Digitized by the Internet Archive
in 2017 with funding from
The National Endowment for the Humanities and the Arcadia Fund

https://archive.org/details/texasmedicine66unse

JANUARY 1970

TEXAS MEDICINE

U. C. SAN FRANCISCO
MEDICAL CENTER LIBRARY
FEB 18 1970

257739

RECOGNIZING DRUG ABUSE IN YOUR PRACTICE

HEART PROBLEMS

DOCTOR FINDS UNDERSEA GLORIES

Torbett, Hutchings, Smith Memorial Hospital
And The Torbett Clinic

306 Coleman Street
Post Office Box 60

Marlin, Texas

Telephone: WE 6-3561

GENERAL SURGERY
Howard O. Smith, M.D., F.A.C.S.
D. R. Swetland, M.D., F.A.C.S.
Howard L. Smith, M.D., F.A.C.S.

INTERNAL MEDICINE
W. F. McKinley, Jr., M.D.
James S. Bussell, M.D.
C. G. Brown, M.D.

EYE, EAR, NOSE AND THROAT
S. W. Hughes, M.D.

ALLERGY
Walter S. Smith, M.D.*

OBSTETRICS AND PEDIATRICS
M. A. Davison, M.D., F.A.C.O.G.
W. L. Reese, M.D., F.A.C.O.G.

RADIOLOGY
J. M. Brown, M.D., F.A.C.R.

PATHOLOGY
W. W. Klatt, M.D.
Ronald E. Henderson, Jr., M.D.
Kent Smith, M.D.

UROLOGY
Howard O. Smith, M.D., F.A.C.S.

DENTISTRY
B. E. Latimer, D.D.S.

NEUROPSYCHIATRY
S. B. Morrison, M.D.

DERMATOLOGY
Maurice C. Barnes, M.D., D.A.B.D.

Administrator:
J. D. Norris, Jr.

Superintendent of Nurses:
Ruby Lowrance, R.N.

Howard O. Smith, M.D., FACS, Chairman of the Board of Trustees, of Torbett, Hutchings, Smith Memorial Hospital and the Torbett Clinic which opened January, 1963. The original hospital was founded by Dr. J. W. Torbett, Sr., in 1898.

The Torbett Clinic and Memorial Hospital continues to utilize the Marlin Hot Mineral Water and other forms of physical therapy as an adjunct in the treatment of arthritis and allied rheumatic conditions.

*Expired 4-24-69.

THE DALLAS MEDICAL & SURGICAL CLINIC AND HOSPITAL

4105 Live Oak Street

DALLAS, TEXAS

Telephone TA 3-4151

*Geo. M. Underwood, M.D., F.A.C.P., Diagnosis & Gastroenterology, D.A.B. Internal Medicine & Gastroenterology
P. E. Luecke, Sr., M.D., F.A.A.P., Pediatrics Diplomate American Board Pediatrics
*G. A. Davidson, B.S., M.D., Dermatology
*Wm. H. Potts, B.A., F.A.C.P., Internal Medicine
*Ozro T. Woods, M.D., Surgery, Emphasizing Tumors
Richard M. Smith, M.D., F.A.C.P., Diagnosis & Internal Medicine
J. Wilbur Bourland, Jr., M.D., Obstetrics & Gynecology
Harry M. Spence, M.D., D.A.B.U., F.A.C.S., Urology
Wells M. Wade, D.D.S., Dental Surgery
Halcuit Moore, M.D., F.A.A.P., Pediatrics Diplomate American Board Pediatrics
John B. Bourland, M.D., Gynecology & Obstetrics Diplomate American Board OB-GYN
Raymond W. Burford, M.D., D.A.B.R., Radiology
Henry G. Montgomery, M.D., F.A.C.S., D.A.B.S., Surgery
Edwin M. Cleveland, M.D., Internal Medicine
John B. Allen, M.D., Internal Medicine Diplomate American Board Internal Medicine
R. M. Burnside, M.D., D.A.B.O., Ophthalmology
Adam D. Green, M.D., Surgery
Morris E. Magers, M.D., Internal Medicine Diplomate American Board Internal Medicine
B. Celia Slaughter, M.D., F.A.A.P., Pediatrics Diplomate American Board Pediatrics
D. W. Shuster, M.D., D.A.B.O., Otolaryngology and Otologic Surgery
P. E. Luecke, Jr., M.D., Pediatrics, F.A.A.P., Diplomate American Board Pediatrics
Channing Woods, M.D., Internal Medicine
William W. Hoffman, M.D., D.A.B.U., F.A.C.S., Urology
James M. Copps, M.D., D.A.B.O., Ophthalmology
Joe B. Caldwell, M.D., D.A.B.R., Radiology
Terry D. Allen, M.D., D.A.B.U., Urology
J. Boyd Hollabaugh, D.D.S., General Dentistry
George P. Fosmire, M.D., D.A.B.S., General Surgery
Richard C. Stone, M.D., Internal Medicine and Gastroenterology
Daniel L. Maddox, D.D.S., General Dentistry
William N. New, M.D., Dermatology
Donald A. Sutherland, M.D., Internal Medicine (Hematology)
John R. Woodward, M.D., Obstetrics & Gynecology, Diplomate American Board OB-GYN
Masashi Kawasaki, M.D., D.A.B.O., Otolaryngology, Tumor and Reconstructive Surgery of the Head and Neck
Miss Billye J. Norris, R.N., Director of Nurses
C. H. Rosamond, Administrator
Arthur L. Cook, Business Manager

*Inactive status

TERRELL'S LABORATORIES

T. C. TERRELL, M.D., F.C.A.P., F.A.C.P., DIRECTOR
JOHN S. TERRELL, M.D., F.A.A.P., ASSISTANT DIRECTOR

FORT WORTH, TEXAS

211 Medical Arts Building

DEPARTMENT OF PATHOLOGY
T. C. Terrell, M.D., F.C.A.P., F.A.C.P.
May Owen, M.D., F.C.A.P., F.A.C.P.
Joan Windmiller, M.D., F.A.A.P.

DEPARTMENT OF RADIOLOGY
H. W. Banker, M.D., D.A.B.R., M.A.C.R.
Ernest E. Holt, M.D., D.A.B.R., M.A.C.R.
James C. Moore, M.D., D.A.B.R., M.A.C.R.

DEPARTMENT OF CHEMISTRY
LaMonte A. Tucker, Ph.D.

DEPARTMENT OF BACTERIOLOGY & MYCOLOGY
Robert F. Devlin, Ph.D.

CONSULTING & ANALYTICAL SERVICES

PATHOLOGY, FORENSIC PATHOLOGY & VETERINARY PATHOLOGY: Histology, Cytology.
CLINICAL PATHOLOGY: Serology, Bacteriology & Mycology, Parasitology, Hematology.
INDUSTRIAL & CLINICAL CHEMISTRY: Radioassay, SMA-12 survey and other Automated Procedures. Hormone Chemistry, Chromatography, Electrophoresis, Immunochemistry.
TOXICOLOGY: Drugs, Water, Foods & Biological materials.
MANUFACTURING DEPARTMENT: Allergenic Extracts and Treatment Sets, Mounting Media, Specifically Prepared Reagents and Stains for Laboratory Use.

TERRELL MEDICAL GROUP

FORT WORTH, TEXAS

210 Medical Arts Building

INTERNAL MEDICINE Diagnosis, Allergy, Cardiology	T. C. Terrell, M.D., F.C.A.P., F.A.C.P. Elizabeth A. Taylor, M.D.
NEUROPSYCHIATRY Electroencephalography	Henry G. Gardiner, Jr., M.D.
PEDIATRICS Pediatric Hematology Adolescent Medicine & Pediatric Consultation	Joan Windmiller, M.D., F.A.A.P. John S. Terrell, M.D., F.A.A.P.
CLINICAL PSYCHOLOGY	Michael W. Wheeler, Ph.D.

Administrator: Arthur Fuston

TEXAS MEDICINE

VOLUME 66 NUMBER 1 JANUARY 1970

SCIENTIFIC ARTICLES

42 Clinical Evaluation of the Drug User: Current Concepts

50 Factors Influencing Drug Abuse in Young People

58 Care-Induced Psychoses

61 Vectorcardiography in Ischemic Heart Disease

Gregory G. Dimijian practices psychiatry in Dallas and also is clinical instructor in psychiatry at The University of Texas (Southwestern) Medical School at Dallas. During his residency at the University of Washington School of Medicine, Seattle, and subsequently, he has gained experience in treating the newer type of drug user. Dr. Dimijian also spent two years treating narcotic addicts at the NIMH Clinical Research Center at Fort Worth; during the second year he was deputy chief of the Addiction Service. He wrote the chapter, "Contemporary Drug Abuse," published in the 1968 edition of "Medical Pharmacology," by Andres Goth; this chapter has recently been revised by Dr. Dimijian for the 1970 edition of the text.

Doyle I. Carson is director of male service at Timberlawn Psychiatric Center, Dallas, and assistant clinical professor of psychiatry at The University of Texas Southwestern Medical School. Both he and his coauthor, Jerry M. Lewis, work with adolescent psychiatric patients at Timberlawn.

Robert R. Rynearson is a diplomate of, and examiner for, the American Board of Psychiatry and Neurology; he is chairman of the Department of Psychiatry, Scott and White Clinic, Temple. Dr. Rynearson also is a member of the Citizens Advisory Committee to the Texas Youth Council, and serves on the Board of Directors of the Bell County Mental Health Center.

Thomas M. Runge is professor, Biomedical Engineering Program, Department of Aerospace and Engineering Mechanics, The University of Texas at Austin. He is a

DIMIJIAN

CARSON

RUNGE

JONES

LINHART

SHROPSHIRE

diplomate of the American Board of Internal Medicine and of the American Board of Cardiovascular Disease.

70 An Electrocardiographic Screening Test of Cardiac Function

Frederic G. Jones is chief of the Internal Medicine Service and staff cardiologist in the Department of Medicine, Wilford Hall USAF Hospital, Aerospace Medical Division, Lackland Air Force Base. He is a diplomate of the American Board of Internal Medicine and took two years of postresidency training in cardiology. Prior to entering the US Air Force, Lieutenant Colonel Jones had served some ten years on reserve and active duty with the US Navy.

76 Coronary Arteriography and Current Indications for Its Use

Joseph W. Linhart is associate professor, Department of Physiology and Medicine, and director of the Cardiac Catheterization Laboratory at The University of Texas Medical School at San Antonio. He is a diplomate of the American Board of Internal Medicine, a fellow of the American College of Cardiology, and a member of other professional associations.

82 Clinicopathologic Conference

Participants in this CPC from The University of Texas (Southwestern) Medical School at Dallas and Parkland Memorial Hospital are Spencer Shropshire, fellow in internal medicine and chief resident; Eugene P. Frenkel, professor in internal medicine; Gregory Whelan, instructor in internal medicine; Lawrence S. Cohen, associate professor in internal medicine; Hugo Jasin, assistant professor of internal medicine; Alexander Kosinski, clinical professor of pathology; and Edwin H. Eigenbrodt, associate professor of pathology and guest editor for this series.

EDITORIALS

17 Anatomy of a Legislative Victory
Joe T. Nelson

18 Pruritus Ani—No Laughing Matter
John E. Cogan

20 Protein Metabolism and Coronary Atherosclerosis
Carl F. Shaffer

21 AMA Committee on Planning and Development
Charles Max Cole

DEPARTMENTS

4 Association & Late News

27 Highlights of Coming Meetings

33 Postgraduate Courses

85 TMA Annual Session Housing Information

95 News

98 Gold medals become by-product of relaxation for doctor-diver

105 Medicine in Literature

105 New Books in TMA Library

107 Personals

108 Pamphlet

108 Recent Deaths

ON THE COVER

Drug abuse has many facets, even more than the kaleidoscopic cover art. An article beginning on page 42 gives some practical pointers on clinical evaluation of the drug user. The next article explores some of the factors that may influence young people to turn to drugs. From a somewhat different perspective, "Care-Induced Psychoses" (page 58) discusses prescribed drugs and other therapeutic measures which bring to mind the maxim, "There are some remedies worse than the disease."

NEXT MONTH

February's editorials will be about the appalling price we pay—in terms of life, disability, and economic loss—to vroom vehicles along the superhighways. Scientific articles will be on office screening for porphyria, chemical laboratory for detecting disease, health care delivery, health planning, methotrexate for psoriasis, cutaneous drug reactions, and management of common skin diseases.

PUBLICATION INFORMATION

Texas Medicine is published monthly by the Texas Medical Association.

Editorial and Business Offices: 1801 N. Lamar Blvd., Austin, Texas 78701; Telephone: Area Code 512 477-6704.

Second Class Postage paid at Austin, Texas, with additional entry at Fort Worth, Texas, under Act of March 3, 1879.

Subscription communications should be sent to the Business Offices. $3 per year for members; $9 for nonmembers; $10 for foreign; single copy, $1.

Contributions, previously unpublished, are welcomed for review; suggestions for preparation are available from the Editorial Offices. News and other items should be sent to the Editorial Offices by the 10th of the month preceding the month of publication. All contributions are sent at the owner's risk.

Printing Offices: c/o Stafford-Lowdon Company, 1114 West Daggett, Fort Worth 76104.

ASSOCIATION & LATE NEWS

AMA House of Delegates Gives Approval to Texas Resolution at 1969 Clinical Convention; Other House Action Noteworthy to Texas MDs

Texas delegates to the 1969 American Medical Association Clinical Convention at Denver on Nov. 30-Dec. 3, 1969, saw their resolution relating to advertising of psychotropic drugs in AMA publications favorably considered by the House of Delegates and referred to the Board of Trustees. In addition, they viewed with special interest the establishment by the House of Delegates of a Committee on Private Practice, the AMA's activities and studies concerning medical professional liability, and the report of the Committee on Planning and Development regarding far-reaching recommendations on the practice of medicine.

The Texas resolution urged responsible AMA departments to screen carefully all advertising of psychotropic drugs to make certain that the claims made for such drugs do not exceed the legitimate therapeutic indications for them.

The resolution also presented objections to some advertising claims for psychotropic drugs as effective adjuncts in "meeting the problems of everyday living." Some advertisements published in AMA journals have suggested the use of tranquilizers and sedatives for ordinary anxiety and tension, for such things as helping to get the housework done, for avoiding the "annoyances" of the children, and for other relatively minor stresses of living.

New Committee on Private Practice

The action of the AMA House of Delegates establishing a Committee on Private Practice received particular attention from the Texas delegation. The committee was established on the basis that the private practice of medicine is still considered the best method of serving mankind's medical needs. The AMA has previously had no specifically designated body for the promotion of private practice.

Functions of the new committee will be the following:

1. To encourage and promote the private practice of medicine.
2. To develop new methods that will promote the private practice of medicine throughout medical school and postgraduate training.
3. To assist the private practitioner to improve his method of providing medical care continually, including business practices and the efficient utilization of allied health personnel.
4. To publicize to patients the merits of private practice.
5. To bring to the attention of all practicing physicians the forces at work to downgrade private practice and to encourage and assist the development of similar committees by state medical associations.

Medical Professional Liability

The Texas delegation also reviewed with interest the continuing activities of the AMA in its efforts to study and search for solutions to the problems of medical professional liability, including containment of costs, availability of adequate insurance for all competent and ethical physicians, and possible legislative remedies.

Although the AMA Board of Trustees reported that no definitive solutions are yet in sight, several approaches continue to receive attention. The AMA has urged state and county medical societies to explore the development of workshops designed to prevent medical accidents in hospitals; and it has suggested the exploration of additional possible remedial legislation, including regulation of contingent fees for attorneys and statutory limits on damages.

The AMA also has suggested the investigation of sponsorship of professional liability insurance programs by medical societies. Another insurance proposal calls for the exploration of some mechanism for prepaid economic protection for persons injured as a consequence of medical or other accidents arising in the course of patient care. Such a plan would prevent the necessity for proof of fault and provide relief from liability on the part of the physician.

Far-Reaching Recommendations

Potentially one of the most far-reaching of all studies, the report of the Committee on Planning and Development, was especially noted by the Texas delegation at the convention.

Chaired by Dr. George Himler of New York, the committee studied the environment in which medicine now is practiced. It sought to identify current problems and to analyze the reasons for their development as well as to identify current trends by studying the forces that are influencing the practice of medicine. The evaluation of those trends in terms of their direction, rigor, and likelihood of endurance provided the basis for predicting the future form of medical practice and the social, economic, political, scientific, and technological climate in which it will be conducted. The committee also has used the study to develop recommendations on how these trends could be channeled, modified, supported, or opposed in the best interest of the public and the members of the AMA.

Some 57 recommendations, most of which related to long-term policy and organization and which encompassed a wide diversity of assumptions, conclusions, and suggestions, were presented by the committee. Discussion of the recommendations was marked by strong differences of opinion and philosophy which prompted the presentation of an articulate minority report written by a member of the committee, Dr. John H. Budd of Ohio.

In view of the long-range effects of the recommendations on the practice of medicine and on the AMA, the House of Delegates agreed that policy actions properly should be generated at future sessions on the basis of resolutions submitted by state medical societies.

Accordingly, the Texas delegation will distribute sections of majority and minority reports to appropriate boards, councils, and committees of the Texas

Medical Association for consideration. Similarly, copies of the reports will be sent to component county medical societies. These reports are extremely well worth reading since every physician is affected by the pressing social, economic, legislative, and legal problems which confront American medicine.

The Texas delegation invites comments, suggestions, or resolutions on the various recommendations. These responses are requested prior to April 30, 1970, so that the TMA House of Delegates may have an opportunity at Annual Session to adopt policy actions or expressions which it may choose. With these responses in hand, the Texas delegation will then be prepared to present the views of Texas physicians and the policy statements of the Texas Medical Association at the 1970 AMA Annual Meeting on June 21-25 in Chicago.

Recognition of Texas Physicians

Dr. Milton V. Davis of Dallas was appointed to the AMA Council on National Security at the 1969 Clinical Convention, and two Texas physicians were recognized for long service in the AMA House of Delegates. Dr. James C. Terrell of Stephenville completed service as a delegate from the Texas Medical Association. Dr. Robert A. Murray of Temple will assume office in the AMA Section on Orthopaedic Surgery after having completed his tenure as the delegate from that section.

TMA Plays Role In Drug Abuse Education

Since the fall of 1968 the Texas Medical Association has been involved in a drug abuse education program and has distributed informational materials to county medical societies and interested individuals.

Although most of the materials used are produced by the American Medical Association, TMA has reproduced some of the items and made them available at no cost. During the past year, 250 billboards have been placed throughout the state. All space was provided as a public service by various outdoor advertising companies. The posters used psychedelic art and carried the message: "Drug abuse doesn't solve problems . . . it causes them." County medical societies were notified that the posters would be used in their area and were urged to conduct concurrent local drug abuse education programs.

Materials offered and still available include a packet of materials to be used in a drug abuse education program, a list of seven films on drug abuse available from the TMA film library, and a selection of five pamphlets on drug abuse designed for distribution to the public. Over 50,000 copies of each pamphlet have been distributed by TMA. They were prepared by the AMA's Department of Health Education and reprinted by the TMA Printing Division and are available from TMA at no charge. Pamphlet titles are "Marihuana," "Amphetamines," "Barbiturates," "LSD," and "Glue Sniffing."

The packet of program materials includes scientific background information on drug abuse (primarily reprints from *JAMA*), newspaper publicity and feature material, a suggested 15-minute radio interview script on drug abuse, a sample speech for delivery by physicians before civic clubs or other adult groups, a sample speech for delivery by physicians before high school students or other youth groups, a script outline for a television or radio panel program, and other useful material on the drug abuse problem.

In October, 1968, the Radio, Television, and Motion Picture Department of the American Medical Association distributed two animated public service TV spot announcements to all Texas television stations. One covered drug abuse in general, and the other dealt with marijuana. Scripts for radio spots on marijuana and drug abuse were distributed to Texas radio stations in December, 1968, by the AMA; and copies are available from the Public Relations Division, Texas Medical Association, 1801 N. Lamar, Austin 78701. County medical societies may contact their local television stations to urge them to use the AMA spots.

Before making any public statements or speeches on drug abuse, physicians should study the scientific material available. Questions from the audience, especially from youth groups, can be disastrous if the speaker is not completely informed.

House Representation For Medical Schools Proposed

An amendment to the Constitution and By-Laws of the Texas Medical Association regarding representation in the House of Delegates by the chief academic administrative officer of each Texas medical school will be considered at the 1970 Annual Session April 30-May 3 in Dallas.

The TMA Council on Constitution and By-Laws believes that medical schools should have a voice in Association business and has recommended that Article VII, Section 1, of the Constitution be amended to read as follows:

> Sec. 1. The House of Delegates shall constitute the legislative body of the Association. The membership of the House of Delegates shall consist of (1) Delegates elected in accordance with this Constitution and By-Laws, and ex officio (2) the President, the President-Elect, the Vice-President, the Immediate Past President, the Secretary, and the Treasurer; (3) Councilors; (4) Trustees; (5) the Speaker of the House of Delegates; (6) Vice-Speaker of the House of Delegates; (7) Texas delegates and alternate delegates to the American Medical Association; (8) the members of the Council on Medical Jurisprudence

UNIT VALUES FOR TMA MEMBERS RETIREMENT PLAN AND TRUST

(As a service to participants in the TMA Members Retirement Plan and to physicians interested in enrolling in the program, comparative values for investment media are published regularly in *Texas Medicine*. Figures shown are the latest available at press deadline and are for comparison purposes only. Most daily newspapers list up-to-the-minute values on mutual funds.)

Investment Media	Net Asset Value Per Share 9-30-68	11-30-69	11-30-69*
Mercantile National Bank Stock Fund	$10.25	$ 9.73	$ 9.73
Loomis-Sayles Capital Development Fund	14.20	11.82	12.21
T. Rowe Price Growth Stock Fund	25.93	26.15	27.19
Loomis-Sayles Mutual Fund	16.82	14.82	15.31
Stein-Roe & Farnham Balanced Fund	23.34	20.75	22.50
Mercantile Bank Fixed Income Fund	10.00	9.09	9.09

*Adjusted to include dividends and distributions since 9-30-68.

and the several chairmen of the other respective councils, and (9) the chief academic administrative officer, who is a member of Texas Medical Association, of each class A medical school in Texas.

Although this amendment was first introduced at the 1969 Annual Session, it cannot be voted on until this year because, according to the Constitution, a final vote cannot be taken on an amendment until a year from the time of the meeting at which the amendment is introduced.

The chief administrative physician of each Texas medical school has been considered an official guest of the House of Delegates and furnished the same information as a member at meetings of the House since the 1968 Annual Session, when a reference committee recommendation to that effect was adopted.

Overhead Insurance Enrollment Extended

The Prudential Insurance Company of America has agreed to extend the enrollment period for its office overhead insurance plan to Jan. 31, 1970, for Texas Medical Association members under age 60. The extension was granted because such a program is new for TMA and because the required participation is within reach.

When Prudential's charter enrollment period ended on Dec. 31, 1969, the office overhead plan remained several hundred applications short of minimum participation requirements despite favorable response to the program. Until the minimum is attained only applicants who meet the company's underwriting requirements will be insured.

The office overhead plan was first made available at the request of many Texas physicians when Prudential was named underwriter of the Association's insurance programs. This type of coverage has become popular because it has a very favorable rate schedule and its premiums are tax deductible.

As the inflationary spiral continues to climb, Texas physicians should consider that insurance protection for office overhead expenses during a disability may be a worthwhile addition to their overall insurance coverage. Those desiring such protection must enroll in the plan by the Jan. 31 deadline.

1969 Index Available

The index to the 1969 volume (Vol. 65) of *Texas Medicine* will soon be available upon request from the journal office at Texas Medical Association, 1801 N. Lamar Blvd., Austin 78701.

Few Draft Calls On Tap For Texas MDs in 1970

Latest news from American Medical Association headquarters confirms that the new draft lottery system does not include physicians. Physicians are classified, processed, and ordered for induction separately under provisions of the Military Selective Service Act of 1967; and few calls for physicians through this procedure are anticipated in Texas in 1970, according to Lt. Col. Norman R. Haertig, chief of manpower, Texas headquarters, State Selective Service.

The needs of the military probably will be satisfied almost fully in Texas by calling up those physicians who previously committed themselves through the Berry Plan, Col. Haertig said.

Only the status of medical students between the ages of 19 and 26 will be affected by the random sequence plan, and physicians over 26 will continue to be chosen for military service as they have in the past. Col. Haertig assures that most medical students and young physicians will be deferred, respectively, until they complete their medical education or their internships. The AMA's Department of Military Medicine also points out that the person who fulfills draft obligations before completing medical school has no further liability.

Texas Viet Volunteers Rank Third in Number

Texas ranks third among states in total number of physicians who have participated in the Volunteer Physicians for Viet Nam program and number of tours served since August, 1965.

California heads the list of states providing the largest number of volunteers, followed by New York. A total of 601 individual physicians have served 676 tours in Viet Nam since the inception of this program.

Those Texas physicians who have served one tour in Viet Nam include Drs. William R. Albracht, Stephenville; Jerry W. Bains, Galveston; Exeter F. Bell, Jr., Houston; Billy J. Blankenship, Galveston; Raymond L. Brewer, Houston; Emerson Emory, Dallas; Sterling H. Fly, Jr., Uvalde; Robert Franken, San Angelo; Robert E. Haan, El Paso; Charles W. Hase, Dallas; Curtis R. Jordan, Palestine; Richard A. Keffler, Lubbock; Vincent J. Kitowski, Houston; Michael F. Koehl, San Antonio; Kurt P. Lekisch, Midland; John C. Long, Plainview; Frederick C. Lowry, Austin; John W. McFadden, Jr., Galveston; Paul R. Meyer, Port Arthur; Jay Norton, Corpus Christi; Lumir F. Novak, San Antonio; Andrew W. Para, Big Spring; Edward S. Singleton, Houston; William W. Taylor, Dallas; Leonard A. Toomim, Beaumont; Wayne E. Truax, Galveston; and Frank Van Orden, Trinidad.

Dr. Otto H. Heins of Raymondville is credited with serving a third tour, and Dr. Roscoe A. Schulze of Flatonia served a second tour. Physicians who served one tour and subsequently served or are currently serving long-term tours in Viet Nam under contract with AMA/USAID or as medical missionaries include Drs. John V. Connolly, Ingleside; Joe D. Heath, Kermit; and Charles M. Henner, Santa Anna.

The US Agency for International Development has requested the American Medical Association to continue its administration of the VPVN program for an additional two years. Approximately 400 volunteers will be required to maintain the program at its current level.

Medicare Companion Benefits Now Greater

Benefits of Texas Blue Cross and Blue Shield's Senior Texan Companion Service, the coverage designed to help pay the expenses not covered by Medicare, were increased, effective Jan. 1, 1970, recently announced the company's president, Tom L. Beauchamp, Jr.

No increase in premium rates is contemplated at this time for the more than 85,000 Blue Cross members enrolled in this service. The increase in coverage was prompted by reductions in Medicare benefits.

In announcing this increase in Blue Cross benefits, Beauchamp explained that the Secretary of Health, Education, and Welfare is required by law to make an annual review of hospital costs under Medicare and make necessary adjustments in deductible and coinsurance amounts for which Medicare beneficiaries will be responsible during the next year. The review for this year has been completed, and HEW determined that for benefit periods starting in 1970 the inpatient hospital deductible under Medicare must be raised from $44 to $52.

Additionally, the hospital coinsurance amounts will be increased from $11 to $13 per day for the 61st through the 90th day of each such benefit period and from $22 to $26 per day for each "lifetime reserve day" used.

Beauchamp said that the increased benefits of the Senior Texan Companion Service would cover all of these new patient charges for Blue Cross members. He emphasized that the better coverage would be provided without any increase in Blue Cross rates at this time.

But it is even tougher when you run out of insurance benefits, long before the end of the hospital-medical expense. Yet how can anyone know in advance, how much coverage he is going to need? Of course no one can.

BLUE CROSS® and BLUE SHIELD®, being truly a *prepayment* system for future hospital-medical care, make as sure as is reasonably possible that your patient does not "run out of gas", long before his period of illness is over. Could this be the reason that more than 72 million Americans are today protected by the "Blues"? Just about —

"Everybody's swingin' to the Blues!"

BLUE CROSS® and BLUE SHIELD®'

Hospital and Health Care Coverage
(GROUP HOSPITAL SERVICE, INC.)

Medical and Surgical Benefits
(GROUP LIFE & HEALTH INSURANCE COMPANY)

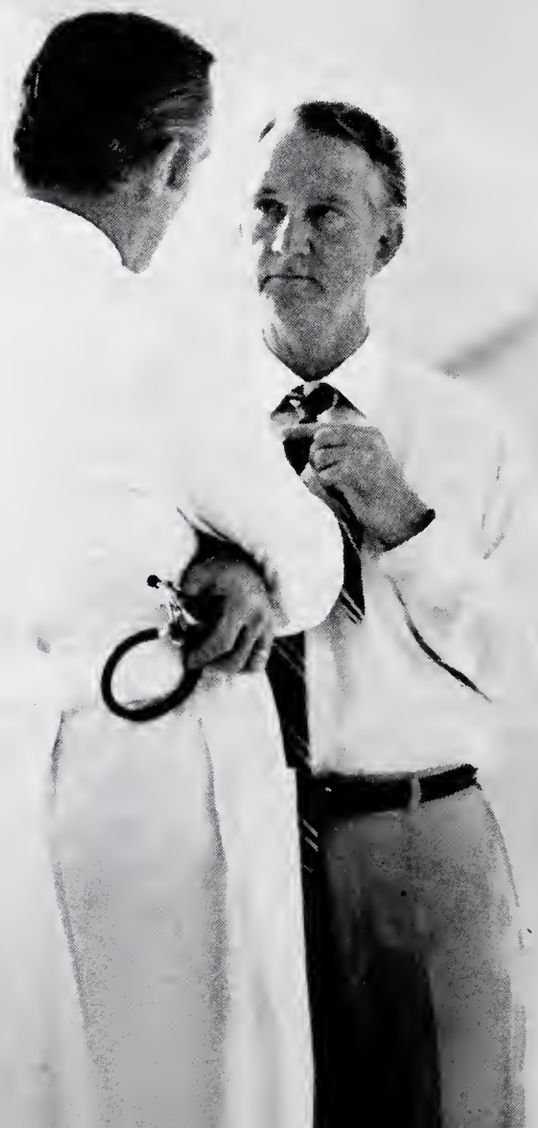
OF TEXAS

MAIN AT NORTH CENTRAL EXPRESSWAY ■ DALLAS, TEXAS 75222

® American Hospital Association
®' National Association of Blue Shield Plans

Mylanta®
24 million hours a day.

Through the day, every day,
ulcer patients take
one million doses of Mylanta
for relief of ulcer pain.



Mylanta®
LIQUID/TABLETS

aluminum and magnesium hydroxides plus simethicone

Good taste = patient acceptance
Relieves G.I. gas distress*
Non-constipating

*with the defoaming action of simethicone

Stuart PHARMACEUTICALS Pasadena, Calif. 91109
Division of Atlas Chemical Industries, Inc., Wilmington, Del. 19899

The AMBAR® SCRAPBOOK of

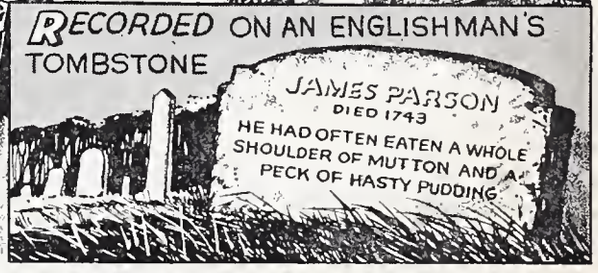
Obesity Oddities

FACT & LEGEND

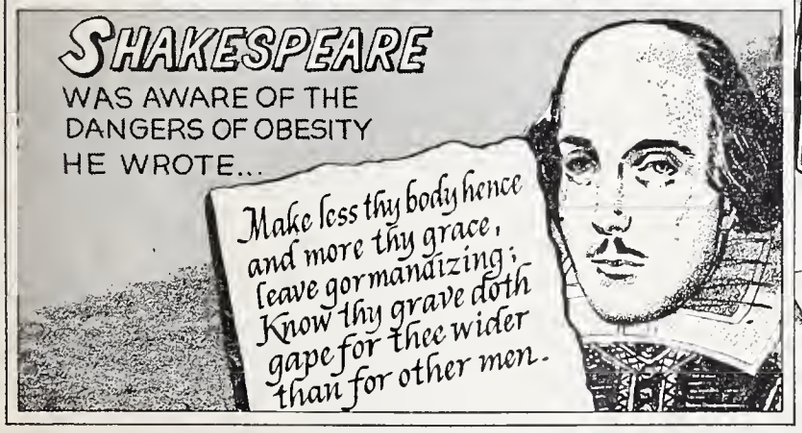
OBESITY WAS A MILITARY OFFENSE!

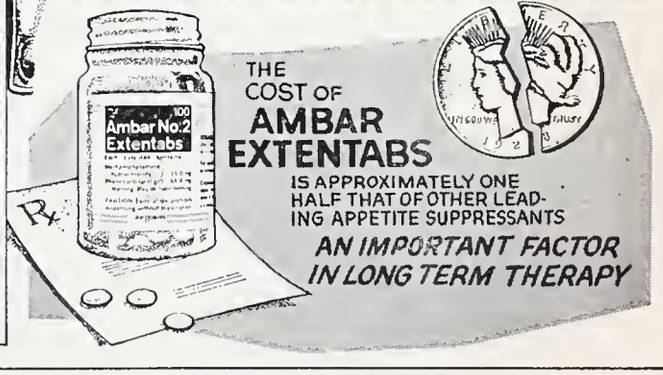
OVERWEIGHT ROMAN HORSEMEN WERE MADE TO FORFEIT THEIR MOUNTS AND BECOME FOOT SOLDIERS!

RECORDED ON AN ENGLISHMAN'S TOMBSTONE



SHAKESPEARE WAS AWARE OF THE DANGERS OF OBESITY HE WROTE...





CONTROL FOOD AND MOOD ALL DAY LONG WITH A SINGLE MORNING DOSE

AMBAR #2 EXTENTABS®

methamphetamine HCl 15 mg., phenobarbital 64.8 mg. (1 gr.) (Warning: may be habit forming).

One Ambar Extentab before breakfast can help control most patients' appetite for up to 12 hours. Methamphetamine, the appetite suppressant, gently elevates mood and helps overcome dieting frustrations. Phenobarbital, the sedative in Ambar, controls irritability and anxiety...helps maintain a state of mental calm and equanimity. Both work together to ease the tensions that erode the willpower during periods of dieting.

Also available: Ambar #1 Extentabs®—methamphetamine hydrochloride 10 mg., phenobarbital 64.8 mg. (1 gr.) (Warning: may be habit forming).

BRIEF SUMMARY/**Indications:** Ambar suppresses appetite and helps offset emotional reactions to dieting. **Contraindications:** Hypersensitivity to barbiturates or sympathomimetics; patients with advanced renal or hepatic disease. **Precautions:** Administer with caution in the presence of cardiovascular disease or hypertension. **Side Effects:** Nervousness or excitement occasionally noted, but usually infrequent at recommended dosages. Slight drowsiness has been reported rarely. See package insert for further details.

A. H. ROBINS COMPANY, RICHMOND, VA. 23220 A·H·ROBINS

Mead Johnson–pharmaceuticals created for your specialized clinical needs

new 10% solution...
particularly convenient for home use

MUCOMYST®-10
(ACETYLCYSTEINE)

liquefies thick, viscid mucus in chronic bronchitis and emphysema

Mucomyst, as 20% acetylcysteine, has been used with safety and effectiveness in hospitals for over five years.

Now a new 10% solution, Mucomyst-10, offers you the choice of prescribing a lesser concentration whenever you feel this is desirable. It provides added convenience and simplicity, particularly for your patients using nebulizing units at home.

By including Mucomyst-10 in the home management regimen, you can provide full mucolytic benefits for many of your patients with chronic bronchitis and emphysema complicated by tenacious secretions.

Indications: Mucomyst has been demonstrated to be clinically effective as adjuvant therapy in a wide range of conditions in which thick, viscous mucus is a problem, including: postoperative atelectasis and pneumonia; chronic bronchopulmonary disease (emphysema, chronic bronchitis, asthma, and bronchiectasis); acute bronchopulmonary disease (pneumonia, bronchitis, and tracheobronchitis); tracheostomy care; facilitation of bronchial studies; maintenance of an open airway during anesthesia; and to help control pulmonary complications of cystic fibrosis. **Contraindications:** Mucomyst is contraindicated in those patients who are sensitive or who have developed a sensitivity to it. **Warnings: After proper administration of acetylcysteine, an increased volume of liquefied bronchial secretions may occur. When cough is inadequate, the open airway must be maintained by mechanical suction if necessary. When there is a large mechanical block due to foreign body or local accumulation, the airway should be cleared by endotracheal aspiration, with or without bronchoscopy. Asthmatics under treatment with Mucomyst should be watched carefully. If bronchospasm progresses, this medication should be immediately discontinued. Adverse Effects:** Adverse effects have included stomatitis, nausea and rhinorrhea. Sensitivity and sensitization to Mucomyst have been reported very rarely. A few susceptible patients, particularly asthmatics (see **Warnings**), may experience varying degrees of bronchospasm associated with the administration of nebulized acetylcysteine. Most patients with bronchospasm are quickly relieved by the use of a bronchodilator given by nebulization. **Administration & Dosage:** Mucomyst may be administered by nebulization into a tent, Croupette, face mask, or mouthpiece; or by direct instillation. **Mucomyst should not be placed directly into the chamber of a heated (hot-pot) nebulizer.** Complete details on dosage, administration, and compatibility are included in the package insert. Additional information may be obtained from Mead Johnson Laboratories. **Supplied: Mucomyst-10 (acetylcysteine)**, a sterile 10% solution, in vials of 10 ml. and 30 ml.; **Mucomyst (acetylcysteine)**, a sterile 20% solution, in vials of 10 ml. and 30 ml.

Mead Johnson
LABORATORIES

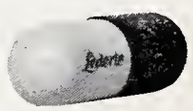
© 1969 MEAD JOHNSON & COMPANY • EVANSVILLE, INDIANA 47721 70469

Doctor, after all we've been through together...

abscess
acne
amebiasis
anthrax
bacillary dysentery
bartonellosis
bronchitis
bronchopulmonary infection
brucellosis
chancroid
diphtheria
endocarditis
genitourinary infections
gonorrhea
granuloma inguinale
listeriosis
lymphogranuloma
mixed bacterial infection
osteomyelitis
otitis
pertussis
pharyngitis
pneumonia
psittacosis
pyelonephritis
Rocky Mountain spotted fever
scarlet fever
septicemias
sinusitis
soft tissue infection
tonsillitis
tularemia
typhus fever
urethritis

...don't you think it's time we were on a first-name basis?

call me "Achro® V"



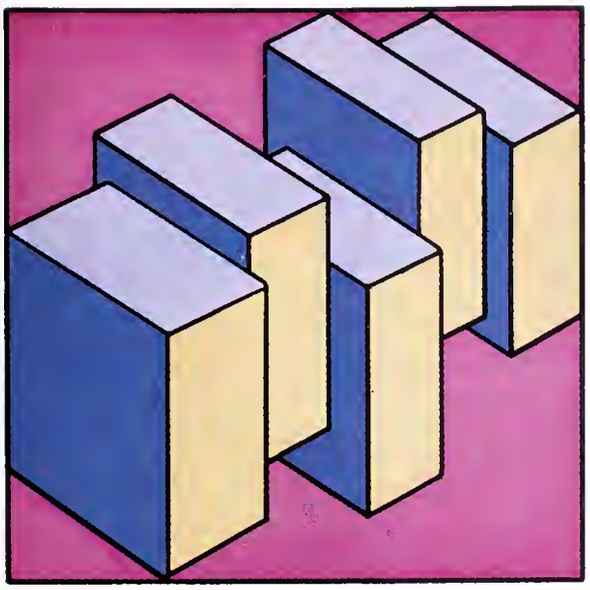
Every pharmacist knows ACHRO® V stands for ACHROMYCIN® V

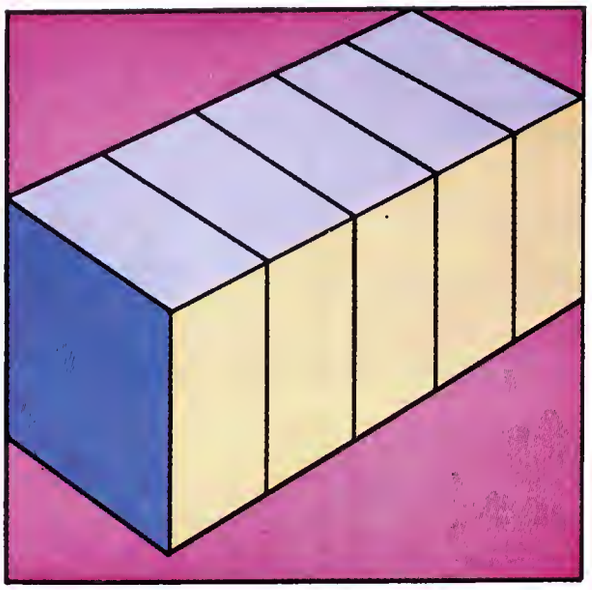
Contraindications: Hypersensitivity to tetracycline.
Warning: In renal impairment, since liver toxicity is possible, lower doses are indicated; during prolonged therapy consider serum level determinations. Photodynamic reaction to sunlight may occur in hypersensitive persons. Photosensitive individuals should avoid exposure; discontinue treatment if skin discomfort occurs.
Precautions: Nonsusceptible organisms may overgrow; treat superinfection appropriately. Tetracycline may form a stable calcium complex in bone-forming tissue and may cause dental staining during tooth development (last half of pregnancy, neonatal period, infancy, early childhood).
Adverse Reactions: *Gastrointestinal*—anorexia, nausea, vomiting, diarrhea, stomatitis, glossitis, enterocolitis, pruritus ani. *Skin*—maculopapular and erythematous rashes; exfoliative dermatitis; photosensitivity; onycholysis, nail discoloration. *Kidney*—dose-related rise in BUN. *Hypersensitivity reactions*—urticaria, angioneurotic edema, anaphylaxis. *Intracranial*—bulging fontanels in young infants. *Teeth*—yellow-brown staining; enamel hypoplasia. *Blood*—anemia, thrombocytopenic purpura, neutropenia, eosinophilia. *Liver*—cholestasis at high dosage. Upon adverse reaction, stop medication and treat appropriately.

Achromycin® V
Tetracycline

Lederle LEDERLE LABORATORIES • A Division of American Cyanamid Company, Pearl River, New York 10965

484-9





from the discord of anxiety...

to emotional harmony

Before prescribing, please consult complete product information, a summary of which follows:

INDICATIONS: Indicated when anxiety, tensian and apprehension are significant components of the clinical profile.
CONTRAINDICATIONS: Patients with known hypersensitivity to the drug.
WARNINGS: Cautian patients about passible cambined effects with alcohol and other CNS depressants. As with all CNS-acting drugs, caution patients against hazardous occupatians requiring complete mental alertness (e.g., operating machinery, driving). Though physical and psychological dependence have rarely been reparted an recommended doses, use cautian in administering to addictian-prone individuals ar those who might increase dosage; withdrawal symptoms (including convulsians), follawing discontinuation of the drug and similar ta thase seen with barbiturates, have been reported. Use af any drug in pregnancy, lactatian, ar in wamen af childbearing age requires that its patential benefits be weighed against its possible hazards.
PRECAUTIONS: In the elderly and debilitated, and in children over six, limit to smallest effective dasage (initially 10 mg or less per day) to preclude ataxia ar aversedatian, increasing gradually as needed and talerated. Nat recammended in children under six. Though generally not recommended, if combination therapy with ather psychatrapics seems indicated, carefully cansider individual pharmacalagic effects, particularly in use af patentiating drugs such as MAO inhibitars and phenathiazines. Observe usual precautions in presence of impaired renal or hepatic functian. Paradoxical reactions (e.g., excitement, stimulation and acute rage) have been reported in psychiatric patients and hyperactive aggressive children. Emplay usual precautians in treatment of anxiety states with evidence of impending depression; suicidal tendencies may be present and pratective measures necessary. Variable effects on blood coagulatian have been reported very rarely in patients receiving the drug and oral anticaagulants; causal relationship has nat been established clinically.
ADVERSE REACTIONS: Drowsiness, ataxia and canfusion may occur, especially in the elderly and debilitated. These are reversible in most instances by proper dasage adjustment, but are alsa occasionally observed at the lawer dosage ranges. In a few instances syncape has been reparted. Also encauntered are isolated instances of skin eruptions, edema, minor menstrual irregularities, nausea and canstipation, extrapyramidal symptoms, increased and decreased libida--all infrequent and generally cantralled with dosage reductian; changes in EEG patterns (low-voltage fast activity) may appear during and after treatment; blood dyscrasias (including agranulocytosis), jaundice and hepatic dysfunction have been reported accasionally, making periadic blood caunts and liver function tests advisable during pratracted therapy.

with the aid of antianxiety

Librium®
(chlordiazepoxide HCl)

5-mg, 10-mg
and 25-mg capsules

In an age af swift change and challenge, susceptible individuals may experience varying degrees of excessive anxiety. The resulting emational stress may precipitate significant functional disarders or camplicate existing organic disease. In properly individualized maintenance dosage, Librium (chlordiazepaxide HCl) quickly helps relieve anxiety and apprehension, pravides useful adjunctive therapy in psychaphysiolagic disorders. In long clinical experience, Librium has demanstrated a wide margin af safety.

Also available:
Libritabs®
(chlordiazepoxide)

ROCHE
Roche
LABORATORIES
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

Before prescribing, see complete prescribing information, including symptoms and treatment of overdosage, in SK&F literature or *PDR*.

Contraindications: Patients with glaucoma, pyloric obstruction, prostatic hypertrophy, bladder neck obstruction, obstructive intestinal lesions and/or ileus.

Precautions: Use with caution in elderly patients. Discontinue one week prior to I^{131} uptake and PBI tests, as the iodine in isopropamide iodide may alter results. Iodine skin rash may occur in rare instances. Caution patients about activities requiring mental alertness (driving, hazardous occupations). Use in pregnancy, lactation, and in women of childbearing age only when necessary.

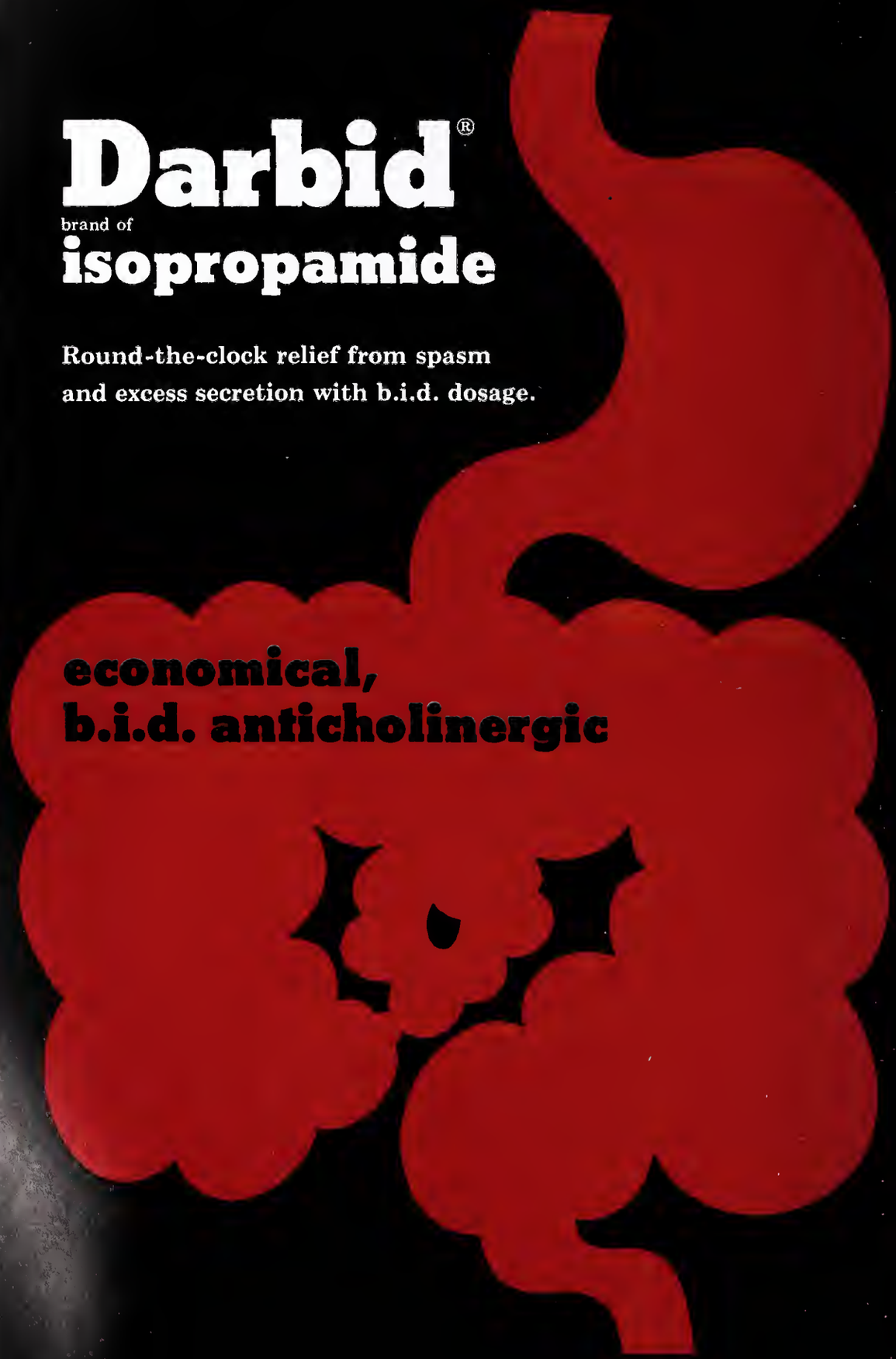
Adverse Reactions: Dry mouth, blurred vision, dilated pupils, photophobia, constipation, urinary retention and tachycardia. Seen less frequently are: palpitation, nausea, dysphagia, fever and nasal congestion.

Supplied: In bottles of 50.

SK&F
Smith Kline & French Laboratories

Darbid®
brand of
isopropamide

Round-the-clock relief from spasm and excess secretion with b.i.d. dosage.



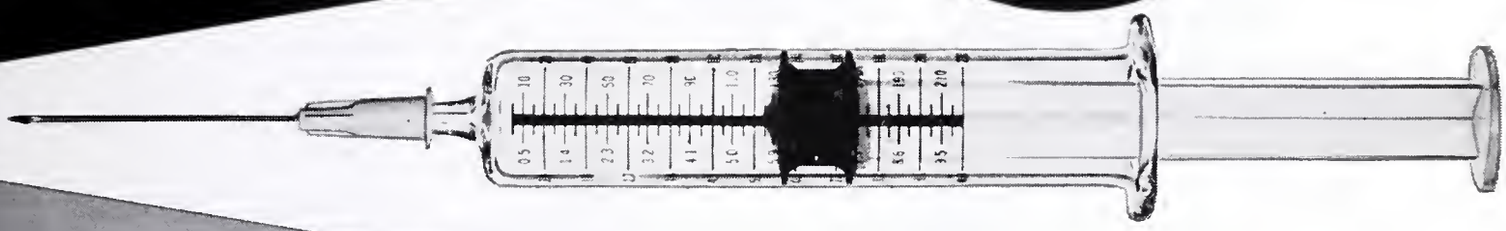
economical, b.i.d. anticholinergic

BSP® DISPOSABLE UNIT

HW&D BRAND OF SODIUM SULFOBROMOPHTHALEIN INJECTION, USP

(50 mg. per ml.)

BSP®



BROMSULPHALEIN® IN A STERILE, DISPOSABLE, ECONOMICAL UNIT

The Bromsulphalein test is a convenient, sensitive, reliable test of liver function.

The precalibrated syringe contained in the BSP Disposable Unit makes weight calculations unnecessary, providing proper dosage regardless of patient-weight. Each unit contains complete directions for use, precautions and contraindications.

The all-inclusive BSP Disposable Unit provides economic unit dispensing.

Complete literature available on request.

HYNSON, WESTCOTT & DUNNING, INC.

HW&D

Baltimore, Maryland 21201

(BSP04)

Each 5 cc. contain erythromycin estolate equivalent to 250 mg. erythromycin base.
When mixed as directed, each 5 cc. will contain erythromycin estolate equivalent to 125 mg. erythromycin base.
When mixed as directed, each cc. will contain erythromycin estolate equivalent to 100 mg. erythromycin base.
Each 5 cc. contain erythromycin estolate equivalent to 125 mg. erythromycin base.
Each tablet contains erythromycin estolate equivalent to 125 mg. erythromycin base.
Each Pulvule® contains erythromycin estolate equivalent to 125 mg. erythromycin base.
Each Pulvule contains erythromycin estolate equivalent to 250 mg. erythromycin base.
The many forms of Ilosone®
Erythromycin Estolate
Lilly
Additional information available upon request.
Eli Lilly and Company
Indianapolis, Indiana 46206
900761

TEXAS MEDICINE

VOLUME 66 NUMBER 1 JANUARY 1970

Devoted to the interests of the medical profession and public health in Texas

BOARD OF PUBLICATION

Charles P. Hardwicke, MD, Austin
Acting Chairman
James A. Hallmark, MD, Fort Worth
John M. Smith, Jr., MD, San Antonio
R. Harvey Bell, MD, Palestine
N. L. Barker, MD, Paris
C. W. Yates, MD, Rosenberg
Don G. Harrel, Dallas

TMA OFFICERS

Charles Max Cole, MD, Dallas
President
C. Lincoln Williston, Austin
Executive Secretary

EDITORIAL AND BUSINESS OFFICES
1801 North Lamar Blvd., Austin
Telephone: 477-6704
Marilyn Baker, Managing Editor
Rae Vajgert, Assistant Managing Editor
Nancy Arthurs, Assistant Editor
Sharon Walker, Editorial Assistant
Judy Harris, Editorial Secretary
E. Maxwell Jones, Business Manager
Jon R. Hornaday, Advertising Director
Anne Shelnutt, Advertising Assistant

PRINTING OFFICES
c/o Stafford-Lowdon Company
1114 West Daggett, Fort Worth 76104

Subscriptions: $3 per year for members; $9 for nonmembers; $10 for foreign. Single copy: $1.

Copyright 1970 by The Texas Medical Association. Owned and issued monthly by the Association.

ANATOMY OF A LEGISLATIVE VICTORY

Are you aware that medicine won an important legislative victory in the United States Senate last month?

The story probably didn't make the front page of your newspaper, but that doesn't minimize the importance of the victory, nor the significant contribution that Texas physicians made in achieving it.

The issue was tax treatment of professional associations, and the antagonist was the Senate Finance Committee. The legislation in question was the Tax Reform Act of 1969 (H.R. 13270).

The Committee had proposed that the regulations governing the Keogh retirement program (for self-employed professionals) should also apply to members of professional associations. Under the Keogh Act, tax deductible contributions may not exceed 10% of the individual's earnings, nor more than $2,500, in any one year.

On Dec 9 the Senate rejected this proposal, in effect recognizing that it would discriminate against members of a professional association because it would deny them the same retirement program opportunities currently available to employees of commercial corporations.

So the unfair proposal was defeated, and physicians and other professionals had scored a victory. That's where the matter stands now.

But to appreciate *why* the decision was made, and *how* Texas doctors were involved, we have to go back to the end of November when the Texas Medical Association first learned of the Senate Finance Committee's proposal. In fact, that was the first that *anyone* knew that the Committee was even considering imposing such a severe limitation on professional associations. No public notice had been given of the matter; the Committee had made no attempt to take testimony on the ramifications or disadvantages of its proposal, and no one who might oppose the restriction had been permitted to present arguments or briefs of any kind.

Only two months before, the Treasury Department had conceded (after losing a series of court cases) "that organizations of doctors, lawyers and other professional people organized under state professional association and corporation acts will, generally, be treated as corporations for tax purposes." And just prior to that decision, the Texas Medical Association had helped bring about the Texas Professional Association Act, which was signed into law by Gov Preston Smith on June 18.

With this background of favorable legislation and court decisions, the Senate Finance Committee's action was totally unexpected.

The one fact that we were sure of was that the Senate would act on the proposal without delay. The only opportunity available to us was to make ourselves heard, loud and clear!

A letter detailing the situation was sent to all Association members, asking them to write or call the two Texas Senators, their Congressmen, and professional acquaintances who would also be unfairly penalized if the proposal was approved.

Obviously a large number of Texas physicians *did* take time to express their views. And they did so effectively. Sen John Tower cosponsored the motion to kill the proposal, and Sen Ralph Yarborough also supported the motion.

The results of this vote should serve to remind us of several important facts: First, office holders are sensitive to the opinions of voters in their districts. Second, their sensitivity is usually in direct proportion to the number of voters who express themselves. Third, a profession such as ours can be tremendously effective in legislative matters if it is concerned, alert, and organized to do the job.

The Texas physician is fortunate to have a solid legislative program. Under the TMA umbrella we have:

1. Legislative chairmen at the county medical society level. These physicians not only keep their colleagues informed, but help the Association mobilize response to legislative proposals like the one discussed here.

2. The Council on Medical Jurisprudence, which is charged with interpreting legislative matters and with representing the Association's views before Congress and the Texas Legislature. Under most circumstances, the Council has time to make detailed studies of pending legislation, and to consult with other TMA committees and councils and with medical specialty organizations. The Council then works directly with members of Congress and the state government. The Council is ably assisted by TMA's two legal and legislative representatives, Philip R. Overton, LLB, and Sam V. Stone, Jr, LLB, and by the Association's executive secretary, C. Lincoln Williston.

3. TEXPAC, our political action committee. It does what TMA cannot legally do, and that is to give financial support to incumbents and candidates whose philosophies are compatible with TMA's views. Having friends in Congress and the Texas Legislature is a prime prerequisite to legislative success. Electing these friends is TEXPAC's responsibility, and its success in recent years has been remarkable.

We must recognize, however, that the most important asset available to medicine is the interest and participation of the individual doctor. If he takes time from his practice and personal affairs to stay informed, and to make himself heard, then we will have more successes in the United States Senate and in other branches of government.

How we fare in 1970 depends in great part on how we develop and use our resources, and how hard we work, individually, for the things we believe in.

Let's remember the case history of the Senate Finance Committee as an example of how really effective we can be!

Joe T. Nelson, MD, Weatherford,
Chairman, Council on Medical Jurisprudence.

PRURITUS ANI—NO LAUGHING MATTER

"I itch," says the patient. In colon and rectal surgery that is the most common complaint I hear. Many other physicians hear it often, regardless of the specialty, and most tend to make light of these symptoms. But to the patient who wakes up scratching at 3 AM, it can become a frustrating problem. Once a man told me, "If you can't help my itch, would you please give me eight more hands to scratch with?" Why do people scratch an itch? Because scratching, for the most part, turns itching into pain—a symptom

which can be tolerated better. Physicians and patients alike have many misconceptions about the etiology and treatment of pruritus ani.

Etiology: Of all pruritus ani cases I see, 99% are caused by diet. The other 1% result from organic conditions such as large prolapsing internal hemorrhoids, anal fissure, and fistula in ano, and nonorganic causes such as "mycin" drugs and pinworm infestation. Conditions such as improper anal hygiene, loose bowel movements, and anxiety often aggravate or perpetuate pruritus ani. After the history is taken, a thorough anoscopic and proctoscopic examination must be done to rule out organic causes, and nonorganic causes (drug reaction and pinworms) must be excluded. The majority of cases, then, are caused by dietary indiscretions. I am often amused by commercial advertisements concerning the treatment of so-called itching hemorrhoids. I do not think that hemorrhoids cause itching except in rare instances. Many patients tell me they have had their hemorrhoids removed because of pruritus ani, and after surgery they still itch.

Diet: If I think that a patient's pruritus ani is caused by diet, I ask him to stop eating pork, chocolate, nuts, alcohol, highly seasoned foods, fresh raw fruits, shellfish, and milk. Usually, the patient is sensitive to one of these products. Most Americans would rather fight wild tigers than give up some of their food. However, if pruritus ani is severe enough, they will sacrifice.

Never promise to cure pruritus ani. Tell the patient that you will control his itching and possibly get rid of it, but that if he is sensitive to one or more foods and eats them, he will itch again. Once the itching is controlled, let the patient add one food at a time. Usually he will let you know quickly which product he thinks is the villain.

Anal Hygiene: In some patients the perianal area looks as if it had been cleansed with a steel brush. Most patients think that they itch because they are not keeping the area clean enough, and thus they cleanse so vigorously that trauma ensues and small excoriations become larger. Patients should not wipe but blot alternately with wet and dry toilet tissue until the area is clean. Wiping traumatizes the anal and perianal skin. No soap of any kind should be applied directly, since it causes a discharge from the excoriated areas. The moisture produces itching and the patient scratches, which aggravates the excoriations and completes the itching cycle. Plain water should be used to cleanse the anal area during the bath or shower. Extract of witch hazel is then applied several times a day to clean the skin and relieve symptoms.

To help keep the area dry (after all, this is the whole idea of treatment) any kind of mild powder can be used. Sometimes a strip of cotton or Kleenex next to the area will allow proper air circulation between the buttocks to insure dryness.

Fungus: An anti-inflammatory, antifungal cream may be used if there is a secondary fungus infection. Cream is better than ointment because it will keep the area dry, whereas ointment tends to macerate the skin.

Anxiety: I think anxiety will aggravate pruritus ani, but usually does not cause it. Sometimes tranquilizers are helpful.

Loose Bowel Movements: If the patient has diarrhea it is important to find the cause and treat it immediately. Loose bowel movements keep anal and perianal tissue irritated and hinder the healing process.

I think that many physicians underestimate the importance of diet as a possible cause of pruritus ani. Treating the symptom—itching—and not its source provides no sustained relief. Likewise, treating only the various conditions that aggravate pruritus ani will be useless. When the etiology of pruritus ani is not apparent, I think that elimination diets to detect possible food allergies are well worth trying.

John E. Cogan, MD, Houston.

PROTEIN METABOLISM AND CORONARY ATHEROSCLEROSIS

Protein metabolism is related to coronary artery disease through its purine component, the principal end-product of purine catabolism being uric acid. Hyperuricemia (a serum value greater than 7.0-8.0 mg/100 ml) may result from different causes, for example, increased cellular catabolism, the clinical manifestation of which is gouty arthritis, an inherited metabolic disorder. Factors common to both coronary artery disease and gouty diathesis include prevalence in males, predominance in the same age group, plasma lipid abnormality (hyperlipidemia), diabetes mellitus, and familial tendency.

The pathogenesis has been related to the tissue colloid stability, the quality and quantity of ionic substances, and the permeability of the arterial intima. In theory, uric acid is related to the cholesterol-phospholipid ratio and may determine the arterial intimal conditioning for cholesterol deposition. Whether or not the conditioning effect of uric acid is conducive to cholesterol deposition, especially if colloidal tissue is unstable, has not been completely investigated.

Serum uric acid values have been studied in patients who are relatively inactive, moderately inactive, and relatively active. The relatively inactive persons had higher levels of uric acid, but no cause and effect relationship has been established. That persons with gouty arthritis are prone to coronary artery disease has been established in long-term studies which reveal apparently separate associations between hyperuricemia and gouty diathesis and the development of coronary artery disease with hyperuricemia only if the gouty arthritis is present. This does not imply that hyperuricemia is the cause and/or that persons with this biochemical disorder who develop gouty arthritis are more prone to coronary artery disease. The results of these investigations are compatible with the hypothesis that there are two "populations" among hyperuricemic persons: (1) simple hyperuricemia with no significant incidence of coronary artery disease, and (2) hyperuricemia with associated gouty diathesis and significant coronary disease.

Generally, it is considered that there is an association between uric acid and lipid metabolism, and that hyperuricemia and coronary disease are related. Uric acid values are not increased in persons who have normal glyceride (as the triglyceride) or cholesterol values, but hyperuricemic patients do have significant increase ($P < 0.0001$) in glyceride levels. Correspondingly, there is an insignificant increase in cholesterol values ($P > 0.05$); the majority of persons with a gouty diathesis have abnormal glyceride but normal cholesterol values. Earlier studies of this relationship between uric acid and lipid metabolism considered only the cholesterol values, which were normal in the majority of subjects with hyperuricemia. Later studies, wherein the equal importance of glycerides has been recognized, show virtually a 100% correlation between hyperglyceridemia (hyperlipemia) and hyperuricemia.

In addition, there is a frequent relation between increased serum glycerides and an abnormal glucose tolerance curve. There is a questionable correlation between the abnormal values of uric acid, glyceride, cholesterol, and glucose tolerance. Other evidence permits speculation that the abnormality of gouty diathesis and familial disorders are interrelated. It may be considered that a genetic or fundamental metabolic relation exists between biochemical factors. Consequently, the serum uric acid value, when higher than normal, may be considered as a provocative factor in the etiology of coronary atherosclerosis. Therefore, use of a dependable uricosuric agent to reduce serum uric acid content may be as important as is the use of a hypolipemic agent. Both are unproven factors in prevention of atherogenesis, and a generation or more will be required in order to establish their hypouricemic and hypolipemic effects.

Carl F. Shaffer, MD, San Antonio.

AMA Committee on Planning and Development

At the recent clinical session of the AMA in Denver the Committee on Planning and Development presented a 60-page majority report as well as a 6-page minority report; both were discussed in considerable detail before a reference committee and on the floor of the House of Delegates. The majority report presents an extensive commentary on problems facing the medical profession today and offers 18 groups of recommendations totaling 57 in all. The minority report presented by one member of the committee offers 19 recommendations at variance with the conclusions of the full committee.

The almost unanimous feeling of the House of Delegates was that an item-by-item discussion of these various recommendations would be fruitless at this time, so great is their scope. Instead, the House voted to establish an Ad Hoc Committee on Long Range Planning and Development; five of the nine members would be members of the House of Delegates and the others would be appointed by the Speaker of the House except for one member from SAMA. This committee will study both reports and all material pertinent to them. It will also send the majority and minority reports to the component state societies for their specific study and recommendations. The House instructed the committee to present a report at the annual convention of the AMA in June 1970.

The Texas delegates to the AMA have asked the Executive Secretary to give these reports and their recommendations wide distribution within the state, especially calling appropriate ones to the attention of specific committees for their consideration. It is anticipated that there will be much deliberation of these recommendations at the January committee meetings in Austin, and even more extensive consideration at our own annual session this spring in Dallas.

There will be many recommendations made by the full committee with which the majority of physicians in Texas will disagree. Where possible, we should counter such areas of disagreement with constructive proposals of our own. Certainly we must not reject the concept of long-range planning, for such is absolutely essential to our survival as an independent profession, and in no other way can the public's need for medical services in the future be met.

Max Cole, M.D.

Charles Max Cole, MD, President, Texas Medical Association.

AMERICAN MEDICORP, INC.

is proud to announce the appointment of

JOHN A. BRADLEY, Ph.D.

as

VICE PRESIDENT AND EXECUTIVE DIRECTOR

Southcentral United States Region

Dr. Bradley is Vice-President of the Texas Hospital Association, a delegate from Texas to the American Hospital Association House of Delegates, was the first lay member of the Board of Trustees, Catholic Hospital Association, and a Fellow, American College of Hospital Administrators.

AMI, the nation's leading owner-manager of general acute hospitals, is pleased to welcome Dr. Bradley as a member of the AMI management team.

American Medicorp, Inc.
One Decker Square
Bala Cynwyd, Pennsylvania
(215) 667-1570

American Medicorp, Inc.
Southcentral United States Headquarters
Suite 201, Northwood Executive Building
1550 N.E. Loop 410
San Antonio, Texas 78207
(512) 824-7274

HIGHLAND HOSPITAL

ASHEVILLE, NORTH CAROLINA

Founded 1904

A DIVISION OF THE DEPARTMENT OF PSYCHIATRY OF DUKE UNIVERSITY

Accredited by the Joint Commission on Accreditation and Certified for Medicare

Complete facilities for evaluation and intensive treatment of psychiatric patients, including individual psychotherapy, group therapy, psychodrama, electro-convulsive therapy, Indoklon convulsive therapy, drugs, social service work with families, family therapy, and an extensive and well organized activities program, including occupational therapy, art therapy, music therapy, athletic activities and games, recreational activities and outings. The treatment program of each patient is carefully supervised in order that the therapeutic needs of each patient may be realized.

High school facilities for a limited number of appropriate patients are now available on grounds. The School Program is fully integrated into the hospital treatment program and is accredited through the Asheville School System.

Complete modern facilities with 85 acres of landscaped and wooded grounds in the City of Asheville.

Brochures and information on financial arrangements available

Contact: Mrs. Elizabeth Harkins, ACSW, Coordinator of Admissions

or

Charles W. Neville, Jr., M.D.
Assistant Professor of Psychiatry and Medical Director
Area Code 704 - 254-3201

symptoms of mixed anxiety-depression are rarely clear-cut...
but they are often a clear indication for

Mellaril®
(thioridazine)
25 mg. t.i.d.

effective in mixed anxiety-depression and in moderate to severe anxiety

Before prescribing or administering, see Sandoz literature for full product information, including adverse reactions reported with phenothiazines. The following is a brief precautionary statement.

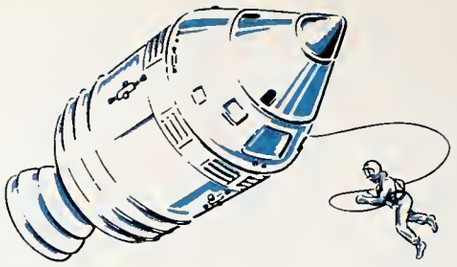
Contraindications: Severe central nervous system depression, comatose states from any cause, hypertensive or hypotensive heart disease of extreme degree.

Warnings: Administer cautiously to patients who have previously exhibited a hypersensitivity reaction (e.g., blood dyscrasias, jaundice) to phenothiazines. Phenothiazines are capable of potentiating central nervous system depressants (e.g., anesthetics, opiates, alcohol, etc.) as well as atropine and phosphorus insecticides. During pregnancy, administer only when necessary.

Precautions: There have been infrequent reports of leukopenia and/or agranulocytosis and convulsive seizures. In epileptic patients, anticonvulsant medication should also be maintained. Pigmentary retinopathy may be avoided by remaining within the recommended limits of dosage. Administer cautiously to patients participating in activities requiring complete mental alertness (e.g., driving). Orthostatic hypotension is more common in females than in males. Do not use epinephrine in treating drug-induced hypotension. Daily doses in excess of 300 mg. should be used only in severe neuropsychiatric conditions.

Adverse Reactions: *Central Nervous System*—Drowsiness, especially with large doses, early in treatment; infrequently, pseudoparkinsonism and other extrapyramidal symptoms; nocturnal confusion, hyperactivity, lethargy, psychotic reactions, restlessness, and headache. *Autonomic Nervous System*—Dryness of mouth, blurred vision, constipation, nausea, vomiting, diarrhea, nasal stuffiness, and pallor. *Endocrine System*—Galactorrhea, breast engorgement, amenorrhea, inhibition of ejaculation, and peripheral edema. *Skin*—Dermatitis and skin eruptions of the urticarial type, photosensitivity. *Cardiovascular System*—Changes in the terminal portion of the electrocardiogram have been observed in some patients receiving the phenothiazine tranquilizers, including Mellaril (thioridazine). While there is no evidence at present that these changes are in any way precursors of any significant disturbance of cardiac rhythm, several sudden and unexpected deaths apparently due to cardiac arrest have occurred in patients previously showing electrocardiographic changes. The use of periodic electrocardiograms has been proposed but would appear to be of questionable value as a predictive device. *Other*—A single case described as parotid swelling.

SANDOZ PHARMACEUTICALS, HANOVER, N.J. SANDOZ 69-384



Man in space, now fait accompli, re-emphasizes the importance of Uro-Phosphate therapy. Research into the effect of space travel on the astronaut reveals that weightlessness causes loss of bone calcium. As the bones are required to bear less and less of the weight of the body they lose calcium, increasing the calcium content of the urine. When physical activity is reduced, the acidity of the urine should be adjusted to keep increased calcium in solution . . . . a prophylaxis to prevent kidney or bladder calculi.

Uro-Phosphate®

NOW A SUGAR-COATED TABLET

Each tablet contains: METHENAMINE, 300 mg.; SODIUM ACID PHOSPHATE, 500 mg.

Uro-Phosphate gives comfort and protection when inactivity causes discomfort in the urinary function. It keeps calcium in solution, preventing calculi; it maintains clear, acid, sterile urine; it encourages complete voiding and lessens frequency when residual urine is present.

Uro-Phosphate contains sodium acid phosphate, a natural urinary acidifier. This component is fortified with methenamine which is inert until it reaches the acid urinary bladder. In this environment it releases a mild antiseptic keeping the urine sterile.

Uro-Phosphate is safe for continuous use. There are no contra-indications other than acidosis. It can be given in sufficient amount to keep the urine clear, acid and sterile. A heavy sugar coating protects its potency.

Dosage:

For protection of the inactive patient 1 or 2 tablets every 4 to 6 hours is usually sufficient to keep the urine clear, acid and sterile.

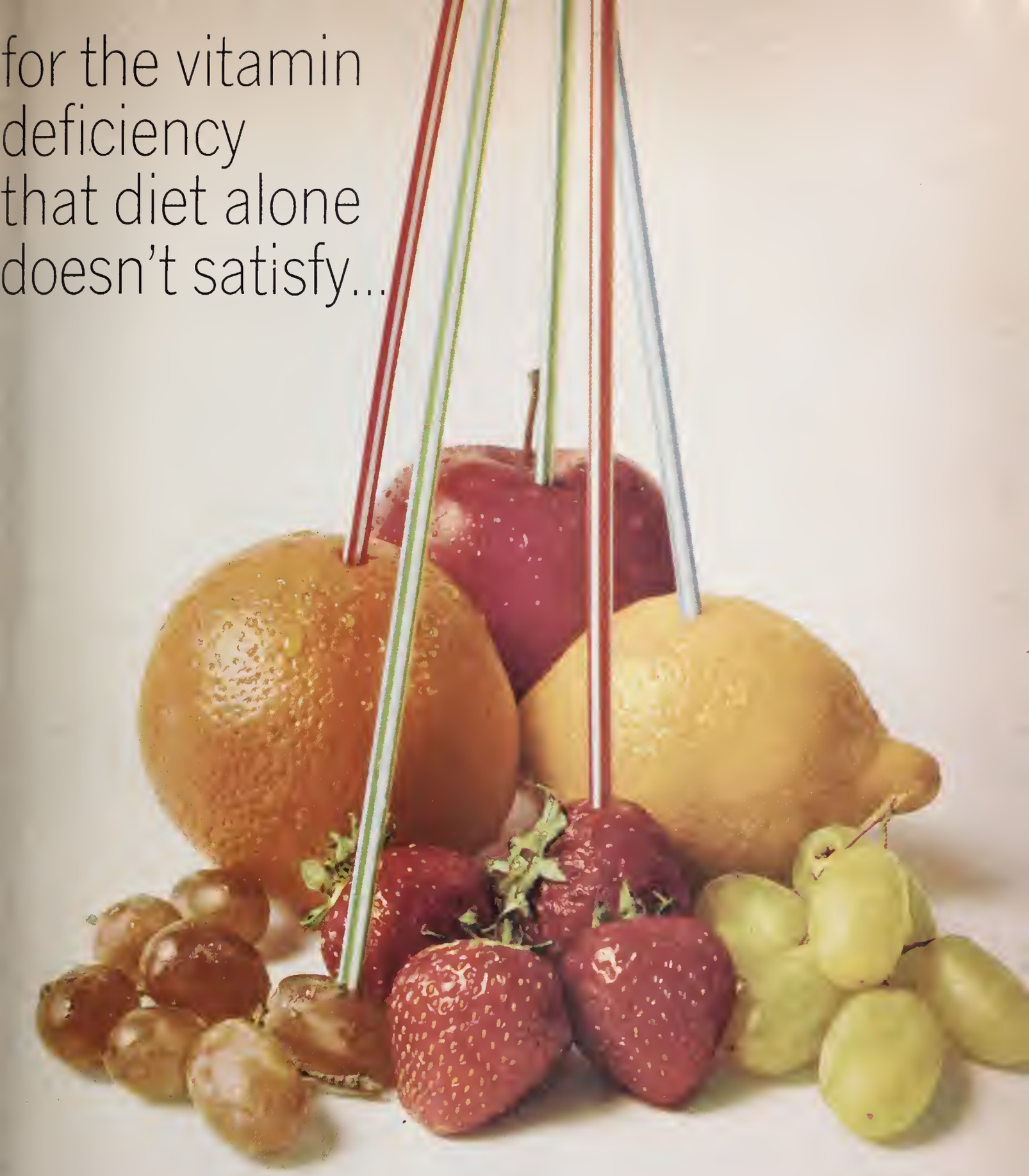
2 tablets on retiring will keep residual urine acid and sterile, contributing to comfort and rest.

A clinical supply will be sent to physicians and hospitals on request.

WILLIAM P. POYTHRESS & COMPANY, INC., RICHMOND, VIRGINIA 23217

Manufacturers of Ethical Pharmaceuticals

for the vitamin deficiency that diet alone doesn't satisfy...



Thera-Combex H-P®

This high-potency vitamin C and B-complex combination starts where diet stops

Kapseals®

Each Kapseal contains: ascorbic acid, 500 mg.; thiamine mononitrate, 25 mg.; riboflavin, 15 mg.; pyridoxine hydrochloride, 10 mg.; cyanocobalamin, 5 mcg.; niacinamide, 100 mg.; *dl*-panthenol, 20 mg.; Taka-Diastase® (Aspergillus oryzae enzymes), 2½ gr.

The Brown capsule with Green band is a Parke-Davis trademark.

Parke, Davis & Company, Detroit, Michigan 48232

PARKE-DAVIS

335R68

heavenly relief
for unearthly cough

Benylin®
EXPECTORANT

Each fluidounce contains: 80 mg. Benadryl® (diphenhydramine hydrochloride, Parke-Davis); 12 grains ammonium chloride; 5 grains sodium citrate; 2 grains chloroform; 1/10 grain menthol; and 5% alcohol.

An antitussive and expectorant for control of coughs due to colds or of allergic origin, BENYLIN EXPECTORANT is the leading cough preparation of its kind.

BENYLIN EXPECTORANT tends to inhibit cough reflex... soothes irritated throat membranes. And its not-too-sweet, pleasant raspberry flavor makes BENYLIN EXPECTORANT easy to take.

PRECAUTIONS: Persons who have become drowsy on this or other antihistamine-containing drugs, or whose tolerance is not known, should not drive vehicles or engage in other activities requiring keen response while using this preparation. Hypnotics, sedatives, or tranquilizers if used with BENYLIN EXPECTORANT should be prescribed with caution because of possible additive effect. Diphenhydramine has an atropine-like action which should be considered when prescribing BENYLIN EXPECTORANT.

ADVERSE REACTIONS: Side reactions may affect the nervous, gastrointestinal, and cardiovascular systems. Drowsiness, dizziness, dryness of the mouth, nausea, nervousness, palpitation, and blurring of vision have been reported. Allergic reactions may occur.

PACKAGING: Bottles of 4 oz., 16 oz., and 1 gal.

Parke, Davis & Company
Detroit, Michigan 48232

PARKE-DAVIS

410R69

TEXAS UROLOGICAL SOCIETY

The Holiday Inn Emerald Beach Hotel in Corpus Christi will be the site Feb. 27 and 28 of a meeting of the Texas Urological Society. Program will include scientific papers by Dr. James F. Glenn, professor and chairman of the department of urology, Duke University, and Dr. Raymond Bunge, associate professor of urology, University of Iowa. A panel composed of the urology department heads of Texas' four medical schools will discuss management of prostatic carcinoma, and Dr. Harry M. Spence of Dallas will moderate a pyelogram conference.

In addition, a golf tournament, skeet shooting competition, special entertainment for the ladies, a cocktail buffet, and a party aboard the *Showboat* are scheduled. Urologists from Arkansas, Oklahoma, New Mexico, and Louisiana will be invited.

Registration information is available from Dr. James I. Tyree, Professional Building, 1209 Santa Fe, Corpus Christi, secretary-treasurer.

SOUTHWEST ALLERGY FORUM

Afternoon panel sessions on recent developments in the management of mold allergy, management of atopic asthma and its complications in children, and our polluted planet are but a few of the diverse activities scheduled for the 31st annual Southwest Allergy Forum Feb. 2-4 at the Holiday Inn Emerald Beach Hotel at Corpus Christi. Entertainment will include fishing, moonlight cruises, golf, tennis, mariachis, cocktails, King Ranch tours, beachcombing, Padre Island National Sea Shore visits, and a style show of resort fashions for the ladies. For those also planning to attend the Mexican Allergy Society meeting in Monterrey, Mexico, round trip bus transportation will be provided; and hotel reservations have been made.

Those desiring additional information and registration applications may contact Dr. G. M. McCaskey, P.O. Box 3007, Corpus Christi 78404, secretary-treasurer.

TEXAS RADIOLOGICAL SOCIETY

The Flagship Hotel on the Pier at Galveston will be the site Jan. 30-31 of the 57th annual meeting of the Texas Radiological Society, a chapter of The American College of Radiology. Guest speaker for the luncheon session will be Dr. J. Frank Walker, president of The American College of Radiology, Atlanta, Ga. A cocktail party, banquet, entertainment, and dance are planned; and entertainment for physicians' wives includes a coffee, a bus trip to restored historical Galveston homes, and a luncheon at the Galveston Artillery Club.

Registration fee is $25 for nonmembers, and there is no fee for radiological residents and military personnel. For further details, write to Dr. Herman C. Sehested, Room 100, Medical Tower, 1550 W. Rosedale St., Fort Worth 76104, secretary.

INTERNATIONAL MEDICAL ASSEMBLY OF SOUTHWEST TEXAS

Eighteen leading medical authorities from the United States, Canada, and Mexico will convene in San Antonio on Jan. 26-28 to address the 34th annual medical science meeting of the International Medical Assembly of Southwest Texas. A Friendship Party, a ladies' brunch and style show, a Gala Dinner Dance, a golf tournament, and other social activities fill the entertainment schedule. A post convention trip to Acapulco has been planned.

S. E. Cockrell, Jr., 202 W. French Place, San Antonio 78212, executive director, will provide further information.

HIGHLIGHTS OF COMING MEETINGS

CURRENT MEETINGS IN TEXAS

AMERICAN COLLEGE OF PHYSICIANS AIR FORCE REGION AND THE SOCIETY OF AIR FORCE PHYSICIANS will sponsor a scientific meeting Feb. 4-6 at the USAF School of Aerospace Medicine at San Antonio for specialists in internal medicine and related medical specialties who are serving in the US Air Force. Special guest at the meeting will be Dr. James W. Haviland of Seattle, Wash., ACP president-elect and clinical professor of medicine at the University of Washington School of Medicine. Additional information and registration materials are available from Lt. Col. Malcolm C. Lancaster, USAF MC, Chief, Internal Medicine Branch, Clinical Sciences Division, USAF School of Aerospace Medicine, Brooks Air Force Base, Tex. 78235.

AMERICAN SOCIETY OF CLINICAL PATHOLOGISTS' Commission on Continuing Education and Commission on Medical Technology have scheduled an interim meeting for Feb. 7-14 at the Shamrock Hilton and Marriott hotels in Houston. A wide variety of workshops, seminars, and roundtable luncheon symposia are planned, including those held by the councils on anatomic pathology, clinical chemistry, cytopathology, hematology, immunohematology, microbiology, special topics, and medical technology. Some programs are designed for pathologists, medical technologists, and other ASCP-registered personnel, while others are planned for specialized participation. Early registration is advised, and there will be no registration fee for members or affiliate members. Nonmembers will be charged a general registration fee of $10. Write to Dr. Clyde G. Culbertson, President, P.O. Box 618, Indianapolis, Ind. 46206, for additional details.

FIFTH DISTRICT MEDICAL SOCIETY of the Texas Medical Association will hold its annual meeting Jan. 28, 1970, at the San Antonio Convention Center. Main objective of the meeting will be the election of new officers. Also to be considered is the best application of the district's funds. Contact Dr. A. Fletcher Clark, Jr., 3F Med. Prof. Bldg., San Antonio 78212, secretary-treasurer, for additional information.

SCOTT AND WHITE CONFERENCE IN MEDICINE AND SURGERY will take place Feb. 27-28 at the Veterans Administration Hospital Auditorium in Temple. Program for the 18th annual meeting will include sessions on laboratory aids to clinical diagnosis, 40-minute scientific demonstrations, and speakers on adverse drug reactions. A luncheon is also planned. Contact Scott and White Memorial Hospital, 2401 S. 31st St., Temple, for further information.

SOUTHWESTERN MEDICAL ASSOCIATION will hold its 49th scientific session Feb. 12-14 at the Sheraton Motor Inn in El Paso in conjunction with meetings of District 1 of the Texas Medical Association and the El Paso County Medical Society. Dr. Charles Max Cole of Dallas, President of TMA, will be one of 12 guest speakers. The program will be acceptable for 18 elective hours of credit by the American Academy of General Practice. A reception, banquet, and luncheon are planned for physicians and their wives; and special entertainment including a coffee, a luncheon, guided tours to local points of interest, shopping, and a style show is planned for the wives. There will be no program on Saturday so that physicians and wives are free to visit El Paso and Juarez. Further information may be obtained from Dr. Laurance N. Nickey, President, 723 Mills Bldg., El Paso 79901.

TEXAS NURSING HOME ASSOCIATION will present an Institute for Directors of Nursing Service on the theory and practice of nursing service administration Jan. 25-28 at the Contessa Inn in Longview. Conducted by The University of Texas at Austin Division of Extension, Distributive Education Department, the conference will be open to administrators and their assistants, registered nurses, and graduate LVNs. Faculty members for the meeting include Bill Tucker, director of institutional resources, El Centro College, Dallas; Dr. Fred H. Watson (PhD), associate professor of management and assistant dean, College of Business, The University of Texas at Austin; Miss Pamela Gay Messer, assistant instructor on the nursing faculty at Incarnate Word College in San Antonio; and Edward L. Baker, Jr., 1969 president of the Texas Pharmaceutical Association. Sidney D. Rich, 6225 US Hwy. 290 E., Austin 78723, is executive officer and will provide further information.

CURRENT NATIONAL MEETINGS

AMERICAN ACADEMY OF ALLERGY's 26th annual meeting will convene Feb. 14-18 at the Jung Hotel in New Orleans, La. Subjects on the postgraduate program will include pulmonary diseases and asthma, developments in medicine relating to allergy, clinical immunology, and organ transplantation. Registration fee for nonmembers is $25; and students, interns, and residents will be admitted at no charge. Additional information may be obtained from Mrs. Julie Thompson, 756 N. Milwaukee St., Milwaukee, Wis. 53202, membership secretary.

AMERICAN COLLEGE OF CARDIOLOGY will sponsor its 19th annual Scientific Session Feb. 25-March 1 at the Rivergate Center in New Orleans, La. Major scientific symposia will include such topics as surgery for complications of myocardial infarctions and cardiac valve substitution and pulmonary circulation. A core curriculum in clinical cardiology and a self-assessment classroom will be new features at this year's meeting. Special panel discussions called Controversies in Cardiology will feature discussions by authorities on opposing sides of current issues, including prevention of atherosclerosis, homografts v. prosthetic heart valves, alcoholic heart disease, and surgery for coronary disease. Participants at the session will be able to attend a choice of 20 evening Fireside Conferences, 21 luncheon panels, clinical conversations with master teachers, and a round of clinics and demonstrations arranged with hospitals and medical schools in the New Orleans area. Write to William D. Nelligan, Executive Director, 9650 Rockville Pike, Bethesda, Md. 20014, for further information.

AMERICAN COLLEGE OF SURGEONS has scheduled three sectional meetings Feb. 2-4 at the Portland Hotel in Portland, Ore.; Feb. 16-18 at the St. Paul Hilton Hotel in St. Paul, Minn.; and March 16-18 at the Sheraton Park Hotel in Washington, D.C. These sessions will include panel discussions, "how-to-do-it" clinics, and symposia on newer ways of handling surgical problems. Scientific papers and selected films will also be presented. General surgery and three or more surgical specialties will be featured at each meeting. Contact Dr. C. Rollins Hanlon, 55 E. Erie St., Chicago 60611, director, for additional and more specific information.

AMERICAN SOCIETY FOR AESTHETIC PLASTIC SURGERY, INC., will conduct its annual meeting at the Marriott Motor Hotel in Atlanta, Ga., on Feb. 8-10. Physicians interested in submitting papers to be discussed at the meeting may send their titles and abstracts to Dr. John R. Lewis, Jr., 478 Peachtree St., N.E., Atlanta, Ga. 30308, president. Dr. Simon Fredricks, 1103 Medical Towers, Houston 77025, secretary, will provide more detailed information concerning the meeting.

SECOND NATIONAL CONFERENCE AND EXPOSITION ON ELECTRONICS IN MEDICINE will be held Feb. 12-14 at the Fairmont Hotel in San Francisco. Sponsored by the Electronics/Management Center of McGraw-Hill Publications Company in association with *Electronics, Medical World News, Modern Hospital,* and *Postgraduate Medicine,* the conference will feature exhibits of medical electronics hardware including patient monitoring systems; specialized equipment to monitor such functions as respiration, cardiac activity, and blood pressure; a computer-assisted diagnosis system; a computer-based console to enable a patient to self-administer his medical history profile; and a demonstration of the planning, building, and equipping of hospitals and other health facilities. Approximately 40 speakers and panelists will be heard by participants who will also attend workshop sessions. Information on conference registration is available from Samuel Weber, Electronics/Management Center, 330 W. 42nd St., New York 10036.

MORE HIGHLIGHTS OF COMING MEETINGS

■ Denotes Texas meetings.

ALSO IN JANUARY

■ BLUE CROSS-BLUE SHIELD SYMPOSIUM, Houston, Jan. 27, 1970; Victoria, Feb. 17, 1970; San Antonio, Feb. 19, 1970. Tom L. Beauchamp, Jr., Blue Cross Bldg., Main at N. Central Expressway, Dallas 75222, Pres.

■ TEXAS SOCIETY OF PATHOLOGISTS, INC., San Antonio, Jan. 24-25, 1970. Dr. Jack L. Smith, 3155 Stagg Dr., Beaumont 77701, Sec.

■ TEXAS STATE BOARD OF MEDICAL EXAMINERS, Fort Worth, Jan. 23-25, 1970. Dr. M. H. Crabb, 1612 Summit, Suite 303, Fort Worth 76102, Sec.

ALSO IN FEBRUARY

AMERICAN BOARD OF FAMILY PRACTICE, INC., examination for certification, Feb. 28-March 1, 1970. Dr. Nicholas J. Pisacano, American Board of Family Practice, Inc., University of Kentucky Medical Center, Annex #2, Room 229, Lexington 40506, Sec.

■ AMERICAN SOCIETY OF CLINICAL PATHOLOGISTS and COLLEGE OF AMERICAN PATHOLOGISTS, Houston, Feb. 23-28, 1970. Albert G. Boeck, 710 S. Wolcott, Chicago, Exec. Dir.

■ TEXAS PUBLIC HEALTH ASSOCIATION, Austin, Feb. 22-25, 1970. Joseph N. Murphy, Jr., Box 5192, Austin 78703, Exec. Officer.

MARCH

AMERICAN ASSOCIATION OF ANATOMISTS, Chicago, March 31-April 3, 1970. Dr. Russell T. Woodburne (PhD), Department of Anatomy, The University of Michigan, E. Med. Bldg., Ann Arbor, Mich. 48104, Sec.-Treas.

AMERICAN COLLEGE OF ALLERGISTS, Bal Harbour, Miami Beach, Fla., March 15-19, 1970. Eloi Bauers, 2100 Dain Tower, Minneapolis, Minn. 55402, Exec. Vice Pres. and Counsel.

■ AMERICAN COLLEGE OF RADIOLOGY, Dallas, March 3-4, 1970. William C. Stronach, 20 N. Wacker Dr., Chicago 60606, Exec. Dir.

AMERICAN COLLEGE OF SURGEONS, Washington, D. C., March 16-18, 1970. Dr. C. Rollins Hanlon, 55 E. Erie St., Chicago 60611, Dir.

AMERICAN DERMATOLOGICAL ASSOCIATION, Boca Raton, Fla., March 19-24, 1970. Dr. Charles Barrett Kennedy, 1542 Tulane Ave., New Orleans 70115, Exec. Sec.

■ DALLAS SOUTHERN CLINICAL SOCIETY, Dallas, March 16-18, 1970. Millard J. Heath, 433 Medical Arts Bldg., Dallas 75201, Exec. Officer.

NEW ORLEANS GRADUATE MEDICAL ASSEMBLY, New Orleans, March 2-5, 1970. Mrs. Irma B. Sherwood, 1430 Tulane Ave., New Orleans 70112, Exec. Sec.

■ HOUSTON SOCIETY OF CLINICAL PATHOLOGISTS, Houston, March 28, 1970. Dr. Don B. Singer, Dept. of Pathology, Texas Children's Hospital, 6221 Fannin St., Houston 77025, Chrmn.

■ NINTH DISTRICT MEDICAL SOCIETY, Pasadena, Tex., March 19, 1970. Dr. William H. Bridges, 1105 Decker Dr., Baytown, Tex. 77520, Sec.

■ RADIATION RESEARCH SOCIETY OF AMERICA, Dallas, March 1-5, 1970. Dr. Mary E. Gaulden (PhD), The University of Texas Southwestern Medical School, 5323 Harry Hines Blvd., Dallas 75235.

■ SOUTH CENTRAL ASSOCIATION OF BLOOD BANKS, Houston, March 12-14, 1970. Mrs. Elsie Howard, 2109 Commerce St., Dallas 75201, Exec. Sec.

SOUTHWESTERN SOCIETY OF NUCLEAR MEDICINE, Oklahoma City, March 13-15, 1970. Dr. Herbert C. Allen, Jr., 100 Hermann Professional Bldg., Houston 77025, Sec.

■ TEXAS ASSOCIATION OF OBSTETRICIANS & GYNECOLOGISTS, Houston, March 6-7, 1970. Dr. J. L. Jinkins, Jr., 200 University Blvd., Suite 921, Galveston 77550, Sec.

US-MEXICO BORDER PUBLIC HEALTH ASSOCIATION, Mexicali, Baja Calif., March 16-20, 1970. Dr. Jorge Jimenez-Gandica, Sec.

APRIL

AEROSPACE MEDICAL ASSOCIATION, St. Louis, Mo., April 27-30, 1970. Dr. Merrill H. Goodman, Washington National Airport, Washington, D.C., Exec. Vice Pres. and Sec.

AMERICAN ACADEMY OF NEUROLOGY, Miami Beach, Fla., April 27-May 2, 1970. Stanley A. Nelson, 4005 W. 65th St., Minneapolis 55435, Exec. Officer.

AMERICAN ACADEMY OF PEDIATRICS, Washington, D.C., April 13-16, 1970. Dr. Robert G. Frazier, 1801 Hinman Ave., Evanston, Ill. 60204, Exec. Dir.

AMERICAN ASSOCIATION FOR THORACIC SURGERY, Washington, D.C., April 6-8, 1970. Miss Ada Hanvey, 7710 Carondelet Ave., St. Louis, Mo. 63105, Exec. Officer.

■ AMERICAN COLLEGE OF ALLERGISTS, seminar on allergy and immunology, Children's Medical Center, Dallas, April 10-12, 1970. Dr. John D. Gillaspie, The American College of Allergists, 2141 14th St., Boulder, Colo. 80302, Exec. Sec. and Treas.

AMERICAN COLLEGE OF OBSTETRICIANS AND GYNECOLOGISTS, New York City, April 12-18, 1970. Dr. Michael Newton, 79 W. Monroe St., Chicago 60603, Exec. Officer.

AMERICAN MEDICAL ASSOCIATION, 23rd National Conference on Rural Health, Milwaukee, Wis., April 9-10, 1970. Dr. Bond L. Bible (PhD), Council on Rural Health, American Medical Association, 535 N. Dearborn St., Chicago 60610, Sec.

AMERICAN PEDIATRIC SOCIETY, Atlantic City, N.J., April 29-May 2, 1970. Dr. Charles D. Cook, 333 Cedar St., New Haven, Conn. 06510, Exec. Sec.

■ AMERICAN PHYSICAL THERAPY ASSOCIATION: TEXAS CHAPTER, Corpus Christi, April 24-26, 1970; Hilda McKethan, 4162 Monaco Dr., Corpus Christi 78411, Chm.

AMERICAN PROCTOLOGIC SOCIETY, Hollywood, Fla., April 12-16, 1970. Dr. John E. Ray, 320 W. Lafayette, Detroit, Mich., Sec.

ASSOCIATION OF AMERICAN PHYSICIANS AND SURGEONS, INC., House of Delegates, Chicago, April 3-4, 1970. Frank K. Woolley, 230 N. Michigan Ave., Chicago 60601, Exec. Dir.

■ EIGHTH DISTRICT MEDICAL SOCIETY, Lake Jackson, Tex., April, 1970. Dr. Clinton E. Woodson, 2100 N. Fulton St., Wharton, Tex. 77488, Sec.

FIRST INTERNATIONAL CONGRESS ON GROUP MEDICINE, Winnipeg, Manitoba, Canada, April 26-30, 1970. Mrs. D. Sorell, 425 St. Mary Ave., Winnipeg 1, Manitoba, Canada, Exec. Sec.

■ FORT WORTH CLINICAL SYMPOSIUM, Fort Worth, April 17-19, 1970. Dr. John S. Alexander, 1217 W. Cannon, Fort Worth 76104, Sec.

INDUSTRIAL MEDICAL ASSOCIATION and AMERICAN ASSOCIATION OF INDUSTRIAL NURSES, American Industrial Health Conference, Chicago, April 13-16, 1970. Howard N. Schulz, 55 E. Washington St., Chicago 60602, Exec. Dir.

■ SANTA ROSA MEDICAL CENTER, THE CHILDREN'S HOSPITAL, Eighth Annual Teaching Conference, San Antonio, April 4-5, 1970. Chairman, Department of Pediatrics, The Children's Hospital, Santa Rosa Medical Center, San Antonio 78207.

■ SOUTHWESTERN SURGICAL CONGRESS, Dallas, April 20-23, 1970. Dr. Jack A. Barney, 301 Pasteur Bldg., Oklahoma City 73103, Sec.-Treas.

■ TEXAS ACADEMY OF GENERAL PRACTICE, Valley Chapter, Third Annual Medical-Surgical Conference, Harlingen, April 3-5, 1970. Dr. Rudolph C. Hecht, Box 838, La Feria, Tex. 78559.

■ TEXAS DENTAL ASSOCIATION, Fort Worth, April 26-29, 1970. Bill B. Howard, 3707 Gaston Ave., Dallas 75246, Exec. Sec.

■ TEXAS INDUSTRIAL MEDICAL ASSOCIATION, Dallas, April, 1970. Dr. Carolyn K. Veatch, 4837 Merrimac, Corpus Christi 78415, Sec.

■ TEXAS MEDICAL ASSOCIATION, Annual Session, Dallas, April 30-May 3, 1970. C. Lincoln Williston, 1801 N. Lamar Blvd., Austin 78701, Exec. Sec.

■ TEXAS PROCTOLOGIC SOCIETY, Dallas, April, 1970. Dr. James M. Hampton, 448 Hermann Professional Bldg., Houston 77025, Sec.-Treas.

■ TEXAS SOCIETY OF CHILD PSYCHIATRY, Brownsville, Tex., April 17-18, 1970. Dr. Alberto C. Serrano, 2135 Babcock Rd., San Antonio, Sec.

■ TEXAS SURGICAL SOCIETY, Austin, April 5-7, 1970. Dr. Jesse E. Thompson, 3434 Swiss Ave., Dallas 75204, Sec.

■ TEXAS TUBERCULOSIS AND RESPIRATORY DISEASE ASSOCIATION, Lubbock, April 2-4, 1970. Mrs. Pauline K. Matthis, 2402 Manor Rd., Austin, Exec. Officer.

■ 13TH DISTRICT MEDICAL SOCIETY, Wichita Falls, Tex., April 11, 1970. Dr. William H. Neil, 800 Fifth Ave., Fort Worth 76104, Sec.

UNITED STATES PHARMACOPEIAL CONVENTION, INC., Washington, D.C., April 8-10, 1970. Dr. Arthur C. DeGraff, 4630 Montgomery Ave., Bethesda, Md. 20014, pres.

MORE HIGHLIGHTS OF COMING MEETINGS

MAY

■ AMERICAN ACADEMY OF PEDIATRICS, TEXAS CHAPTER, Dallas, May 1, 1970. Dr. William S. Conkling, 500 E. Washington, Navasota 77868, Sec.

AMERICAN ACADEMY OF PSYCHOANALYSIS, San Francisco, May 8-10, 1970. Dr. Sidney S. Goldensohn, 40 Gramercy Park No., New York 10010, Sec.

■ AMERICAN COLLEGE OF SURGEONS, NORTH TEXAS CHAPTER, May 16, 1970. Dr. Ernest Poulos, 6140 Sherry Lane, Dallas 75225, Sec.-Treas.

AMERICAN PSYCHIATRIC ASSOCIATION, San Francisco, May 11-15, 1970. Dr. Walter E. Barton, 1700 18th St. NW, Washington, D.C. 20009, Exec. Officer.

■ AMERICAN PSYCHIATRIC ASSOCIATION, TEXAS DISTRICT BRANCH, Dallas, May, 1970. Mrs. Iris Wenzel, 1801 N. Lamar Blvd., Austin 78701, Exec. Sec.

AMERICAN THORACIC SOCIETY, Cleveland, May 24, 1970. Robert G. Weymueller, 1790 Broadway, New York 10019, Exec. Officer.

AMERICAN UROLOGICAL ASSOCIATION, Philadelphia, May 11-14, 1970. Richard J. Hannigan, 1120 N. Charles St., Baltimore, Exec. Officer.

■ CONFERENCE OF CITY AND COUNTY HEALTH OFFICERS, Dallas, May, 1970. Dr. J. E. Peavy, 1100 W. 49th St., Austin 78756, Texas State Commissioner of Health.

INTERNATIONAL ACADEMY OF PROCTOLOGY, Spain, May 13-22, 1970. Executive Office, 147-41 Sanford Ave., Flushing, N.Y. 11355.

■ INTERNATIONAL CANCER CONGRESS, Houston, May 22-29, 1970. Dr. Murray M. Copeland, Office of the Secretariat, Tenth International Cancer Congress, P.O. Box 20465, Astrodome Station, Houston 77025, Sec. General.

■ NATIONAL LEAGUE FOR NURSING, Dallas, May 10-14, 1970. Mrs. Margaret E. Walsh, 10 Columbus Circle, New York 10019, Sec.

■ ST. LUKE'S EPISCOPAL SYMPOSIUM, Houston, May 14-16, 1970. Dr. Donald T. Lazarz, 1817 Dryden, Houston 77025, Pres.

STUDENT AMERICAN MEDICAL ASSOCIATION, Philadelphia, May 5-9, 1970. Russell F. Staudacher, 2635 Flossmoor Rd., Flossmoor, Ill. 60422, Exec. Dir.

■ TEXAS AIR-MEDICS ASSOCIATION, Dallas, May 2, 1970. Dr. C. F. Miller, Box 1338, Waco 76703, Sec.

■ TEXAS DERMATOLOGICAL SOCIETY, Dallas, May 2-3, 1970. Dr. Coleman G. Jacobson, 3707 Gaston, Dallas, 75246, Sec.

■ TEXAS HOSPITAL ASSOCIATION, Houston, May 17-20, 1970. O. Ray Hurst, P. O. Box 4553, Austin 78751, Exec. Vice Pres.

■ TEXAS MEDICAL ASSISTANTS ASSOCIATION, Baytown, May 21-24, 1970. Faye Gibson, 5401 41st St., Lubbock, Sec.

■ TEXAS OPHTHALMOLOGICAL ASSOCIATION, Dallas, May 1, 1970. Dr. John C. Kuppinger, 1515 Ed Carey Dr., Harlingen 78550, Sec.

■ TEXAS ORTHOPAEDIC ASSOCIATION, Dallas, May 2, 1970. Dr. John J. Hinchey, 1A Medical Professional Bldg., San Antonio 78212, Exec. Officer.

■ TEXAS OTOLARYNGOLOGICAL ASSOCIATION, Dallas, May, 1970. Dr. James L. Baldwin, 712 N. Washington, Dallas 75246, Sec.

■ TEXAS SOCIETY OF PLASTIC SURGEONS, Dallas, May 2, 1970. Dr. E. Frank Dunton, 3434 Swiss Ave., Suite 104, Dallas 75204, Sec.

★

Specialized Service

IN

PROFESSIONAL LIABILITY INSURANCE

is a high mark of distinction

THE

MEDICAL PROTECTIVE COMPANY

FORT WAYNE, INDIANA

Professional Protection Exclusively since 1899

AUSTIN OFFICE: Robert F. Reiman, Representative
3201 Clearview, Austin 78703 Telephone: 512-472-9603

DALLAS OFFICE: Gayle Nelson and Arthur F. Ennis, Jr., Representatives
816 Medical Arts Building, Dallas 75201 Telephone: 214-742-4980

HOUSTON OFFICE: Richard B. Ross and William A. Orsburn, Representative
1525 Hermann Professional Bldg., Houston 77025 Telephone: 713-523-1127

Turner's Clinical & X-Ray Laboratories

Medical Center

El Paso, Texas

Telephone 532-4689

☆

SURGICAL PATHOLOGY
CLINICAL PATHOLOGY
RADIOLOGY

☆

GEORGE TURNER, M.D.
DELPHIN von BRIESEN, M.D.
JEANNE TURNER BOWMAN, M.D.

The Martin X-Ray and Radium Clinic

3501 Gaston Ave. Dallas, Texas

ADJOINING
GASTON EPISCOPAL HOSPITAL

For X-ray diagnosis and the X-ray and radium treatment of cancer and other conditions suitable for radiation therapy.

Chas. L. Martin, M.D. James A. Martin, M.D.

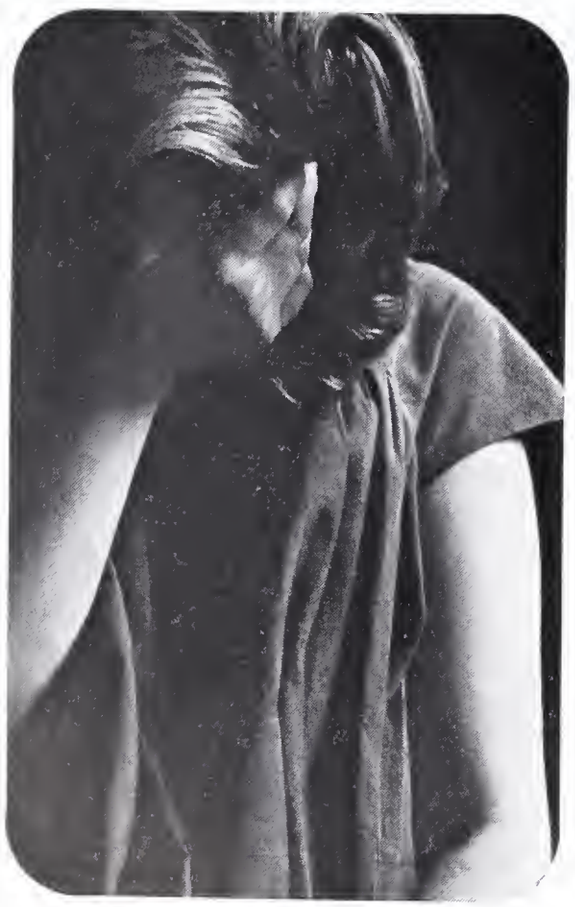
the common denominator in G.U. therapy

In G. U. therapy, the first consideration is control of infection. To your patient, a primary concern is *relief from pain.* URISED provides rapid relief from pain, and relaxation of smooth muscle spasm through parasympatholytic action of atropine and hyoscyamine.

URISED is not a dramatic "wonder drug" but a useful one that has served the medical profession for more than fifty years. You can rely on URISED; it has gained the confidence of physicians who have written more than one million prescriptions for their patients.

URISED is a mild but reliable agent with a low order of toxicity. It can be used alone to treat uncomplicated urinary tract infections where the invading organisms are susceptible to methenamine and methylene blue in an acid medium. URISED can provide "interim therapy" while awaiting complete laboratory diagnosis. It can also be used as an adjunct (to relieve pain and spasm) with almost any other form of antibacterial therapy).

For prompt relief of the distressing symptoms of pain, burning, frequency, dysuria, and spasm, consider URISED. Your patient will recognize its presence by the characteristic blue-green urine.



keeping your patient comfortable

PRECAUTIONS: Administer with caution to persons with known idiosyncrasy to atropine or cardiac disease.

SIDE EFFECTS: Neither irritation nor other untoward reactions have been reported; however, if pronounced dryness of the mouth, flushing, or difficulty in initiating micturition occur, decrease dosage. If rapid pulse, dizziness, or blurring of vision occur, discontinue use immediately. Acute urinary retention may be precipitated in prostatic hypertrophy.

CONTRAINDICATIONS: Glaucoma, urinary bladder neck or pyloric obstruction, duodenal obstruction and cardiospasm. Hypersensitivity to any of the ingredients.

DOSAGE: Adults—Two tablets, orally, four times per day followed by liberal fluid intake. Acute cases—Initially two tablets every hour for three doses followed by the recommended daily administration. Children—One-half the adult dose.

Stocked Nationally Through All Service Wholesale Druggists

URISED®

Each blue-coated tablet contains active:

Atropine Sulfate	0.03 mg.	Methylene Blue	5.4 mg.
Hyoscyamine	0.03 mg.	Phenyl Salicylate	18.1 mg.
Methenamine	40.8 mg.	Benzoic Acid	4.5 mg.

CONAL PHARMACEUTICALS, INC.
CHICAGO, ILLINOIS 60640

Manufacturers of Uriceutical® Specialties

General Practice: Galveston, Tex., will be the site Feb. 1-7, 1970, of a general practice review postgraduate course sponsored by the department of postgraduate education and the clinical departments at The University of Texas Medical Branch at Galveston. The course is designed especially for the general practitioner, and an important area of practice will be covered each day of the week. Subjects to be included are medicine, pediatrics, surgery, obstetrics and gynecology, dermatology, psychiatry-neurology, otolaryngology, ophthalmology, and anesthesiology. A number of evening round-table discussions are also scheduled.

For additional information, write to Dr. Stephen R. Lewis, Director, Postgraduate Education, Professor of Surgery and Chief, Plastic Surgery Division, The University of Texas Medical Branch, Galveston 77550.

Various Subjects: The American College of Physicians will sponsor a series of postgraduate courses on the following subjects: practical approach to selected clinical problems, Jan. 26-29, 1970, New Orleans; gastroenterology for teachers, Feb. 23-27, 1970, Ann Arbor, Mich.; clinical concepts in infectious diseases: manifestations and management, March 2-4, 1970, Gainesville, Fla.; cardiology and renal disease: pathophysiology and pharmacology, March 9-13, 1970, Chicago; clinical problems in internal medicine, March 16-20, Cleveland, Ohio; and neurology and the internist, March 23-26, 1970, Rochester, Minn. Lectures, demonstrations, panel discussions, and question and answer periods will be included.

Tuition is $60 for members and $100 for nonmembers for each of the courses. Write Dr. Edward C. Rosenow, Jr., Executive Director, American College of Physicians, 4200 Pine St., Philadelphia 19104, for additional information and registration forms.

Allergy: The American Academy of Allergy will present a two-day postgraduate course in connection with its 26th annual meeting, Feb. 14-18, 1970, at the Jung Hotel in New Orleans. The program will offer subjects of timely interest in allergy, immunology, and related fields. Topics include pulmonary diseases and asthma, developments in medicine relating to allergy, clinical immunology, and organ transplantation. Scientific session will convene Feb. 16 and will feature presentations of new research in allergy.

Details of the program may be obtained by contacting the American Academy of Allergy Executive Office, 756 N. Milwaukee St., Milwaukee, Wis. 53202.

POSTGRADUATE COURSES

Laboratory Workshops: A series of laboratory workshops for the benefit of public health, hospital, clinical, and other medical laboratories has been scheduled for the spring of 1970. The first workshop will take place Feb. 4-6 and will be on microtiter serology, a project with emphasis on the usefulness of the microtiter (dipping) technique in depressed plastic plates rather than conventional test-tube pipetting. The new technique is applicable both to complement fixation and hemagglutination inhibition, increasingly used in routine serological tests such as for rubella, histoplasmosis, or influenza. The second workshop in the series is set for Feb. 18-20. Entitled "Introductory Immuno Fluorescence," this project is designed to acquaint the worker with the use of the microscope and provide some first hand knowledge of techniques. Some work in beta strep grouping, rabies, toxoplasmosis, and syphilis serology will be included. Daily starting and closing times for each workshop will be 9 a.m. and 5 p.m.

There is no registration fee for the workshops, and admittance is by prior registration only. Applications may be addressed to Dr. J. V. Irons (ScD), Director of Laboratories, Texas State Department of Health, 1100 W. 49th St., Austin 78756.

Neuropathology: The Department of Psychiatry at The University of Texas Southwestern Medical School at Dallas announces a continuing course in neuropathology for psychiatrists from 7 to 9 p.m. on Thursdays, Jan. 22, 29, and Feb. 5, 1970. Instructor for the course will be Dr. A. N. D'Agostino, associate professor of pathology at Southwestern. Additional information is available from the Department of Postgraduate Education, The University of Texas Southwestern Medical School, 5323 Harry Hines Blvd., Dallas 75235.

Laboratory Training: A series of laboratory training courses are being presented by the Laboratory Division of the National Communicable Disease Center in Atlanta, Ga. "Laboratory Methods in Enteric Bacteriology" and "Basic Laboratory Methods in Virology" will be offered March 23-April 3 and March 23-April 2, 1970, respectively. Registration for these courses will close Jan. 26, 1970. "Laboratory Methods in the Diagnosis of Viral Exanthems" will be offered April 3-9, 1970; and registration will end Feb. 9, 1970. The deadline for registering for "Laboratory Methods in Dermatologic Mycology" is also Feb. 9, 1970. The course will be held April 6-17, 1970. From April 13-May 8, 1970, will be "Laboratory Methods in Medical Parasitology"; and registration will end Feb. 16, 1970.

Information and application forms may be obtained from the Training Office, Laboratory Division, National Communicable Disease Center, Atlanta 30333.

Surgery: A postgraduate course on surgery of the hand will be held Feb. 17-20, 1970, in Denver, Colo. Sponsored by the University of Colorado School of Medicine, this four-day course will cover various aspects of trauma to the hand including reconstructive surgery. Specific subjects in the fields of rheumatoid arthritis, Dupuytren's contracture, and congenital defects are also featured.

All sessions will take place in the Humphreys Postgraduate Center in the Denison Library Building. A buffet luncheon will be served each day in the center, and the cost of the luncheons is included in the $80 tuition.

Guest faculty will include Drs. John A. Boswick, director, Hand Surgical Service, Cook County Hospital, Chicago; J. Leonard Goldner, professor, Division of Orthopedic Surgery, Duke University School of Medicine, Durham, N.C.; George E. Omer, Col., MC, chief, Orthopedic Service, Brooke General Hospital, Fort Sam Houston, San Antonio; Daniel C. Riordan, associate professor of orthopedic surgery, Tulane University School of Medicine, New Orleans.

For further information and detailed programs, write to the Office of Postgraduate Medical Education, University of Colorado School of Medicine, 4200 E. Ninth Ave., Denver 80220.

Cancer: Postgraduate fellowships in cancer will be offered by The University of Texas Medical School at San Antonio for practicing physicians who wish to spend a period of one or two weeks, fulltime, in the medical school and adjacent teaching hospital working with the faculty and staff in the care and management of cancer patients. Such programs will be available in most of the clinical fields such as surgery, radiotherapy, medicine, pediatrics, obstetrics-gynecology, and pathology and will be tailored to meet the desires of the individual physician. Any inquiries may be addressed to Dr. J. B. Aust, chairman, Cancer Committee, 7703 Floyd Curl Drive, San Antonio 78229.

Convalescing . . . but still a long way to go. Anxiety can make it even longer.

Convalescence following medical or surgical procedures may be almost endless to an anxious patient. And, indeed, anxiety with some patients actually retards progress—for example, by inducing insomnia and reducing cooperation.

As physicians have found during nearly 15 years of widespread use, Equanil may be a beneficial part of aftercare. It helps relieve anxiety and tension, thus often aiding your primary therapy.

Indications: For use in management of anxiety and tension occurring alone or as accompanying symptom complex to medical and surgical disorders and procedures. Though not a hypnotic, fosters normal sleep through antianxiety and related muscle-relaxant properties.

Contraindications: History of sensitivity to meprobamate.

Important Precautions: Carefully supervise dose and amounts prescribed, especially for patients prone to overdose themselves. Excessive prolonged use has been reported to result in dependence or habituation in susceptible persons, as alcoholics, ex-addicts, and other severe psychoneurotics. After prolonged excessive dosage, reduce dosage gradually to avoid possibly severe withdrawal reactions. Abrupt discontinuance of excessive doses has sometimes resulted in epileptiform seizures.

Warn patients of possible reduced alcohol tolerance, with resultant slowing of reaction time and impairment of judgment and coordination.

Reduce dose if drowsiness, ataxia or visual disturbance occurs; if persistent, patients should not operate vehicles or dangerous machinery.

Side Effects include drowsiness, usually transient; if persistent and associated with ataxia, usually responds to dose reduction; occasionally concomitant CNS stimulants (amphetamine, mephentermine sulfate) are desirable. Allergic or idiosyncratic reactions are rare, but such reactions, sometimes severe, can develop in patients receiving only 1 to 4 doses who have had no previous contact with meprobamate. Previous history of allergy may or may not be related to incidence of reactions. Mild reactions are characterized by itchy urticarial or erythematous maculopapular rash, generalized or confined to groin. Acute nonthrombocytopenic purpura with cutaneous petechiae, ecchymoses, peripheral edema and fever have been reported. One fatal case of bullous dermatitis following intermittent use of meprobamate with prednisolone has been reported. If allergic reaction occurs, meprobamate should be stopped and not reinstituted. Severe reactions, observed very rarely, include angioneurotic edema, bronchial spasms, fever, fainting spells, hypotensive crises (1 fatal case), anaphylaxis, stomatitis and proctitis (1 case) and hyperthermia. Treat symptomatically as with epinephrine, antihistamine and possibly hydrocortisone. Aplastic anemia (1 fatal case), thrombocytopenic purpura, agranulocytosis and hemolytic anemia have occurred rarely, almost always in presence of known toxic agents. A few cases of leukopenia, usually transient, have been reported on continuous administration.

Meprobamate may sometimes precipitate grand mal attacks in patients susceptible to both grand and petit mal. Extremely large doses can produce rhythmic fast activity in the cortical pattern. Impairment of accommodation and visual acuity has been reported rarely. After excessive dosage for weeks or months, withdraw gradually (1 or 2 weeks) to avoid recurrence of pretreatment symptoms (insomnia, severe anxiety, anorexia). Abrupt discontinuance of excessive doses has sometimes resulted in vomiting, ataxia, tremors, muscle twitching and epileptiform seizures. Prescribe very cautiously and in small amounts for patients with suicidal tendencies. Suicidal attempts have resulted in coma, shock, vasomotor and respiratory collapse and anuria. Excessive doses have resulted in prompt sleep; reduction of blood pressure, pulse and respiratory rates to basal levels; and occasionally hyperventilation. Treat with immediate gastric lavage and appropriate symptomatic therapy. (CNS stimulants and pressor amines as indicated.) Doses above 2400 mg./day are not recommended.

Composition: Tablets, 200 mg. and 400 mg. meprobamate. Coated Tablets, WYSEALS® EQUANIL (meprobamate) 400 mg. (All tablets also available in REDIPAK® [strip pack], Wyeth.) Continuous-Release Capsules, EQUANIL L-A (meprobamate) 400 mg.

EQUANIL®
(meprobamate)

Wyeth

Wyeth Laboratories Philadelphia, Pa.

Photo professionally posed.

Milk from lactating patients with breast cancer, patients with a history of treated breast cancer and patients with a history of breast cancer in their immediate family is needed for special studies by physicians at The University of Texas M. D. Anderson Hospital and Tumor Institute at Houston. Doctors who might be interested in having the milk from their patients considered for the study should write to:

Dr. Gabriel Seman, Department of Virology
The University of Texas at Houston
M. D. Anderson Hospital and Tumor Institute
Houston, Texas 77025

or call collect (713) 526-5411, Ext. 383

Con-
ven-
ience!

Dicarbosil®
ANTACID

Your ulcer patients and others will praise it. Specify DICARBOSIL 144's—144 tablets in 12 rolls.

ARCH LABORATORIES
319 South Fourth Street, St. Louis, Missouri 63102

T. ROWE PRICE GROWTH STOCK FUND, INC.

Est. 1950

A NO-LOAD FUND

Investing in stocks carefully selected for long term growth possibilities

Individuals & institutions are invited to request free prospectus

NO SALES CHARGE

T. Rowe Price Growth Stock Fund, Inc.
One Charles Center, Dept. F-1
Baltimore, Md. 21201 Phone (301) 539-1992

Name _____

Address _____

_____ Zip _____

WICHITA FALLS CLINIC-HOSPITAL

GENERAL SURGERY
W. E. Crump, M.D., F.A.C.S.
James T. Lee, M.D.
Charles H. Wilson, M.D., F.A.C.S.

ORTHOPEDIC SURGERY
Jack E. Maxfield, M.D., F.A.C.S.
Clyde W. Parsons, M.D.
Mark E. Huff, Jr., M.D.

ORAL SURGERY
R. A. Mitchell, D.D.S.
Larry J. Cason, D.D.S.

RADIOACTIVE ISOTOPES
Claude D. Wilson, M.D., D.A.B.R.
Joe D. Steed, M.D., D.A.B.R.
Julian H. Acker, M.D.
David D. Salmon, M.D., D.A.B.R.

PEDIATRICS
George W. Slaughter, III, M.D., F.A.A.P.
Joseph Bilder, Jr., M.D.

LABORATORIES
Claude D. Wilson, M.D., D.A.B.R., Radiology
Joe D. Steed, M.D., D.A.B.R., Radiology
David D. Salmon, M.D., D.A.B.R., Radiology

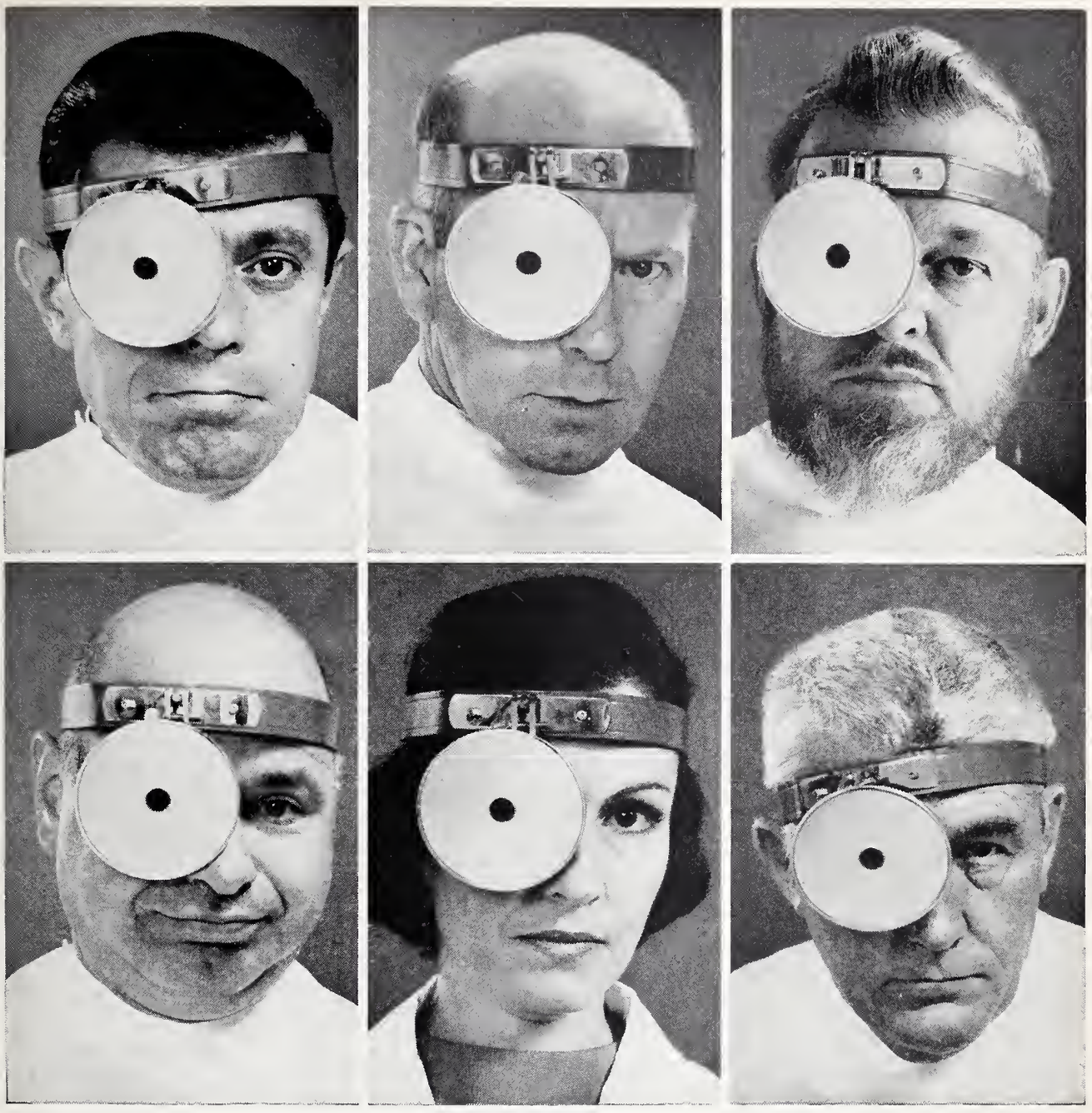
MEDICINE
W. B. Whiting, M.D., Cardiology
R. F. Knox, M.D., Endocrinology
P. K. Smith, M.D., F.A.C.P., Diagnosis & Internal Medicine
I. L. Humphrey, Jr., M.D., Diagnosis & Internal Medicine
Julian H. Acker, M.D., Diagnosis & Internal Medicine
Preston McCall, M.D., Diagnosis & Internal Medicine
Julian C. Sleeper, M.D., Cardiology
Eugene Jackson, M.D., Diagnosis & Internal Medicine

GENERAL PRACTICE
J. B. Hathorn, Jr., M.D.
Melvin Horany, M.D.
John E. Worthen, Jr., M.D.

UROLOGY
Owen C. Berg, M.D., F.A.C.S.

OBSTETRICS AND GYNECOLOGY
W. L. Parker, M.D., F.A.C.S.
Warren T. Kable, M.D.
Frank J. Lee, M.D.

ADMINISTRATIVE OFFICER
Bertha McNeill, Administrator
Jesse E. Dobbs, Jr., Asst. Administrator



"All Otolaryngologists are Alike"

Just look at them and you can see how much they have in common. Besides, they all go through pretty much the same training, and pass the same kinds of tests, and measure up to the same sort of standards. Therefore, all otolaryngologists are alike. Right?

Wrong! But that's no more preposterous than what some people say about aspirin. Namely: since all aspirin is at least supposed to come up to certain required standards, then all aspirin tablets must be alike.

Bayer's standards are far more exacting. In fact, there are at least nine *specific differences* involving moisture content, purity, potency and speed of tablet disintegration, which make the manufacture of Bayer® Aspirin so different.

These Bayer standards result in significant product benefits, including gentleness to the stomach and product stability, that enable Bayer Aspirin tablets to *stay* strong and gentle until they are taken.

So next time you hear someone say that *all* aspirin tablets are alike, you can say, with confidence, that "it just isn't so."

You might also say that all otolaryngologists aren't alike, either.

when your patients need continuous potassium supplementation...

they need the proved effectiveness and safety of

K·LYTE®

Each effervescent tablet supplies: 2.5 Gm. potassium bicarbonate (25 mEq. elemental potassium), 2.1 Gm. citric acid, cyclamic acid

Three clinical studies* confirm the effectiveness of good tasting K-Lyte as a source of supplemental potassium to increase low levels of serum potassium and to maintain normal levels. Patients were on continuous diuretic therapy and salt-restricted diets. K-Lyte dosage was one tablet b.i.d.

Serum Potassium Levels (in mEq./L)

Number of patients	Mean initial value	Mean final value
14	3.23	4.83
16	3.50	4.40
25	4.52	4.47

K-Lyte can offer effective potassium supplementation without the gastrointestinal complications sometimes associated with potassium chloride tablets and thiazide-potassium chloride combination therapy. Effervescent K-Lyte is taken in solution, speeding up absorption to avoid these hazards.

Composition: Each tablet contains potassium bicarbonate (2.5 Gm.), citric acid (2.1 Gm.), cyclamic acid, artificial flavor and color.
Contraindications: When renal function is impaired, or if the patient has Addison's disease, potassium supplementation should not ordinarily be instituted.
Precautions: Should not be used in patients with low urinary output unless under the supervision of a physician. In established hypokalemia, attention should be directed toward correction of frequently associated hypochloremic alkalosis and other potential electrolyte disturbances. Patients should be directed to dissolve tablet in stated amount of water to assure against gastrointestinal injury associated with the oral ingestion of concentrated potassium salt preparations.
Side Effects: While nausea has been reported in an occasional patient, K-Lyte produces no serious side effects when given in recommended doses to patients with normal renal function and urinary output. Potassium intoxication causes listlessness, mental confusion, tingling of the extremities and other symptoms associated with a high concentration of potassium in the serum.
Administration and Dosage: K-Lyte effervescent tablets must be dissolved in 3 to 4 ounces of water before taking. Adults: 1 tablet 2 to 4 times daily, depending on the requirements of the patient. Two tablets (50 mEq. of elemental potassium) supply the approximate normal adult daily requirement.
How Supplied: Effervescent tablets—boxes of 30 and 250 (orange or lime).

*Reports on file: Medical Research Department, Mead Johnson Laboratories, Evansville, Indiana 47721

©1970 MEAD JOHNSON & COMPANY • EVANSVILLE, INDIANA 47721 71770

Mead Johnson LABORATORIES

for the problem drinker

Berocca®

TABLETS
high potency B-complex and C
for nutritional support

AVAILABLE ONLY ON Rx

contains water-soluble vitamins only

b.i.d. dosage

good patient acceptance

no odor, and virtually no aftertaste

Each Berocca Tablet contains:

Thiamine mononitrate	15 mg
Riboflavin	15 mg
Pyridoxine HCl	5 mg
Niacinamide	100 mg
Calcium pantothenate	20 mg
Cyanocobalamin	5 mcg
Folic acid	0.5 mg
Ascorbic acid	500 mg

Usual dosage is one tablet b.i.d.

Indications: Nutritional supplementation in conditions in which water-soluble vitamins are required prophylactically or therapeutically.

Warning: Not intended for treatment of pernicious anemia or other primary or secondary anemias. Neurologic involvement may develop or progress, despite temporary remission of anemia, in patients with pernicious anemia who receive more than 0.1 mg of folic acid per day and who are inadequately treated with vitamin B_{12}.

Dosage: 1 or 2 tablets daily, as indicated by clinical need.

Available: In bottles of 100.

ROCHE

Roche
LABORATORIES

Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

The girth control pill

Tepanil® Ten-tab®

(continuous release form)

(diethylpropion hydrochloride)

works on the appetite not on the 'nerves'

When girth gets out of control, TEPANIL can provide sound support for the weight control program you recommend. TEPANIL reduces the appetite—patients enjoy food but eat less. Weight loss is significant—gradual—yet there is a relatively low incidence of CNS stimulation.

Contraindications: Concurrently with MAO inhibitors, in patients hypersensitive to this drug; in emotionally unstable patients susceptible to drug abuse.

Warning: Although generally safer than the amphetamines, use with great caution in patients with severe hypertension or severe cardiovascular disease. Do not use during first trimester of pregnancy unless potential benefits outweigh potential risks.

Adverse Reactions: Rarely severe enough to require discontinuation of therapy, unpleasant symptoms with diethylpropion hydrochloride have been reported to occur in relatively low incidence. As is characteristic of sympathomimetic agents, it may occasionally cause CNS effects such as insomnia, nervousness, dizziness, anxiety, and jitteriness. In contrast, CNS depression has been reported. In a few epileptics an increase in convulsive episodes has been reported. Sympathomimetic *cardiovascular effects* reported include ones such as tachycardia, precordial pain, arrhythmia, palpitation, and increased blood pressure. One published report described T-wave changes in the ECG of a healthy young male after ingestion of diethylpropion hydrochloride; this was an isolated experience, which has not been reported by others. *Allergic* phenomena reported include such conditions as rash, urticaria, ecchymosis, and erythema. *Gastraintestinal effects* such as diarrhea, constipation, nausea, vomiting, and abdominal discomfort have been reported. Specific reports on the hematopoietic system include two each of bone marrow depression, agranulocytosis, and leukopenia. A variety of miscellaneous adverse reactions have been reported by physicians. These include complaints such as dry mouth, headache, dyspnea, menstrual upset, hair loss, muscle pain, decreased libido, dysuria, and polyuria.

Convenience of two dosage forms: TEPANIL Ten-tab tablets: One 75 mg. tablet daily, swallowed whole, in midmorning (10 a.m.); TEPANIL: One 25 mg. tablet three times daily, one hour before meals. If desired, an additional tablet may be given in midevening to overcome night hunger. Use in children under 12 years of age is not recommended.

T-006A / 1/70 / U.S. PATENT NO. 3,001,910

THE NATIONAL DRUG COMPANY
DIVISION OF RICHARDSON-MERRELL INC
PHILADELPHIA, PENNSYLVANIA 19144

DRUG USER

CLINICAL EVALUATION OF THE DRUG USER: CURRENT CONCEPTS

It is not only the layman who feels unequipped to help the drug user. The medical profession likewise is confronted by a relatively new phenomenon, the nature of which was not fully elucidated in medical school studies or residency training programs. The types of drugs being taken indiscriminately have multiplied to such a degree that the practicing physician now faces unfamiliar diagnostic and treatment dilemmas.[1] This article is an outgrowth of numerous requests for lectures designed to orient house officers to current concepts in the clinical evaluation and treatment of the suspected drug user.

CONTEMPORARY DRUG ABUSE: There are four fairly distinct groups of drug abusers in the United States today. The first and most significant is still the alcoholic; there are an estimated 6,000,000 alcoholics in the country, and the majority of deaths on the nation's highways are attributable to the use of ethanol. Opiate (narcotic) addicts constitute the second group of drug abusers. Like the alcoholic, the opiate addict has been around for a long time; we know him well, and our medical textbooks cover the gamut of narcotic addiction fairly adequately.

The third and fourth groups are relatively new; we have known them only since the early 1960s. The third group is the newer type of drug user who makes one or more drugs a "way of life" for many months or longer, usually choosing the amphetamines, psychotomimetics, marihuana, inhalants, or a combination of drugs. The fourth group is comprised only of "experimenters"—youngsters or adults who try one or more drugs only once or a few times. There is a high correlation of emotional disturbance with long-term drug use; a well adjusted, emotionally healthy individual is a more likely candidate for the fourth group than for the third. There is some overlap in the four groups, of course; opiate abuse, for example, is now becoming more common with the new drug user.

It is with the last two groups that this article is primarily concerned. Some possible factors behind the growing epidemic of drug abuse are considered, and some principles of clinical evaluation and treatment of the drug user are discussed.

The "Stoned Age": Drug users on the west coast now pour rat poison over marihuana and then smoke it to receive a subconvulsive dose of strychnine by the respiratory route. They play games similar to Russian roulette; an unknown agent is self-administered, often intravenously, for a surprise effect. Car windows are closed in order not to "waste" the nitrous oxide remaining in a partially depleted tank, and the band of users falls asleep for the last time. Although virtually all known cultures since the beginning of history have used drugs to manipulate mood or thought,[2] we are now witnessing a veritable explosion in the variety of chemicals so used and the numbers of people, young and old, who are using them.

It is often forgotten that the primary problem is not drugs, but people. The great majority of

GREGORY G. DIMIJIAN, MD

abused drugs have a useful place in medicine, and may be put to constructive or destructive use. The "crash programs" in drug abuse education in some public schools today reflect the delusion that drugs are "the" problem, and that if one teaches the facts, one is facing the issue squarely. The more sophisticated programs now on the drawing board in some schools reflect the growing awareness that drug abuse is a symptom of emotional disturbance, and that the drug user (actual or potential) can be helped more by a humanistic approach than by a factually oriented crusade against drugs. In some ways, teaching the facts about drugs is like teaching about bullets: a .38 caliber bullet has such-and-such muzzle velocity, and if used indiscriminately it can "blow your mind (out)!" There is no doubt that the youngsters do need to know the facts, but it is even more apparent that teachers must be helped to communicate with their students more effectively to bridge the gap which, for the emotionally disturbed youngster, represents a closed avenue to help.

Why are we now witnessing a swelling tide of pharmacological mind-bending? The question is almost as futile to ask as it is cogent. Although perhaps only future historians will answer it well, a few leads seem pertinent. LSD was first synthesized in 1938, and its effects became widely known in the 1950s. In the early 1960s the term "hippie" was born in the Haight-Ashbury district of San Francisco, and came to represent a new kind of young rebel: one who usually came from a middle or upper middle class Caucasian home, who was well educated and intellectually curious, who preferred peaceful camaraderie to violence, who espoused a mode of existence shaped by the drug experience (usually marihuana and LSD), and who was often eminently attractive and appealing to "straight" society. The attractiveness of the hippie prototype, in fact, brought about a national fad, with adoption of hippie modes of dress, psychedelic coloration, and slang expressions. Some linguistic innovations became common overnight, such as "groovy," "uptight," "turned on," "trip," "happening," "Establishment," "that's my bag," and "do your thing." Enormous publicity was given to the Haight-Ashbury, the East Village of New York City, and the hippie communes. It has been said that Haight-Ashbury was like a great Rorschach card onto which the Establishment projected its own wish-fulfillment fantasies: everyone wanted secretly to be "free" of the hypocrisy of the culture (sometimes a neurotic element within the self perceived as a defect of society), and the "flower child" represented the living attainment of this ideal. The mirage appealed especially to the emotionally disturbed of all ages, and many of the young responded by running toward it, away from home.

The phenomena of the Woodstock Music and Art Fair in mid-August of 1969, and the Texas Pop Festival two weeks later, aptly demonstrated the hippie ideals. In both events there was a notable absence of violence and disorder. Among the more die-hard participants, as contrasted with the onlookers, there was a spirit of brotherhood and a groping for human values. In both events the use of drugs was so widespread that the police turned the other way. According to *Time,* the rock festival is an art form and social structure unique to our time, "the equivalent of a political forum for

the young . . . in which the politics involved is not the expression of opinion or ideas but the spirit of community created."[3]

The question presses relentlessly: why have *drugs* come to be the big thing with the new generation? Rebel youth groups have been known in all societies, but never before has such a *drug* subculture arisen. Perhaps the discovery of LSD played a role; never before has so potent a psychotomimetic agent been available. Perhaps the news media, never in history so powerful or invasive, played an important role in disseminating the appeal of drugs. Perhaps the drug orientation of adults in our culture helped pave the way; the children of today have seen their parents use multiple drugs, including ethanol, on a daily basis to alter mood, alleviate anxiety, enhance sociability, induce sleep, and relieve physical discomfort. Finally, the dealer of illicit drugs did his part to catalyze the flourishing of a drug subculture; the highly lucrative nature of manufacturing and selling drugs on the black market became an enticing trap for anyone.

There is no obvious answer to the question of why drugs have suddenly become so popular a tool with young people. It is an inescapable fact, nevertheless, that the use of drugs has caught on and has spread inexorably across geographic and socioeconomic barriers. There is no evidence that the trend is slowing down.

The Drugs Themselves: Psychotropic drugs occupy only a small segment of a medical pharmacology textbook. Yet it is these drugs that are abused, for the most part. The reason is obvious: the user desires to modify his mental state. One such modification is the "down trip," achieved with central nervous system depressants. Preferred by alcoholics and narcotic addicts, the "down trip" is chosen by those who seek to escape their problems by dulling their perception of them. The narcotic addict, for example, states that he hopes to find "relief" through the use of his drug. The "up trip," in contrast, is achieved with stimulants or psychotomimetics or combinations of drugs; it is usually preferred by the newer type of drug user, who may seek not only an escape from his problems but also an introspective and exciting adventure in thought and mood manipulation.

Abuse of nonpsychotropic drugs is mostly a matter of misuse by physicians or quack "healers," such as the indiscriminate use of penicillin and the "treatment" of obesity with digitalis, diuretics, and hormones.[4] One psychotropic drug abused by youngsters for its nonpsychotropic effect is "Spanish fly" (cantharidin), believed by many teen-agers to possess a specific aphrodisiac action. The basis of this belief is presumably the priapism which may result from irritation of the male urethra when the drug is excreted in the urine.[5] Renal damage and death have followed ingestion of excessive amounts of Spanish fly;[5,6] the risk of overdosage is its principal danger.

Physical dependence accompanies the prolonged use of the opiates, barbiturates, minor tranquilizers, ethanol, and certain nonbarbiturate sedatives (notably glutethimide), in high doses. Psychological dependence may develop during the prolonged use of any drug, and is primarily an expression of the psychopathology of the individual. Psychological dependence may develop to any habit pattern, such as spending four hours a day watching television; dependence on the mood state induced by a drug is no different. The habit becomes a crutch, and may assume enormous importance in daily living; indeed, attempts to break the dependence may be futile. It is psychological dependence, not physical dependence, that drives a heroin addict back to his drug after many months of successful abstinence. Some drugs, however, are more likely than others to be used as a "crutch," because of their greater euphorogenic effects in some individuals. Amphetamines, for example, are more likely to be chosen than caffeine by the newer type of drug user.

A common fallacy is to assume that a physically addicting drug is more dangerous than a nonphysically addicting drug. The psychotomimetics and amphetamines are among the most dangerous drugs, but are not known to be physically addicting.

A summary of selected effects of commonly abused drugs is presented in Table 1. It must be remembered, however, that most drugs taken by youngsters today are black market samples, and this automatically introduces three important unknowns: dose, actual identity, and purity. Any one of these three un-

DRUG CATEGORY	PHYSICAL DEPENDENCE	CHARACTERISTICS OF INTOXICATION	CHARACTERISTICS OF WITHDRAWAL
OPIATES	Present	Analgesia with or without depressed sensorium; pinpoint pupils (tolerance does not develop to this action); patient may be alert and appear normal; respiratory depression with overdose.	Rhinorrhea, lacrimation, and dilated, reactive pupils, followed by gastrointestinal disturbances, low back pain, and waves of gooseflesh. Convulsions are not a feature unless heroin samples were adulterated with barbiturates.
BARBITURATES	Present	Narrow margin between relief of withdrawal symptoms and toxicity; patient often appears drowsy, with nystagmus on lateral gaze, ataxia, and slurred speech; pupil size and reaction normal; respiratory depression with overdose.	General agitation, tremulousness, insomnia, gastrointestinal disturbances, hyperpyrexia, blepharoclonus (clonic blink reflex), acute brain syndrome, major convulsive seizures.
NONBARBITURATE SEDATIVES: GLUTETHIMIDE (DORIDEN)*	Present	Pupils dilated and reactive to light; coma and respiratory depression prolonged; sudden apnea and laryngeal spasm common.	Similar to barbiturate withdrawal syndrome, with agitation, gastrointestinal disturbances, hyperpyrexia, and major convulsive seizures.
MINOR TRANQUILIZERS**	Present	Euphorogenic effect often prominent; progressive depression of sensorium and respiration; pupil size and reaction normal.	Similar to barbiturate withdrawal syndrome, with danger of major convulsive seizures.
ETHANOL	Present	Depression of sensorium, acute or chronic brain syndrome, odor on breath, pupil size and reaction normal.	Similar to barbiturate withdrawal syndrome, but with less likelihood of convulsive seizures.
AMPHETAMINES	Mild to Absent	Agitation, tachycardia, paranoid thought disturbance in high doses; pupils dilated and sluggishly reactive in high doses; acute brain syndrome common; convulsive seizures may occur; hypertensive crisis with intracerebral hemorrhage may occur.	Lethargy, somnolence, general malaise, and psychic depression, often with suicidal ideation; acute brain syndrome may persist for many weeks.
COCAINE	Absent	Paranoid thought disturbance in high doses, with dangerous delusions of persecution and omnipotence; tachycardia; respiratory depression with overdose.	Similar to amphetamine withdrawal.
PSYCHOTOMIMETICS (LSD, STP, TRYPTAMINES, MESCALINE, MORNING GLORY SEEDS)	Absent	Unpredictable disturbance in ego function, manifest by extreme lability of affect and chaotic disruption of thought, with danger of uncontrolled behavioral disturbance; pupils dilated and reactive to light.	No specific withdrawal symptoms; symptomatology may persist for indefinite period after discontinuation of drug.
MARIHUANA	Absent	Milder preparations induce drowsy, euphoric state with frequent inappropriate laughter and disturbance in perception of time or space; occasional adverse reaction reported. Stronger preparations such as hashish frequently induce hallucinations or psychotic reaction. Pupils normal, conjunctivae injected. Marihuana preparations are frequently adulterated with LSD, tryptamines, or heroin.	No specific withdrawal symptoms.
ANTICHOLINERGIC AGENTS	Absent	Nonpsychotropic effects, such as tachycardia, decreased salivary secretion, urinary retention, and dilated, nonreactive pupils accompany depressed sensorium, confusion, disorientation, hallucinations, and delusional thinking.	No specific withdrawal symptoms; mydriasis may persist for several days.
INHALANTS***	Unknown	Depressed sensorium, hallucinations, acute brain syndrome; odor on breath; patient often has glassy-eyed appearance.	No specific withdrawal symptoms.

Table 1. Comparison summary of selected effects of commonly abused drugs.

*Only glutethimide is considered here.
**Meprobamate, chlordiazepoxide, diazepam, ethchlorvynol, and ethinamate.
***A variety of volatile liquids and gases, mostly organic compounds (exception: N_2O), including model airplane glues, paint thinners, gasoline, anesthetic agents, and amyl nitrite.

knowns constitutes a real danger in itself and casts uncertainty on conclusions drawn from studies of drug effect in which untested black market samples have been used. Marihuana, for example, is frequently adulterated with LSD or one of the tryptamines; reports of adverse reactions almost invariably fail to take this into account.[7,8] Heroin is often "cut" (diluted) with any number of different contaminants, including quinine, procaine, baking soda, and barbiturates; if a heroin addict has a major convulsive seizure during withdrawal, it must be assumed that his samples of drug were "cut" with barbiturates, and a barbiturate withdrawal regimen must be instituted in addition to the opiate withdrawal regimen. The numerous contaminants of heroin samples have led to a variety of complications which are often more serious than the drug effect itself, such as bacterial and fungal endocarditis, systemic and pulmonary mycoses, lung abscess, pulmonary fibrosis or granulomatosis, pneumonia, chronic liver disease (of obscure type), tetanus, thrombophlebitis, cellulitis, and local abscesses. Unpredictable dosage is another danger of the heroin sample; a new lot of heroin must be tested for strength before the usual amount is injected, or the user may administer a lethal "overdose."

Thus, the three unknowns inherent in any sample of a black market drug constitute one of the greatest dangers of illicit drug use.

Major Symptom Categories: Fundamental to the clinical evaluation of the suspected drug user is an initial attempt to place the apparent drug-related symptoms into one or more of four possible categories:

1. Symptoms During Intoxication: These symptoms depend not only upon dose but also upon the level of tolerance to the drug, the potentiating effect of other drugs taken concomitantly, physical condition, personality traits, and environmental factors. Because of these variables, symptoms of intoxication with a particular drug may differ strikingly from one patient to the next, and even in the same patient from time to time. Symptoms of intoxication ordinarily persist only while the drug is present in the body; a drug-induced acute psychotic reaction, however, does not necessarily improve with declining blood level of drug. An LSD reaction may require psychiatric hospitalization for an indefinite period following the "trip."[10]

2. Symptoms Accompanying Drug Withdrawal: Characteristic abstinence syndromes follow the discontinuation of physically addicting drugs taken in high doses over a prolonged time. It is not commonly appreciated, however, that equally disruptive psychic symptoms may follow discontinuation of other drugs. The amphetamine user, for example, may become suicidally depressed during the period of withdrawal from his drug, and his need for hospitalization may be as great as that of the barbiturate addict.

Discontinuation of any drug taken over a prolonged interval is a difficult task. There are two distinct phases to the difficulty: first, the ordeal of "coming down" from a state of chronic intoxication, while the blood level of drug is falling; and second, the aftermath of the "come-down," when the user attempts to shake his psychological dependence on the drug during the ensuing days and weeks. During the first phase, a second drug is often taken to moderate the physical or psychic distress, and the clinician may be faced with symptoms of intoxication with one drug occurring simultaneously with symptoms of withdrawal from another. Heroin is often injected, for example, to mask the distressing symptoms accompanying the discontinuation of methamphetamine or cocaine.

3. "Flashback" Symptoms: As the term suggests, these symptoms represent a return, often abrupt and unexpected, of mood states or sensory experiences which characterized an earlier drug experience, usually with LSD. Flashback symptoms vary from mild mood changes to psychotic disruption of thought and affect, and may occur without further administration of drug. Although most flashback reactions occur without obvious precipitating factors, it appears that almost any psychotropic drug can trigger a flashback phenomenon.[11]

4. Masking of Symptoms of Illness or Injury: Of equal importance in the evaluation of the drug user is the possibility that symptoms of serious illness or injury are being masked by intoxication with a psychotropic drug. The opiates are the most likely drugs to mask pain, even while leaving the sensorium otherwise intact; the fully awake heroin addict may not feel the cigarette burning down between his fingers, or, more ominously, may not feel the pain that warns of acute myocardial infarction or internal

traumatic injury. Even psychotropic drugs without analgesic action may serve to mask pain by altering the patient's awareness of the pain, or may remove the incentive to report the pain.

Approaches to Diagnosis: There are, unfortunately, no symptoms pathognomonic of intoxication with or withdrawal from any one drug. Familiarity with the most common effects of the drugs abused, however, is useful in the differential diagnosis.

The acute psychotic reaction is a common result of indiscriminate drug use. Drugs most likely to induce an acute psychotic reaction are the psychotomimetic agents, which include LSD,[12] STP (2,5-dimethoxy-4-methylamphetamine),[13] the tryptamines (dimethyltryptamine or DMT, diethyltryptamine or DET, and dipropyltryptamine or DPT),[14] mescaline (peyote),[15] and morning glory seeds, which contain d-lysergic acid amide.[16] Most of the time a psychotic reaction does not result from ingestion of ordinary doses of one of these agents, but when it does, the reaction is usually characterized by wide affective swings, an emotion of great intensity giving way for no apparent reason to an entirely different emotion, equally powerful and compelling. The victim is "in the grips" of an entraining inner experience, as completely out of control as a runaway car without a driver. It is as if the usual intrinsic restraints on affective response are removed; the integrative functions of the ego are transiently, if not permanently, impaired.

Many drugs other than the so-called psychotomimetic agents may be psychotogenic in high doses or if taken by emotionally unstable individuals. High doses of amphetamines or cocaine may induce a delusional psychotic state in which the user becomes dangerously aggressive. Anticholinergic agents in high doses produce a severe acute brain syndrome and eventually coma; the diagnosis is facilitated by the presence of other signs of anticholinergic intoxication such as mydriasis, tachycardia, decreased salivary secretion, urinary retention, and warm, flushed skin. Commonly abused volatile inhalants may quite effectively remove the user from contact with reality, and even from his place among the living if inhalation is not interrupted; the odor of the inhalant may be detectable on the breath. Many authors have classified marihuana with the psychotomimetic drugs, but it appears that a true and primary marihuana psychosis is a rare reaction,[17] although a number of lesser adverse reactions such as strong paranoid feelings and dissociative experiences are common. Marihuana characteristically predisposes the veteran user to episodes of prolonged, inappropriate laughter, occurring in a relaxed setting with friends; other common effects of marihuana are nonspecific, such as mild sedation, selectively enhanced sensory experiences, and distortion of time perception (often resulting in dangerously slow driving on freeways). The most important substance yet identified in the resin of the female flower clusters of *Cannabis sativa* is l-Δ^1-trans-tetrahydrocannabinol (Δ^1-THC);[18] because this substance is difficult to isolate or synthesize, it is unlikely that a black market sample labeled "THC" is the real thing.

Drug-induced depression of the central nervous system is a common condition seen in hospital emergency rooms. Serious cases most often represent attempts at suicide. Among the accidental cases are the heroin addict whose new sample of drug was more concentrated than he expected, the barbiturate addict who lost track of time while intoxicated and took his succeeding dose too soon, and the newcomer to drugs who experimented naively with more than one depressant drug at the same time. Another important consideration in evaluating the comatose drug user is the possibility of coexisting systemic infection, metabolic disturbance, or head injury; the heroin addict may have taken his usual dose but may be moribund because his diabetes is out of control or because he has pneumonia, or both.

The triad of coma, respiratory depression, and pinpoint pupils in dim light strongly implies opiate overdose. Barbiturate overdose, in contrast, is characterized by coma and respiratory depression with normal pupil size and reaction, prior to the onset of anoxic brain damage.

The only systemic drugs which constrict the pupils to a tiny pinpoint size are the opiates; the *topical* miotic agents used by ophthalmologists are the only other drugs capable of producing the same effect. The pupils are bilaterally dilated and reactive to light during intoxication with LSD, the tryptamines, mescaline (peyote), and morning glory seeds, and during

withdrawal from opiates. During intoxication with high doses of an amphetamine or glutethimide, the pupils are usually dilated and sluggishly reactive to light. They are bilaterally dilated and nonreactive during severe anticholinergic intoxication. They are usually normal during intoxication with marihuana,[19] barbiturates, ethanol, and most inhalants. If anoxic injury to the central nervous system has occurred, the pupils may be equal or unequal and are usually nonreactive or sluggishly reactive to light.

Medical training rightly emphasizes the value of simplifying the diagnosis to include as few diagnostic entities as possible. This orientation may, however, work against the clinician who evaluates the drug user. Coma following the ingestion of barbiturates and LSD may confuse the clinician who thinks in terms of a single drug and recalls that mydriasis is not a feature of barbiturate intoxication.

Major convulsive seizures may be an expression of drug intoxication or drug withdrawal. Seizures may occur during intoxication with high doses of meperidine, amphetamines, or LSD,[20] and, of course, after administration of strychnine. Seizures commonly follow the abrupt withdrawal of barbiturates, glutethimide, or the minor tranquilizers, when taken in higher than ordinary therapeutic doses for a prolonged time.

Some laboratories are equipped to test levels of many commonly abused drugs in blood, urine, or gastric aspirate, or to identify a sample of drugs brought in by the patient.

Treatment Considerations: The psychogenic elements in a drug-associated anxiety reaction are often overlooked. For the acutely disturbed patient having a "bad trip" from LSD or a flashback reaction, an empathetic friend or doctor who spends time attempting to communicate may calm the patient more effectively than large doses of a tranquilizer. If this fails, chlorpromazine is usually the drug of choice, but it should be used cautiously or not at all if the patient has a known seizure disorder or shows signs of anticholinergic intoxication. Chlorpromazine has been shown in some studies to decrease the seizure threshold[21] and is known to possess slight anticholinergic activity. Barbiturates are a good substitute for chlorpromazine unless central nervous system depression accompanies the agitation.

Nalorphine and levallorphan are effective opiate antagonists and should be used if there is clear-cut evidence of serious overdose of opiates or of propoxyphene. These antagonists are otherwise contraindicated, as they may further embarrass respiration that has already been compromised by a non-narcotic depressant.

In glutethimide intoxication, sudden apnea and laryngospasm are relatively common; the insertion of an endotracheal tube, or tracheotomy, is a wise precaution.

Gastric lavage should be considered in all cases of drug ingestion, and may be useful as late as 48 hours after a large quantity of drug has been ingested.[22] It is probably of no value, however, as late as two hours after ingestion of LSD, STP, or the tryptamines. In some instances lavage may serve the additional purpose of providing a sample of drug for analysis.

Forced diuresis,[23] peritoneal dialysis, and hemodialysis[24] are important treatment techniques in the management of the severely intoxicated patient, but will not be discussed here.

Adequate withdrawal management of the barbiturate addict requires hospitalization; usually this is also true of the opiate addict. The procedures for withdrawal from opiates and barbiturates are described in detail by Blachly.[25,26]

Treatment of the opiate addict by methadone maintenance, introduced originally by Dole and Nyswander,[27] seems to be slowly gaining wider acceptance. It is currently being evaluated in major cities across the country. Although it involves the long-term administration of a "hard" narcotic drug, its appeal derives from the relative ineffectiveness of other treatment, as well as the following potential advantages of the program:

1. The drug source (doctors, clinics) is legitimate; there is no further need to patronize underworld suppliers or burglarize drug stores for a continuing drug supply.

2. The cost to the patient is low (about ten cents a day), eliminating the need to obtain large sums of money daily to pay for the habit (often by joining ranks with the suppliers and pushing drugs).

3. The wide swings of mood and behavior associated with peaks of intoxication and troughs of withdrawal are eliminated.

4. The danger of an adulterated drug sample is eliminated.

5. The danger of overdose and death from an unexpectedly concentrated sample is eliminated.

6. Administration is by mouth, eliminating the dangers of a needle habit (infectious and serum hepatitis, bacterial endocarditis, thrombophlebitis, cellulitis, abscess, sclerosis and occlusion of veins).

Potentially undesirable features of methadone maintenance include the following:

1. It is the feeling of many that the substitution of one narcotic for another, with the intention of maintaining a patient indefinitely on this drug, cannot be called "treatment" and is medically unethical.[28]

2. In spite of substitution of methadone for heroin, many addicts will not be diverted from a life of crime, including the selling of drugs.

3. The program may encourage prolonged dependence on opiates; some patients may continue using methadone instead of giving up drugs altogether.

4. If patients are not properly screened for the program, a nonuser or a light user may be introduced to a heavy methadone habit.

5. It is sometimes argued that only an insignificant segment of the addict population will become involved in such a program, a segment that is adequately motivated to relinquish the drug habit altogether if given the proper help.

Now that no drug or consumer product is exempt from abuse, it behooves every physician to own an up-to-date handbook on poisoning and to know the phone number of the local poison control center. No physician can be expected to know the ingredients of all the potentially toxic products on the consumer market, or to be familiar with the recommended treatment for every poison.

As mentioned earlier, the basic problem is a human one and not a chemical one. Providing adequate long-term psychiatric help for the drug user is difficult enough, in most cases; implementing school– and community–oriented preventive measures, with an emphasis on the human side, is an even greater challenge.

REFERENCES

1. Louria, D B: Medical Complications of Pleasure-Giving Drugs, Arch Intern Med 123:82 (Jan) 1969.
2. Montagu, A: The Long Search for Euphoria, in: The Drug Takers, Time-Life Books, Time, Inc, 1965.
3. Time, Aug 29, 1969, p 33.
4. Jelliffe, R W, et al: Death from Weight-Control Pills: A Case Report with Objective Postmortem Confirmation, JAMA 208:1843 (June 9) 1969.
5. Goodman, L S, and Gilman, A, Eds: The Pharmacological Basis of Therapeutics, ed 3, New York, The Macmillan Co, 1965, p 983.
6. Sollmann, T: A Manual of Pharmacology and Its Applications to Therapeutics and Toxicology, ed 8, Philadelphia, W B Saunders Co, 1957, pp 160-161.
7. Keeler, M H: Adverse Reaction to Marihuana, Amer J Psychiat 124:674 (Nov) 1967.
8. Perna, D: Psychotogenic Effect of Marihuana, JAMA 209: 1085 (Aug 18) 1969.
9. Louria, D B, et al: The Major Medical Complications of Heroin Addiction, Ann Intern Med 67:1 (July) 1967.
10. Frosch, W A, et al: Untoward Reactions to Lysergic Acid Diethylamide (LSD) Resulting in Hospitalization, New Eng J Med 273:1235 (Dec 2) 1965.
11. Smith, D E: Acute and Chronic Toxicity of Marihuana, J Psychedelic Drugs 2:37 (Fall) 1968.
12. Dependence on LSD and Other Hallucinogenic Drugs, Council on Mental Health and Committee on Alcoholism and Drug Dependence, JAMA 202:47 (Oct 2) 1967.
13. Snyder, S H, et al: 2, 5 Dimethoxy-4-methylamphetamine (STP): a New Hallucinogenic Drug, Science 158:669 (Nov 3) 1967.
14. Szara, S: The Hallucinogenic Drugs—Curse or Blessing? Amer J Psychiat 123:1513 (June) 1967.
15. Aberle, D F: The Peyote Religion Among the Navaho, Chicago, Aldine, 1966.
16. Fink, P J, et al: Recent Trends in Substance Abuse—Morning Glory Seed Psychosis, Internat J Addictions 2:143 (Spring) 1967.
17. Smith, D E: Acute and Chronic Toxicity of Marihuana, in: Smith, D E, Ed: Drug Abuse Papers 1969, Continuing Education in Criminology, Berkeley, University Extension, University of California, 1969.
18. Efron, D H: Marihuana: A Few Problems, in: Efron, D H, Ed: Psychopharmacology, A Review of Progress 1957-1967, Public Health Service Publication 1836, 1968, pp 1269-1271.
19. Weil, A T, et al: Clinical and Psychological Effects of Marihuana in Man, Science 162:1234 (Dec 13) 1968.
20. Fisher, D D, and Ungerleider, J T: Grand Mal Seizures Following Ingestion of LSD-25, Calif Med 106:210 (March) 1967.
21. Logothetis, J: Spontaneous Epileptic Seizures and Electroencephalographic Changes in the Course of Phenothiazine Therapy, Neurology 17:869 (Sept) 1967.
22. Jenis, E H, et al: Clinical Notes: Acute Meprobamate Poisoning; A Fatal Case Following a Lucid Interval, JAMA 207:361 (Jan 13) 1969.
23. Kelley, W N, et al: Acetazolamide in Phenobarbital Intoxication, Arch Intern Med 117:64 (Jan) 1966.
24. Maher, J F, and Schreiner, G E: The Dialysis of Poisons and Drugs, Trans Amer Soc Artif Intern Organs 14:440, 1968.
25. Blachly, P H: Management of the Opiate Abstinence Syndrome, Amer J Psychiat 122:742 (Jan) 1966.
26. Blachly, P H: Procedure for Withdrawal of Barbiturates, Amer J Psychiat 120:894 (March) 1964.
27. Dole, V P, et al: Successful Treatment of 750 Criminal Addicts, JAMA 206:2708 (Dec 16) 1968.
28. Bates, G M: Letter to the Editor, Methadone for Narcotics Addicts, JAMA 207:2439 (March 31) 1969.

Dr. Dimijian, 3511 North Hall, Suite 106, Dallas, Tex 75219.

FACTORS IN DRUG ABUSE AMONG THE YOUNG

What makes young people abuse drugs? Are they trying to fit into a culture that changes too fast? Do their families play an unwitting part? Or is drug abuse a more individual thing, sought as a way to relieve painful deficiencies within the self? No one knows for certain, but in this article the authors, who work with youthful drug users, share some of their impressions.

FOR THE PAST SEVERAL years family physicians, mental health professionals, and other helping agencies in Texas have had an increasing number of drug-dependent adolescents and young adults referred to them for assistance. The problem of drug abuse has been well publicized and current interest in the subject is high. Although non-drug-dependent individuals argue that drug usage is not good for people, surprisingly little is known with certainty about the complexities involved. Generally, epidemiological studies on college campuses reveal that about one of each five students acknowledges some degree of drug involvement, with about half of that cohort acknowledging some type of regular use.[1] Marijuana is the most popular drug among youthful drug users. Similar studies at the high school or junior high school level are fewer in number but produce comparable data.[1] There is little doubt that we do have a drug problem, but there is considerable uncertainty regarding what to do about it.

We spend a portion of our time working on the adolescent service of a private psychiatric hospital. During the past three years this has required planning and expediting psychological treatment programs for an increasing number of youthful drug users. Although we recognize that our sample of drug-dependent youngsters is a highly selected one, and generalizations can be made only with extreme caution, perhaps our impressions regarding factors involved in the etiology of drug dependency may help the family physician. Our basic thesis is that, although we have much to learn about the causes of drug dependency, our attempts to understand any one case must rest upon data derived from three different levels: the culture itself, the family, and the individual.

Cultural Factors: The problem of drug dependency is not peculiar to the young. In a recent survey in California, 20% of the adults acknowledged the use of stimulants, sedatives, or tranquilizers.[2] In another study, a small sample of presumably representative homes were studied and the medications in the homes were counted.[3] The average home had 30 drugs in it, 6 of which were prescribed and 24 of which were over-the-counter preparations. It is said that 14-18% of all prescriptions written by all physicians in this country are for either sedatives or tranquilizers; in a recent year, 8 billion amphetamine tablets were manufactured.[4] Although some of these undoubtedly went into illegal channels, that was enough to provide 35 tablets for each adult in the country during that year. Most of us are aware of the alarming statistics in adult alcoholism. The point is clear. When we begin to talk about drug abuse among young people, we must do so with the understanding that it occurs in the context of what appears to be a change in our culture within a relatively brief time span. The change is in the direction of an increasingly chemical orientation.

We emphasize the general principle that the effect of any drug upon any of us is not a simple pharmacological equation. In particular, drugs which affect the most recently evolved

INFLUENCING PEOPLE

DOYLE I. CARSON, MD
JERRY M. LEWIS, MD

and complex parts of our central nervous system (CNS) influence us as the result of three groups of variables. First, the chemical nature of the drug is important. Second, the underlying personality of the individual influences the way the drug effect is perceived. Third, there is evidence that the "set" is an important variable, one facet having to do with what we expect from the drug. For examples, there are now studies which illustrate that the physician's attitude in prescribing a tranquilizer influences what the patient expects from the drug; that, in turn, influences the patient's experiencing of the drug's effect.[5] We must remember that the complicated matrix of factors which determine how a given drug affecting the CNS makes an individual feel at a specific time in his life is not completely understood.

If we are becoming a chemically oriented society, what factors appear to be involved? In the absence of hard data we must rely upon the observations and impressions of observers trained to note changes in large, complex systems like societies or cultures. Some principles regarding cultures are basic to our understanding. First, from a historical viewpoint, cultures change. The rate may be such that in an average lifetime one may not be aware of changes in the world about him. In earlier times rapid rates of cultural change usually followed catastrophic events like famines, or unsuccessful wars. However, under normal circumstances cultural evolution was imperceptibly slow.

A second premise is that in any given phase of a culture's development, there is a central relevant task to be accomplished.

A third basic concept is that a culture will tend to produce the kinds of people who are best fitted to achieve the central task of that culture in any given historical era.

To illustrate these three concepts, let us examine our own country of several hundred years ago. With our culture, in its infancy, the central task was the fundamental one of survival—would this country and its newly emerging culture be able to eke out an existence in a wilderness? To accomplish that, the cultural task was to produce individuals with certain kinds of personalities: fundamentally work-oriented people who would be productive from sunup to sundown, and who would accept the notion that pleasure was to be found in the work itself, and that any other rewards were to be postponed until after life ended. In other words, the culture needed large numbers of people who would delay the discharge of their basically pleasure-seeking impulses. It should be no surprise that work was conceptualized as a virtue and other personality traits characterized fundamentally by delayed gratification of man's underlying impulsivity (such as thrift and chastity) were highly valued. Contemporary America appears to some social observers as quite different from pioneering America. The rate of our social evolution, primed by an undreamed-of technology, has been more rapid than any known prior to this time. The ability to exploit scientific advances has reached such a fantastic level that we have an almost unlimited capacity to produce material goods. In such a culture, the main cultural task may well become that of keeping people wanting and consuming more. Think for a moment how many times you are bombarded with messages which suggest that you ought to buy something *now*. A scant

30 years ago, few would have believed it possible to "go to Europe now and pay later" or "buy a car with nothing down and 36 months to pay." If there is truth in this concept, this culture must create values exactly the opposite of those on which the country was built. The old psychological message was self-restraint; the new psychological message is "do it now." Jules Henry, the anthropologist, in his book "Culture Against Man," states that there is a new first commandment abroad in the land and it is "Thou shalt consume."[6] Norman Mailer, the novelist, in his provocative essay, "The White Negro," suggests that the old, restrained, postponing kind of personality is not equipped to deal with the ambiguities of the current culture.[7] He suggests that the vanguard of the new, preferred, personality of tomorrow is already upon us in the person of the manipulative psychopath of yesteryear whose primary goal was to get as much as possible as quickly as possible with as little effort as possible.

If this be true, it clarifies the development of some current mores. With this rapid change in our psychological climate, the past seems distant, the future improbable, and the here and now infinitely more important. Kenniston has written movingly about "the cult of the present."[8] Is it, then, any surprise that drug use, in general, would increase? When drugs which affect the central nervous system are used so frequently to alleviate feelings of anxiety, worry, stress, or psychological pain, there is less motivation to find other solutions to life's problems.

In effect then, whether it is marijuana in teenagers, or amphetamines to lose weight without appropriate effort in young housewives, or tranquilizers to face the inevitable stresses of living during the middle years, or a growing dependency upon an extra martini or two at the end of a harried day, the implication is much the same. Many of us (and particularly many of our youth) have spent a major portion of our lives in a culture that is entirely different psychologically than it was a few short decades ago. It is our belief that factors operating at the broad cultural level described do influence the growing tendency for more people to be more chemically-oriented. Although we are concerned about the potentially destructive impact of a drug-centered way of life for young people, we see it as only one part of an even larger problem of a gradually evolving "chemical culture."

Family Factors: The second level from which data regarding a drug-dependent youngster must be obtained concerns his family. Such data are important because occasionally an adolescent will have participated unknowingly in a process called "family scapegoating." This describes the selection of one member of a family to be the carrier of all the family problems and conflicts. This concept has evolved from both clinical work with families containing patients and the newly developing field of family-systems research. Although psychiatry has been interested in families for many years, the application of systems concepts to family functioning has increased during the past decade. A few of the general principles which permeate current thinking in regard to family systems might be pertinent. There is evidence that, without realizing it or deliberately meaning to, each family evolves a "system" of being a family. Such a family system has many dimensions. For example, when a young couple gets married and begins to have children, certain issues of family life have to be decided: They must evolve a "system" for expressing affection. Some families develop open affectional systems in which people are able to talk, hug, and kiss freely. No one in the family really thinks much about the fact that to do so is not only permissible, but part of the norm for that family. Another family, however, might evolve a different system wherein direct expression of affection is forbidden, and as a consequence there is very little touching, and practically no kissing or hugging, and little if any verbalization of love for each other. A child growing up in this second type of family would learn an entirely different set of rules and regulations for expressing affection than would a child growing up in the first kind of family. Although this example is a simplified one, many

different parameters of family systems are currently under study in psychiatric research facilities. Family decision making,[9] conflict resolution,[10] communication patterns,[11] and myth formations[12] are but a few examples. Evidence suggests that families achieve a type of equilibrium: in other words, if an important change occurs in the life of the family or one of its members, a compensatory change will occur in the opposite direction. This concept, analogous to homeostasis, is amplified in the notion that some homeostatic systems are effective, but others are dependent upon the presence of an identified patient within the family. Although this may seem strange, most treatment facilities with a family emphasis have noted repeatedly that, in some families, the first impressive evidence of psychological growth by the hospitalized adolescent may lead to a crisis in the parental marriage (frequently a strong push in the direction of divorce). In such families, the patient is thought of as having been scapegoated. We do not wish to infer that such action is conscious or deliberate on the part of the family, nor that it is one in which the adolescent doesn't participate. However, we emphasize the need for careful collection of data about the family system, because when one is really dealing with a family level of pathology in the form of the adolescent patient, the treatment plan has to take such a factor into central consideration.

Currently little is known with certainty about the influence of family-system pathology upon drug abuse in young family members. One might wonder whether one such factor might be family systems which are geared to handling stress by either chemical means or florid intoxication, but qualitative differences are difficult to detect between grossly disturbed families with a drug-dependent adolescent patient and those with a seriously disturbed non-drug-dependent adolescent patient. There is, however, some work which demonstrates the impact of a family system upon the action of a drug. A group of investigators have demonstrated that phenothiazines are more effective in schizophrenic patients if such patients are not participants in families which require high levels of aggression from all of their members.[13]

Individual Factors: More data are available for the consideration of the individual psychological factors involved in drug dependency. For the most part such data are clinical in nature and derived from working intensively with drug-dependent adolescents, both in supervising their day-to-day existence within a hospital setting, and in the more highly refined relationship of individual psychotherapy. These drug-dependent adolescents with whom we have worked are a highly selected sample. They are seriously disturbed in addition to their use of a variety of drugs. It is likely that they represent an entirely different cohort than those young people who experiment with drugs but do not become drug-dependent. They may even be quite different from seriously drug-dependent adolescents who do not come to the attention of mental health personnel. Data clarifying these issues are not available. The psychological problems and conflicts which may lead young people to drug dependency are diverse. In other words, we have not observed that certain personality configurations or particular psychodynamic conflicts are common to all drug-dependent youngsters. The entire variety of personality styles and psychodynamic conflicts seen in drug-dependent youngsters have been seen in seriously disturbed, non-drug-dependent youngsters. Thus, although our sample of drug dependent adolescents is a group of seriously disturbed young people, the quality of their disturbance is not necessarily similar nor specific.

With those qualifications, we shall discuss some of the common psychological themes we have observed.

Underachievement: Our adolescent patients show impaired functioning in school and work situations. Outside interests and hobbies are diminished in importance; and there is a general diminution in learning skills that lead to productivity. School drop-out or decrease in the quality of school performance are frequent. The histories and report cards of these individuals

show a steady decline in school performance associated with their increasing drug usage. The exact relationship between drug intake and underachievement is undefined. Do the drugs themselves produce changes within the individual and lead to his being less productive; or do individuals who are less productive, for psychological reasons, find themselves attracted to drug intake? We suspect there is truth in both viewpoints. An individual who is basically underproductive may take drugs which lead to further underproductivity. Most of these patients do not think lack of productivity is a problem; rather, they are inclined to announce that they oppose the concept of hard work and productivity. They do not believe in competition, but do believe in enjoying life and experiencing sensory pleasure to its fullest. Some of the more intellectually-oriented note that achievement is the product of a misguided older society. In essence, the adolescent drug user frequently says that he is not productive because he chooses to be this way and that his choice is a brilliant one.

Observations of these individuals suggest that they are not easily able to switch to a more productive style of living. In the hospital, for instance, they have a difficult time handling simple responsibility. They show low frustration tolerance and are terribly sensitive to criticism when placed in the situation where their ability can be viewed by others; in a classroom setting they become frustrated, apprehensive, and angry. By refusing to participate in activities, they have lessened their ability to appraise their assets and liabilities realistically. On one hand they think of themselves as being more gifted than the facts warrant; but at another level are frightened that they have no ability whatsoever. Not trying permits self-deceit. Thus many such youngsters are able to maintain an unrealistic and expanded self-image, with the result of decreased productivity, underachievement, and a refusal to try.

Loneliness: Intense loneliness is common. This finding is surprising in some ways because the drug users appear to have many contacts and friends. Drug-oriented individuals associate with one another and, initially, one is impressed with their claims of close group ties. However, in time it becomes apparent that relationships based upon a common interest in drugs lack the qualities, for the most part, of genuine, warm, human relationships. For instance, it is common for them to roam from one crash pad to another. In psychotherapy sessions we observe that these people roam because interpersonal relationships within a group make them uncomfortable. We have been impressed that many such youngsters can tolerate only superficial relationships; and when feelings for other people become intense there is discomfort and a need to lessen the intensity of the relationship. Frequently, the primary emphasis in such a relationship is on the drugs, and not the people. We think that these observations are underlying the feeling of loneliness which the drug user tries to hide from himself.

For many there is a background of poor peer-group contact; they have been lonely, isolated, unhappy adolescents who, at some point, started taking drugs and associating with others who were taking drugs. The misery of such loneliness becomes a driving force in the step to heavy drug use; and the excitement of the drug effect may temporarily assist the adolescent in taking his mind off the misery of his loneliness and, in effect, assist in the denial process. They identify each other by manners of speech and dress, much as two Americans in a foreign country can spot each other and feel a sense of kinship. This drug-induced kinship does not have deep roots. Their lack of skill in interpersonal relationships is quickly apparent in the hospital, where the emphasis is on open discussion of how they get along with one another, and not on drug experiences.

Mistrust and Fear of Closeness: The third common finding which is related, in a sense, to the loneliness, is mistrust and a fear of closeness. The drug user is a mistrustful person, particularly of adults; part of this is good reality testing since they are engaged in illegal activity and may be arrested. Frequently undercover agents catch them, so they have good reason to be suspicious of each other. The phrase "Who is the narc in the park?" illustrates this fear. Constantly fearful that one of the group

will confess all to the police or to other adults, matters of trust must be uppermost in their minds. Amphetamines, particularly, seem to provoke increased mistrust and occasionally the development of overtly paranoid illnesses.

The main cause for mistrust, however, is psychological, and such young people have long-standing problems of trust and an inability to form close relationships prior to their drug use. During treatment, many are unable to verbalize their fears of closeness "because something terrible might happen." Their mistrust and fears of being hurt motivate them to be distant from people and, consequently, lonely.

It is known that the development of feelings of trust begin early in life and that the anlage of such feelings is in the early mother-child relationship. If the needs of the infant are met, and if he is handled warmly and with love, he develops a feeling that all is well in the world and that people are good and can be trusted and depended upon. However, if this relationship is a difficult one, a basic feeling of mistrust may develop and become an attitude incorporated in the character structure of the developing youngster; to be close means to be vulnerable. A truly trusting person is not automatically concerned that closeness will lead to being hurt, but concentrates, instead, on the positive, pleasurable aspects of the relationship. Drug utilization produces what we have come to call the feeling of pseudo-closeness.

Identity Problems: Frequently with the young, taking drugs signifies much more than taking a pill or injecting a substance into a vein; it is a life style—a way of being—a certain way of thinking and believing. Drug use is associated with the development of a personal identity and with a code of values, a philosophy for living.

When a person reaches the adolescent years of development, he undergoes extensive physical and psychological changes—a change in his sense of being, and this is a normal adolescent identity process. The drug-oriented youngster frequently shows serious problems in this regard, difficulties in developing an acceptable sense of self and philosophy in living. In part, this appears to be related to how well the family prepares him for his life role. The first model for identification offered to a developing child is a family model. If the family system is seriously conflicted, adequate identification models may not be available to the youngster. Many drug-oriented teen-agers have not been able to develop a clear-cut feeling of what they think of themselves. They fear that they are a "not quite somebody"; and the drug movement offers a quick solution to this psychological dilemma and gives some reinforcement of the adolescent's sense of identity. He then is known for what he does with drugs; he may even get a special name such as "speed freak," "acid head," or "pot head." He may become an "expert" on drugs and serve as consultant to those in need. One such boy had literally memorized the "Physician's Desk Reference," and this, combined with his high school chemistry courses, qualified him to his drug group as a pseudo-physician—a very solid identity! Despite the fact that what he is doing is illegal, frequently self-destructive, and antisocial, it is something definite, something solid, and does augment the youngster's need to feel that he is a distinct person.

Closely connected to identity is one's system of values. Many of our drug-using patients share common values; opposition to the war in Vietnam, intolerance of "establishment" values, belief in free love, interest in Eastern religions, antagonism to all authority symbols, interest in certain types of music, and a belief that drugs can reveal the meaning of existence.

Sexual Conflicts: A variety of sexual conflicts are seen in drug-dependent adolescents. Some appear to be related to the fear of closeness which, in essence, means that a good emotional relationship is impossible. The fact that a physical relationship is the most that can be hoped for by some may account in part for the emphasis on casual sexual relationships. For some, frequent sexual activity with multiple partners is the rule. We see this most frequently as a form of behavior used as a defense against some other problem; for example, fear of real closeness can be hidden by pretending

the physical activity means closeness. Many of the drug-dependent adolescents have not learned to postpone gratification of impulses. This may play a role in launching them into frequent, impulsive sexual activities. Long-lasting, intense, emotional relationships are not common.

A different type of sexual problem occurs in those who need to deny that they have any sexual feelings. Drugs can facilitate this denial. Although some drugs may increase the intensity of sexual feelings (marijuana appears to do so in some users), others diminish sexual interest and drive.

Dependence-Independence Struggle: One of the most common problems observed among drug-oriented adolescents is a serious conflict in regard to feelings of dependency. Noshpitz[14] has described this conflict by utilizing the paradigm of the hungry infant. When a baby gets hungry he becomes restless, his arms and legs move jerkily, and he begins to whimper and cry. If not fed he starts to scream, kick, and flail about; he is totally possessed by his hunger. When the nipple is put into his mouth and he begins to suck, he becomes relaxed and experiences an unusually pleasurable state. It is so good that the baby never forgets it, not for the rest of his life. The experience of tension relieved by mouth and passive reception grooves in deeply and leaves a profound impression. This oral relief of tension is much related to the dependency struggle of later years. Although every individual has within him an urge to return from time to time to the early, blissful, passive, receptive state, such needs appear intensified in the drug-dependent adolescents. In our affluent society, gratification can be obtained with less expenditure of energy than ever before in the history of our culture. Heavy use of drugs may satisfy the need to remain dependent very well: one has only to swallow a capsule, inhale a marijuana cigarette, and tension may melt away into euphoria—instant pleasure.

Rebellion: The use of drugs is frequently related to the adolescent need to rebel against parents and adult society. Although some rebellion may be normal, it can become so extreme as to be maladaptive. Normal types of adolescent rebellion help the youngster to feel more independent and separate from his parents. The teen-ager with unresolved dependency conflicts is trying to establish his independence by the use of drugs and, at the same time, demonstrating his need to be dependent. Many angry feelings at adults find some expression in such rebellion. In a hospital setting without drugs, these youngsters are frequently in conflict with authority, and have disproportionate difficulty accepting what others judge to be reasonable social rules.

Aggressive Feelings: It is fascinating that teenagers who oppose wars at conscious levels frequently feel like killing when they are angered. The intensity of their underlying rage is great. Some of the extreme passivity which many members of this group reflect is related to their need to avoid this intense underlying aggression. When such aggression is expressed it is frequently in the manner of a much younger child, and rages and tantrums are not rare. Many such adolescents are afraid of their own underlying aggression, and this is obviously related to their need to control aggression.

Self-destructive Tendencies: Many of the young people we treat are engaged in activities which

do serious physical damage. Some know that they are taking serious chances with drugs, but they take them anyway. This need to be hurt, in a few, may be one way of handling anger or guilt. Although their psychological need to use drugs may be intense, they often show poor judgment and hurt themselves "unintentionally." One is forced to conclude, however, that in some there is a basic drive toward self-destruction. Heavy drug use, for some, is a slow form of suicide; some do die in their late teens or early twenties. Some feel so depressed, beneath a facade of drug-induced happiness, that living ceases to be of much value to them.

A bewildering complexity of psychological factors seems to be involved in the serious problems of drug-dependent adolescents, and efforts to intervene in such life styles frequently meet with great resistance. The treatment experiences of our clinical team are the subject of another report.[15] We emphasize here that drug dependency is a protection, a shield, a defense against problems that seem too great for the individual to handle. Treatment must be aimed at helping the youngster to alter maladaptive behavior and to learn new types of behavior.

The psychology of the seriously drug-oriented person is that of an individual disturbed in many ways. If these young people did not take drugs, they would be disturbed insofar as coping with life's problems; nevertheless, the fact that they do take drugs magnifies the problem. They may anger adults with their long hair, provocative comments, irresponsible behavior, and antisocial attitude, but beneath the bravado of unearned and unstable independence is a personality built upon immaturity and strong dependency needs.

We urge consideration of the data from three different sources in thinking about the problem of drug abuse in young people; the role of cultural factors, family pathology, and individual psychological problems. This is an area which generates much feeling, both in the adult culture and among the youth groups. Much needs to be learned from adequately designed research projects; until such information is available, however, the medical profession must not get caught up in the frequent hysteria regarding drugs and young people.

REFERENCES

1. Blum, R H, et al: Students and Drugs, vol 2, San Francisco, Jossey-Bass, 1969.
2. Louria, D: Nightmare Drugs, New York, Pocket Books, Inc, 1966.
3. Goddard, J L: The Medicated Man, Washington, DC, US Government Printing Office (#285-367), 1968.
4. Louria, D: The Drug Scene, New York, McGraw-Hill, 1968.
5. Lipman, et al: Paradoxical Influence of a Therapeutic Side-effect Interpretation, Arch Gen Psychiat 15:462 (Nov) 1966.
6. Henry, J: Culture Against Man, New York, Random House, Inc, 1963.
7. Mailer, N: The White Negro, in: Sykes, G, Ed: Alienation, The Cultural Climate of our Time, New York, George-Braziller, Inc, 1964.
8. Keniston, K: The Uncommitted; Alienated Youth in American Society, New York, Harcourt, Brace and World, Inc, 1965.
9. Ferriera, A J, and Winter, W D: Decision Making in Normal and Abnormal Families, Family Process 7:17 (Jan) 1968.
10. Goodrich, D W, and Boomer, D S: Experimental Assessment of Modes of Conflict Resolution, Family Process 2:15 (Jan) 1963.
11. Titchener, J L, et al: Family Transaction and Derivation of Individuality, Family Process 2:(1) 1965.
12. Franco, J L: Rationale and Techniques of Intensive Family Therapy, in: Nagy and Franco, Eds: Intensive Family Therapy, New York, Harper and Row, 1965.
13. Cohen, M, et al: Family Interaction Patterns, Drug Treatment, and Change in Social Aggression, Arch Gen Psychiat 19:50 (July) 1968.
14. Noshpitz, J: Drug Abuse, Postgraduate Conference, University of Texas Southwestern Medical School, Dallas, Texas, April 25-26, 1969.
15. Lewis, J M, and Gossett, J T: Hospital Treatment of Drug-Dependent Adolescents, unpublished data.

The authors, Timberlawn Foundation, Inc., 2750 Grove Hill Road, Dallas, Tex 75227.

CARE-INDUCED

ROBERT R. RYNEARSON, MD

Physicians can literally drive their patients insane. They may give too much medication, or not enough; impersonal care in unfamiliar surroundings can unbalance the mind while technically flawless treatment is curing the body. Even so, the patient can use strong psychologic defense mechanisms to protect his emotional integrity, even at the expense of his physical well-being. The physician should learn to recognize and deal with these before imposing any physical limitations.

THE APHORISM, "PHYSICIAN, first do no harm!" always has urged a conservative approach to treatment and cautioned those who attempted to cure schizophrenia by colectomy, or who attempted to abolish "focus of infection" by extracting a young arthritis patient's teeth. Nowadays, most of us do not feel guilty of such medical boorishness because of our irreproachable expertise. We are informed. We use all of the latest methods. However, many of us are aware that with increasing physician reliance on electronic equipment, dramatic surgical techniques, and the ever expanding pharmacopoeia, the incidence of iatrogenic psychoses is mounting. Our medical schools, in progressively weighting the research aspect of medical education, are fostering an electronic bedside manner; and physicians, like many indulged adolescents, probably suffer from an overabundance of technical devices and lack the experience and judgment to use them wisely. In addition, many of us neglect the important psychologic defense mechanisms which the patient needs to protect him from both the disease and his physician's attempts to cure him.

Medication: Practicing psychiatry in a busy general hospital psychiatric unit, I see patients with drug-induced psychoses every day. These psychoses are not produced by LSD or the other hallucinogenic drugs; they are precipitated by a potpourri of prescribed medications. Forty years ago about 10% of all state hospital admissions were for bromide intoxication. Today, about 10% of the admissions to our psychiatric unit result from tranquilizer, antidepressant, and other sedative intoxication. Most of these patients are taking three to four such medications. One man who has made passionate speeches vilifying youth's experimentation with drugs was oblivious to his wife's severe dysarthria and ataxia until she burned herself while preparing his breakfast. He later admitted that her drug bill was more than $60 per month. "It made us tighten our belts," he said, "but as long as it seemed to be helping her, I didn't mind." In my opinion, the abusive use of tranquilizers, antidepressants, and sedatives by physicians is as serious a social problem as the use of marijuana and hallucinogenic drugs by younger people. All physicians should re-evaluate the drugs that they prescribe routinely, and become increasingly critical of the manufacturers' claims for them.

Many physicians are aware of the problems coincident with too much medication, but are oblivious to the difficulties caused by too little. For example, when patients are allowed to hang suspended in a twilight zone produced by inadequate sedation, their sensory input can become distorted. That patients be given adequate sedation so that they can sleep soundly at night (thus making a sharp delineation between day and night) is extremely important.

PSYCHOSES

Environment: The environment wherein medicine is practiced is becoming progressively more like that portrayed by the science fiction writers of 20 years ago. Dr. Buck Rogers is at home where Sir William Osler would have feared to tread. A case in point is that of a 45-year-old business executive whose acromegaly was diagnosed in an early stage. He was sent to a leading medical center for proton-beam therapy. When he arrived he saw 25 other patients with acromegaly, many of whom were hideously deformed and blind. Next, the physician informed him of *every* possible adverse effect of proton-beam therapy—ranging from impotence and brain damage to death—and asked him to grant permission for an autopsy of his brain. Following this, they made a mold of his head and created a metal helmet which allowed him to breathe, barely, but not to hear or see. Wearing this helmet, he was then wheeled into "the cave" (a cavernous room carved into a mountain and lined with lead walls) where the proton-beam therapy was performed. His body was sandbagged, he was left alone, and a mechanical device turned his head back and forth "so that the beam would not burn my brain." Eighteen of these treatments cured his acromegaly, but he now has a crippling psychiatric problem which has not responded to treatment. At no time during his orientation or treatment was he allowed to express his anxiety and concern about what was happening to him. In defense of the responsible physician, imagine how difficult it would be to practice medicine in such a surrealistic setting!

Similar, albeit less dramatic, environmental and professional indifference is seen in most of our hospitals. In the new concept and design of intensive treatment units, increasing emphasis is given to automation and mechanics without significant planning for the interpersonal needs of the patients. In 1928, Greenwood[1] wrote an article about mental disturbances following operations for cataract. This ophthalmologist had discovered that if only one eye were treated at a time, the postoperative psychoses caused by bandaging both eyes, thus decreasing sensory input, could be avoided. With his unbandaged eye, the patient could orient himself by observing his busy hospital ward, which was filled with the usual hospital sights, sounds, and smells. Hospital routines were so much simpler then; I doubt that the article could have been written in 1969. Even with one eye open, our drug-obtunded patient, trapped in his stressful and foreign situation (the normal route from operating room to recovery room to the intensive treatment unit with its unfamiliar surroundings, electronic hum, and odor-free, air-conditioned, soundproofed cell) would have to be made of stern stuff to preserve his sanity.

Emotional Conflicts: The psychologic defense mechanisms used by a patient who is anxious about his illness and body image need to be understood by the physician who is treating him. Several years ago, I was involved in a psychiatric study of patients with "brittle" diabetes. The most consistent finding was the inordinate amount of denial that these young people used as a defense against a sense of difference imposed by their diabetes. For example, one 14-year-old girl's diabetes was considered "brittle" because she had been treated for diabetic coma 17 times in three years. She had not told her physician that she did not take her insulin and that she would not regulate her diet. For her peers to see her as different was

far more threatening than to acknowledge her diabetes. So, while she gave lip service to her parents and her physician, she flushed her insulin down the toilet—preferring to protect her emotional integrity even if it meant frequent brushes with death. Irrational, psychotic behavior, to be sure, but comprehensible once the girl's unconscious conflict was defined.

Many physicians find themselves threatened by uncooperative patients, and unwisely attempt to order or frighten them into compliance. This approach is doomed to failure because the patient invariably will choose to protect his emotional integrity. For example, a previously active business man who suffered a myocardial infarction panicked at the thought of this insult to his body image and self-esteem. He knew that this illness would terminate the only life style he had imagined, and he used denial in an attempt to minimize its significance: "You know, doctor, I really don't think my heart attack was too serious. I feel as strong as ever, and I am sure I can go on as I did before the attack." The physician did not recognize this denial, and he overreacted in an attempt to persuade the patient to recognize the extreme seriousness of the situation. This warning only served to buttress the denial defense, and the patient refused to remain under the physician's care.

On the other side of the coin, physicians often are unaware that limitations imposed by a chronic illness may be necessary to the patient's emotional integrity. For example, a 12-year-old boy who had been limited severely by a septal defect had corrective surgery and was sent home with the words, "You can do anything any other 12-year-old can do." But before the operation he had developed only a few of the physical skills of a normal 4-year-old; on his return home he became psychotic as a defense against his parents' relentless pressure for him to compete with his peers. His body image was crippled—he needed to hide behind it to prevent the appreciation of anxiety which loomed ominously just beyond his dependent position. Emotionally, he was unable to accept his healthy physical state.

Summary: Physicians must realize that patients under their care can develop preventable psychoses. They should evaluate the efficacy of antidepressant and tranquilizer medications more critically, and determine the most appropriate uses for sedation. The environment in which a patient is treated should be manipulated in order to make it as reassuringly "homelike" as possible. Also, a physician should familiarize himself with standard psychologic defense mechanisms and try to deal with them before imposing any physical limitations. He needs to anticipate these threats to the patient's emotional integrity, and should lead the dialogue into areas that the patient usually is reluctant to ask about; for example, future sexual adjustment normally is of enormous concern to the coronary patient and to his wife. Finally, he should not be overly zealous in his attempts to remove symptoms—particularly chronic ones. The eager, overtreating physician is more likely to push his patient into the sanctuary of insanity—one of the few conditions that he is unwilling to treat.

REFERENCE

1. Greenwood, A: Mental Disturbances Following Cataract Operations, JAMA 91:1713 (Dec 1) 1928.

Dr. Rynearson, Scott and White Clinic, Temple, Texas 76501.

Vectorcardiography in Ischemic Heart Disease

THOMAS M. RUNGE, MD

When there is reason to suspect ischemic heart disease and the results of electrocardiography are inconclusive, vectorcardiography can provide supplementary data to help establish the diagnosis.

ISCHEMIC HEART DISEASE includes angina, coronary insufficiency, and myocardial infarction.

In diagnosing myocardial infarction, the vectorcardiogram is more accurate than the electrocardiogram (ECG). In an extensive review of the literature,[1] Simonson found approximately 16 reports supporting this, while only two indicated that the ECG was superior. Both clinical and autopsy data were cited.[2-17]

Data on vectorcardiographic diagnosis of ischemic heart disease without infarction is less voluminous. However, in a comparison of the exercise ECG and exercise vectorcardiogram in coronary insufficiency without infarction, Isaacs and associates[18] found the vectorcardiogram to be superior to the ECG. They used both ST abnormality and T changes as criteria of ischemia.

Strictly speaking, however, from the ECG and vectorcardiographic standpoint, "ischemia" should be restricted to changes involving the T-wave, and may be manifested by changes in amplitude, electrical axis, and symmetry.[19]

In this study, ECG criteria of ischemia were limited to such changes.

Methods: Fifty vectorcardiograms were performed in parallel with 50 ECGs in 25 subjects, each technique being employed before and after an oral dose of 20 mg of pentaerythritol tetranitrate.

For the ECGs, the tetrahedron lead system was used, and the instruments were the Sanborn 569A and Hewlett-Packard 780-6A. Standard 12-lead, and in some instances 14-lead, tracings were made.

The subjects ranged from 37 to 81 years old; there were 20 men and 5 women. Twenty of the 25 had historical evidence of angina or coronary insufficiency, or both, and 6 had historical evidence of myocardial infarction, but none of the infarctions were recent.

In evaluating the ECGs, to more clearly appreciate the spatial QRS-T relationship, spatial models were fashioned, reconstructing a composite of the frontal, sagittal, and horizontal projections.

This was accomplished using applicator sticks imbedded in a central core of modeling clay, with subsequent positioning of the sticks identical to frontal, sagittal, and horizontal projections as viewed in these three perspectives. The resulting spatial angles of QRS-T were then measured with a protractor.

Results: Utilizing the criteria described, the vectorcardiogram yielded supplementary evidence of abnormality in 11 cases (44%), while the ECG yielded additional abnormal findings in only one instance.

PATIENT	AGE RACE SEX	CLINICAL DIAGNOSIS	ELECTROCARDIOGRAPHIC DIAGNOSIS	ECG FRONTAL QRS and T AXIS				ECG QRS-T ANGLE	
				QRS		T			
				CONTROL	RX	CONTROL	RX	CONTROL	RX
1. C. R.	75WM	NORMAL	LEFT AXIS DEVIATION	-30°	-30°	+60°	+60°	90°	90°
2. L. N. R.	81WF	NORMAL	NORMAL	+10°	+10°	+30°	+30°	20°	20°
3. R. A.	44WM	NORMAL	NORMAL	-10°	-10°	+30°	+30°	40°	10°
4. E. I.	47WM	NORMAL (PAROXYSMAL ARRYTHMIA)	NORMAL	+70°	+70°	+60°	+60°	10°	10°
5. L. D. M.	51WM	POST PERICARDIECTOMY	INCOMPLETE RBBB	+90°	+90°	+90°	+90°	0°	0°
6. I. K.	74WF	ARTERIOSCLEROSIS, GENERALIZED	POSTERIOR INFERIOR ISCHEMIA	-20°	-20°	-30°	-30°	10°	10°
7. J. S.	66WF	CORONARY INSUFFICIENCY	SUBENDOCARDIAL INJURY, MILD	+30°	+30°	+80°	+80°	50°	50°
8. V. S. W.	86WM	CORONARY INSUFFICIENCY	SUBENDOCARDIAL ISCHEMIA	+70°	+70°	+30°	+30°	40°	40°
9. D. L.	45WM	CORONARY INSUFFICIENCY	NORMAL	-15°	-15°	0°	0°	15°	15°
10. A. G.	51WM	ATRIAL FIBRILLATION ARTERIOSCLEROTIC CVD	LEFT AXIS DEVIATION, ISCHEMIA	-70°	-70°	+30°	+30°	100°	100°
11. H. B.	61WM	CORONARY INSUFFICIENCY	LEFT BUNDLE BRANCH BLOCK	-15°	-15°	+150°	+150°	165°	165°
12. M. W.	58WM	CORONARY INSUFFICIENCY	DIFFUSE SUBENDOCARDIAL ISCHEMIA	+60°	+60°	+140°	+140°	80°	80°
13. R. R.	65WM	MYOCARDIAL INFARCTION CORONARY INSUFFICIENCY	SUBENDOCARDIAL ISCHEMIA	+50°	+50°	+150°	+150°	100°	100°
14. E. H.	69WF	CORONARY INSUFFICIENCY	SUBENDOCARDIAL ISCHEMIA, MILD	+10°	+10°	+30°	+30°	20°	20°
15. H. B.	67WM	CORONARY INSUFFICIENCY	NORMAL LIMITS?	+40°	+40°	+30°	+30°	10°	10°
16. R. C.	58WM	CORONARY INSUFFICIENCY	SUBENDOCARDIAL ISCHEMIA	-20°	-20°	+110°	+110°	130°	130°
17. R. L.	65WM	CORONARY INSUFFICIENCY	LEFT AXIS DEVIATION INFERIOR ISCHEMIA	-20°	-20°	-30°	-30°	10°	10°
18. S. H.	46WM	INFERIOR LATERAL INFARCTION	INFERIOR LATERAL INFARCTION	+80°	+80°	+80°	+80°	0°	0°
19. E. G.	68WM	CORONARY INSUFFICIENCY INFERIOR INFARCTION	SUBENDOCARDIAL INJURY INFERIOR INFARCTION	+70°	+70°	-20°	-20°	90°	90°
20. V. L.	60WF	INFERIOR INFARCTION	NORMAL	+60°	+60°	+20°	+20°	40°	40°
21. G. W.	38WM	CORONARY INSUFFICIENCY	NORMAL LIMITS	+60°	+70°	-90°	+90°	150°	30°
22. W. E. F.	50WM	POSTERIOR INFERIOR INFARCTION CORONARY INSUFFICIENCY	NORMAL LIMITS	-20°	-20°	+60°	+60°	80°	80°
23. V. T. W.	37WM	CORONARY INSUFFICIENCY	NORMAL LIMITS	+10°	+10°	+40°	+40°	30°	30°
24. J. C.	72WM	POSTERIOR INFERIOR INFARCTION	POSTERIOR INFERIOR INFARCTION POSSIBLE	+30°	+30°	+30°	+30°	0°	0°
25. T. H. C.	63WM	CORONARY INSUFFICIENCY	SUBENDOCARDIAL ISCHEMIA, MILD	+50°	+50°	+80°	+80°	30°	30°

Table 1. ECG data in 25 patients. All except the first four had historical evidence of coronary insufficiency.

In two cases (case 6 and case 15) the spatial vectorcardiogram showed QRS-T divergence of more than 100° in the presence of normal QRS-T relationship in the electrocardiogram.

In only one instance (case 20) did clear-cut normalization of ECG and vectorcardiographic evidence of ischemia appear to be related to administration of the long-acting nitrate preparation.

These results suggest that in certain instances, the vectorcardiogram can be expected to indicate ischemia when the ECG does not. Since spatial QRS-T divergence can be much more clearly appreciated from the three-dimensional view of electrical forces afforded by the vectorcardiogram, this fact is not surprising.

Similarly, we have found that infarction can occasionally be detected vectorcardiographically when it is not apparent on the ECG (case 22).

In the dosage used, which may have been too small, pentaerythritol tetranitrate rarely converted ischemic changes to normal. It should be reemphasized that in this study the term ischemia is used in the ECG connotation and does not refer to current of injury, which has been used as a criterion by others. In a careful evaluation, Russek[20] showed that administration of this medication did prevent current of injury abnormality and also angina in patients with coronary insufficiency who were subjected to exercise testing.

As expected, and as reported by others, our models of spatial vectors confirm the lack of orthogonal relationships of frontal, sagittal, and

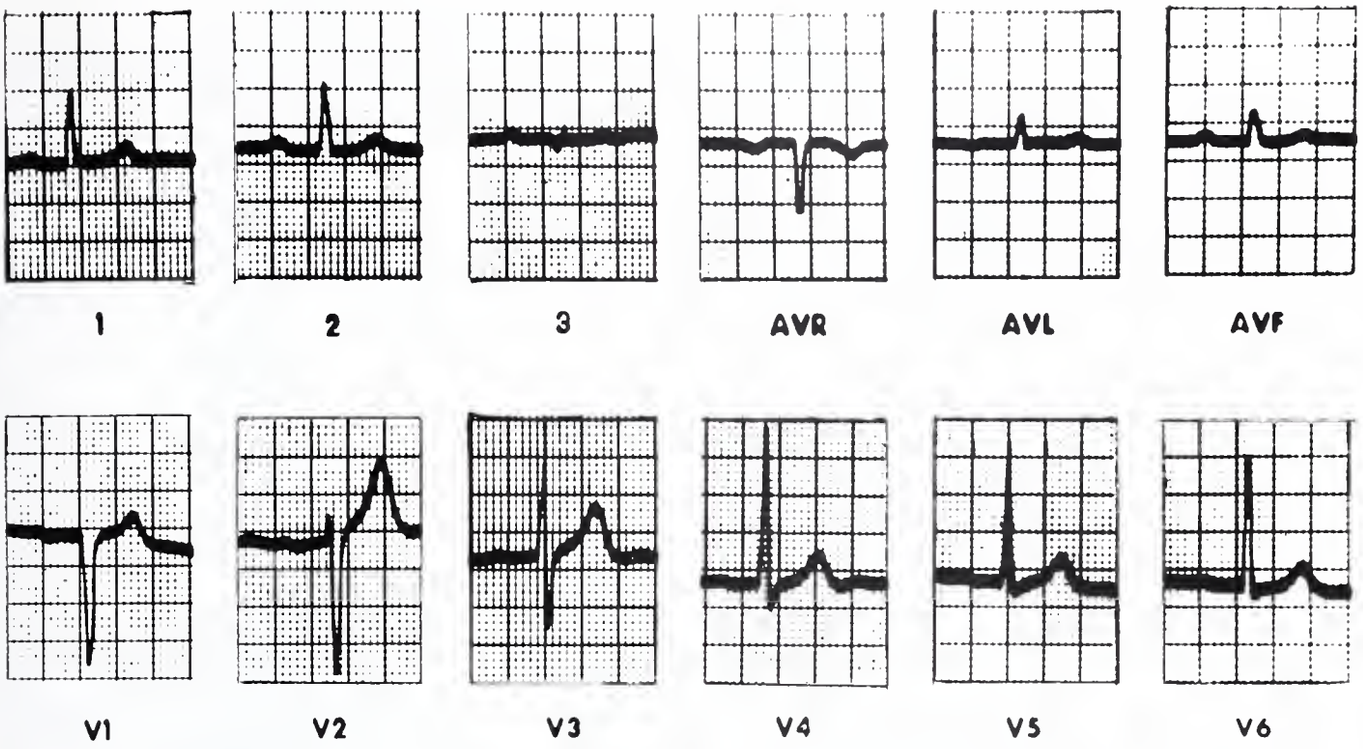


Fig 1. In the resting ECG of a 66-year-old man who had historical evidence of coronary insufficiency, evidence of ischemia is equivocal. In the vectorcardiogram, however, ischemia is indicated by horizontal QRS-T divergence of 170° in the horizontal plane.

	DIAGNOSIS	VECTORCARDIOGRAPHIC AXIS												MAXIMAL SPATIAL VCG QRS-T ANGLE		ECG-VCG COMPARISON	EFFECT OF VASODILATOR
		FRONTAL				RIGHT SAGITTAL				HORIZONTAL							
		QRS		T		QRS		T		QRS		T					
		CONTROL	RX	CONTROL	RX	CONTROL	RX	CONTROL	RX	CONTROL	RX	CONTROL	RX	CONTROL	RX		
1	ISCHEMIA	+40°	+40°	+70°	+70°	-150°	-150°	+100°	+100°	-60°	-70°	-40°	-30°	75°	80°	COMPARABLE	NONE
2	LEFT VENTRICULAR HYPERTROPHY	+30°	+40°	+30°	+40°	+180°	+180°	+130°	+110°	-70°	-70°	-50°	-50°	40°	40°	VCG SUPPLEMENTARY	NONE
3	NORMAL	+40°	+50°	+60°	+50°	-170°	-170°	+90°	+90°	-50°	-60°	+10°	-20°	60°	50°	COMPARABLE	NONE
4	LEFT AXIS DEVIATION	+80°	+80°	+75°	+75°	+100°	+100°	+95°	+95°	-90°	-100°	-40°	-30°	10°	10°	VCG SUPPLEMENTARY	NONE
5	ISCHEMIA AND INCOMPLETE RBBB	+80°	+80°	+85°	+80°	+65°	+50°	+95°	+100°	+80°	+80°	-95°	-95°	25°	25°	VCG SUPPLEMENTARY	NONE
6	ISCHEMIA	-80°	-85°	+90°	+95°	-120°	-130°	+70°	+85°	-80°	-85°	+90°	+90°	140°	140°	VCG SUPPLEMENTARY	NONE
7	ISCHEMIA	+45°	+40°	+90°	+90°	+180°	+180°	+95°	+100°	-45°	-60°	-10°	-45°	45°	30°	COMPARABLE	POSSIBLE IMPROVEMENT VCG
8	LEFT VENTRICULAR HYPERTROPHY	+80°	+80°	+25°	+30°	+110°	+110°	+115°	+125°	-90°	-90°	-30°	-20°	40°	50°	VCG AND ECG MUTUALLY SUPPLEMENTARY	NONE
9	LEFT AXIS DEVIATION	-20°	-30°	0°	-10°	-130°	-130°	+180°	+180°	-50°	-60°	-45°	-55°	40°	40°	VCG SUPPLEMENTARY	NONE
10	LEFT AXIS DEVIATION ISCHEMIA	-90°	-90°	+70°	+60°	-130°	-110°	+180°	+180°	-90°	-90°	+25°	+15°	60°	55°	COMPARABLE	NONE
11	LEFT BUNDLE BRANCH BLOCK	-60°	-50°	+80°	+80°	-170°	-170°	+10°	+10°	-60°	-60°	+110°	+110°	165°	165°	COMPARABLE	ECG SLIGHTLY IMPROVED
12	LEFT AXIS DEVIATION	+65°	+70°	+60°	+60°	+100°	+100°	+110°	+115°	0°	-10°	-30°	-40°	35°	30°	VCG SUPPLEMENTARY	NONE
13	ISCHEMIA	+70°	+70°	-180°	-150°	+110°	+110°	+125°	+120°	-55°	-65°	+130°	+120°	110°	110°	COMPARABLE	NONE
14	ISCHEMIA, MILD	+60°	+40°	+60°	+40°	+120°	+120°	+110°	+110°	-60°	-70°	-10°	-20°	50°	50°	COMPARABLE	NONE
15	NORMAL	+70°	+70°	+60°	+60°	+110°	+110°	+80°	+75°	-70°	-70°	+90°	+90°	160°	160°	VCG SUPPLEMENTARY	NONE
16	ISCHEMIA LEFT AXIS DEVIATION	-60°	-60°	+110°	+100°	-130°	-130°	+80°	+70°	-70°	-70°	+110°	+110°	130°	130°	COMPARABLE	NONE
17	ISCHEMIA	+10°	+10°	-50°	-40°	-130°	-130°	-85°	-80°	-60°	-65°	+10°	+10°	75°	75°	COMPARABLE	NONE
18	POSTERIOR INFERIOR LATERAL INFARCTION	+90°	+90°	+70°	+70°	+95°	+95°	+90°	+90°	+20°	+15°	+10°	+10°	15°	15°	COMPARABLE	NONE
19	POSTERIOR INFERIOR INFARCTION	+80°	+80°	+75°	+75°	+100°	+100°	+100°	+110°	-65°	-50°	-40°	0°	25°	20°	ECG AND VCG MUTUALLY SUPPLEMENTARY	MINOR IMPROVEMENT ECG
20	NORMAL	+60°	+80°	+35°	+25°	+100°	+100°	+100°	+95°	-35°	-50°	0°	-10°	35°	40°	COMPARABLE	NONE
21	ISCHEMIA	+80°	+80°	-90°	+95°	+100°	+100°	+100°	-80°	-60°	-65°	+70°	+50°	170°	30°	VCG SUPPLEMENTARY	REVERSION OF QRS-T DIVERGENCE TO NORMAL
22	POSTERIOR INFERIOR INFARCTION	-30°	-30°	+70°	+60°	-120°	-120°	+70°	+80°	-10°	-30°	+30°	+10°	100°	100°	VCG SUPPLEMENTARY	NONE
23	INFERIOR INFARCTION	+15°	+25°	+40°	+40°	+140°	+140°	+70°	+70°	-25°	-30°	+25°	+15°	20°	15°	VCG SUPPLEMENTARY	NONE
24	INFARCTION	+70°	+40°	-30°	-35°	+110°	+120°	+90°	+80°	-40°	-40°	-30°	-30°	80°	70°	VCG SUPPLEMENTARY	NONE
25	NORMAL LIMITS	+55°	+55°	+85°	+90°	+90°	+90°	+70°	+70°	+25°	+25°	+80°	+80°	20°	20°	ECG SUPPLEMENTARY	NONE

Table 2. Vectorcardiographic data and comparison with ECG data on same patients described in Table 1.

horizontal planes when recorded by the tetrahedron method.

Conclusion: The vectorcardiogram is a useful supplement to the ECG in the detection of ischemic heart disease. This technique is of particular value in eliciting evidence of ischemia in the resting tracing when none is found in the ECG.

Because the technique does increase the time and expense involved in diagnosis, we expect that it will continue to be used clinically only to clarify dubious cases.

REFERENCES

1. Simonson, E, et al: Diagnostic Accuracy of the Vectorcardiogram and Electrocardiogram, A Cooperative Study, Amer J Cardiol 17:829 (June) 1966.
2. den Boer, W: The Clinical Value of Vectorcardiography, Acta Med Scandinav 144:217, 1952.
3. Wolff, L: Vectorcardiographic Diagnosis of Myocardial Infarction, Dis Chest 27:263 (March) 1955.
4. Gelfand, G, and Bellet, S: Silent Electrocardiograms in the Presence of Myocardial Infarction: A Comparison with the Spatial Vectorcardiogram, Circ 12:711 (Oct) 1955. (Proceedings of the 28th Scientific Sessions)
5. Karlen, W S, et al: The Vectorcardiogram in Anterior Myocardial Infarction, Amer Heart J 52:45 (July) 1956.
6. Karni, H: The Ts E Loop in Hypercholesterolemia, Amer Heart J 54:269 (Aug) 1957.
7. Milnor, W R: Vectorcardiography in the Diagnosis of Myocardial Infarction, Prog Cardiovas Dis 1:175 (Oct) 1968.
8. Burch, G E, et al: A Correlative Study of Postmortem, Electrocardiographic, and Spatial Vectorcardiographic Data in Myocardial Infarction, Circ 18:325 (Sept) 1958.
9. Howitt, G, and Lawrie, T D: Vectorcardiography in Myocardial Infarction, Brit Heart J 22:61 (Jan) 1960.
10. Rothfeld, E L, et al: The Vectorcardiogram in Direct Posterior Wall Myocardial Infarction, Amer J Cardiol 7:496 (April) 1961.
11. Heckert, E W, et al: The Clinical Value of Vectorcardiography, Amer J Cardiol 7:657 (May) 1961.
12. Wolff, L, et al: Vectorcardiographic Diagnosis, A Correlation with Autopsy Findings in 167 Cases, Circ 23:861 (June) 1961.
13. Hugenholtz, P G, et al: A Clinical Appraisal of the Vectorcardiogram in Myocardial Infarction, Circ 24:808 (Oct) 1961.
14. Hugenholtz, P G, et al: A Clinical Appraisal of the Vectorcardiogram in Myocardial Infarction, II. The Frank System, Circ 24:825 (Oct) 1961.
15. Pipberger, H V, et al: Correlation of Clinical Information in the Standard 12-lead ECG and in a Corrected Orthogonal 3-lead ECG, Amer Heart J 61:34 (Jan) 1961.
16. Tannenbaum, O, et al: A Simple Corrected Orthogonal Lead System of Electrocardiography: Correlation with the Conventional Twelve-lead Electrocardiogram and Clinical Information, Amer Heart J 65:349 (March) 1963.
17. Hugenholtz, P G, et al: Recognition of Anterior Wall Infarction in Patients with Left Ventricular Hypertrophy, Circ 27:386 (March) 1963.
18. Isaacs, J H, et al: Vector-Electrocardiographic Exercise Test in Ischemic Heart Disease, A More Objective Measure of Exercise Tolerance, JAMA 198:1065 (Dec 5) 1966.
19. Massie, E, and Walsh, T J: Clinical Vectorcardiography and Electrocardiography, The Spatial QRS-T Angle, Yearbook Publishers, 1960, p 88.
20. Russek, H I: Evaluation of the Nitrites in the Treatment of Angina Pectoris, Amer J Med Sci 239:478 (April) 1960.

Dr. Runge, Bio-Medical Engineering Section, Department of Aerospace Engineering and Engineering Mechanics, The University of Texas, Austin, Tex 78712.

Achrocidin® Tablets and Syrup

Tetracycline HCl—Antihistamine—Analgesic Compound

Each tablet contains: ACHROMYCIN® Tetracycline HCl 125 mg.; Phenacetin 120 mg.; Caffeine 30 mg.; Salicylamide 150 mg.; Chlorothen Citrate 25 mg.

ACHROCIDIN Tetracycline HCl—Antihistamine—Analgesic Compound Tablets and Syrup are recommended for the treatment of tetracycline-sensitive bacterial infection which may complicate vasomotor rhinitis, sinusitis and other allergic diseases of the upper respiratory tract, and for the concomitant symptomatic relief of headache and nasal congestion. For children and elderly patients you may prefer caffeine-free ACHROCIDIN Syrup. Each 5 cc contains: ACHROMYCIN Tetracycline equivalent to Tetracycline HCl 125 mg.; Phenacetin 120 mg.; Salicylamide 150 mg.; Ascorbic Acid (C) 25 mg.; Pyrilamine Maleate 15 mg.

Contraindications: Hypersensitivity to any component.

Warning: In renal impairment, since liver toxicity is possible, lower doses are indicated; during prolonged therapy consider serum level determinations. Photodynamic reaction to sunlight may occur in hypersensitive persons. Photosensitive individuals should avoid exposure; discontinue treatment if skin discomfort occurs.

Precautions: Drowsiness, anorexia, slight gastric distress can occur. In excessive drowsiness, consider longer dosage intervals. Persons on full dosage should not operate vehicles. Nonsusceptible organisms may overgrow; treat superinfection appropriately. Treat beta-hemolytic streptococcal infections at least 10 days to help prevent rheumatic fever or acute glomerulonephritis. Tetracycline may form a stable calcium complex in bone-forming tissue and may cause dental staining during tooth development (last half of pregnancy, neonatal period, infancy, early childhood).

Adverse Reactions: *Gastrointestinal*—anorexia, nausea, vomiting, diarrhea, stomatitis, glossitis, enterocolitis, pruritus ani. *Skin*—maculopapular and erythematous rashes; exfoliative dermatitis; photosensitivity; onycholysis, nail discoloration. *Kidney*—dose-related rise in BUN. *Hypersensitivity reactions*—urticaria, angioneurotic edema, anaphylaxis. *Intracranial*—bulging fontanels in young infants. *Teeth*—yellow-brown staining; enamel hypoplasia. *Blood*—anemia, thrombocytopenic purpura, neutropenia, eosinophilia. *Liver*—cholestasis at high dosage.

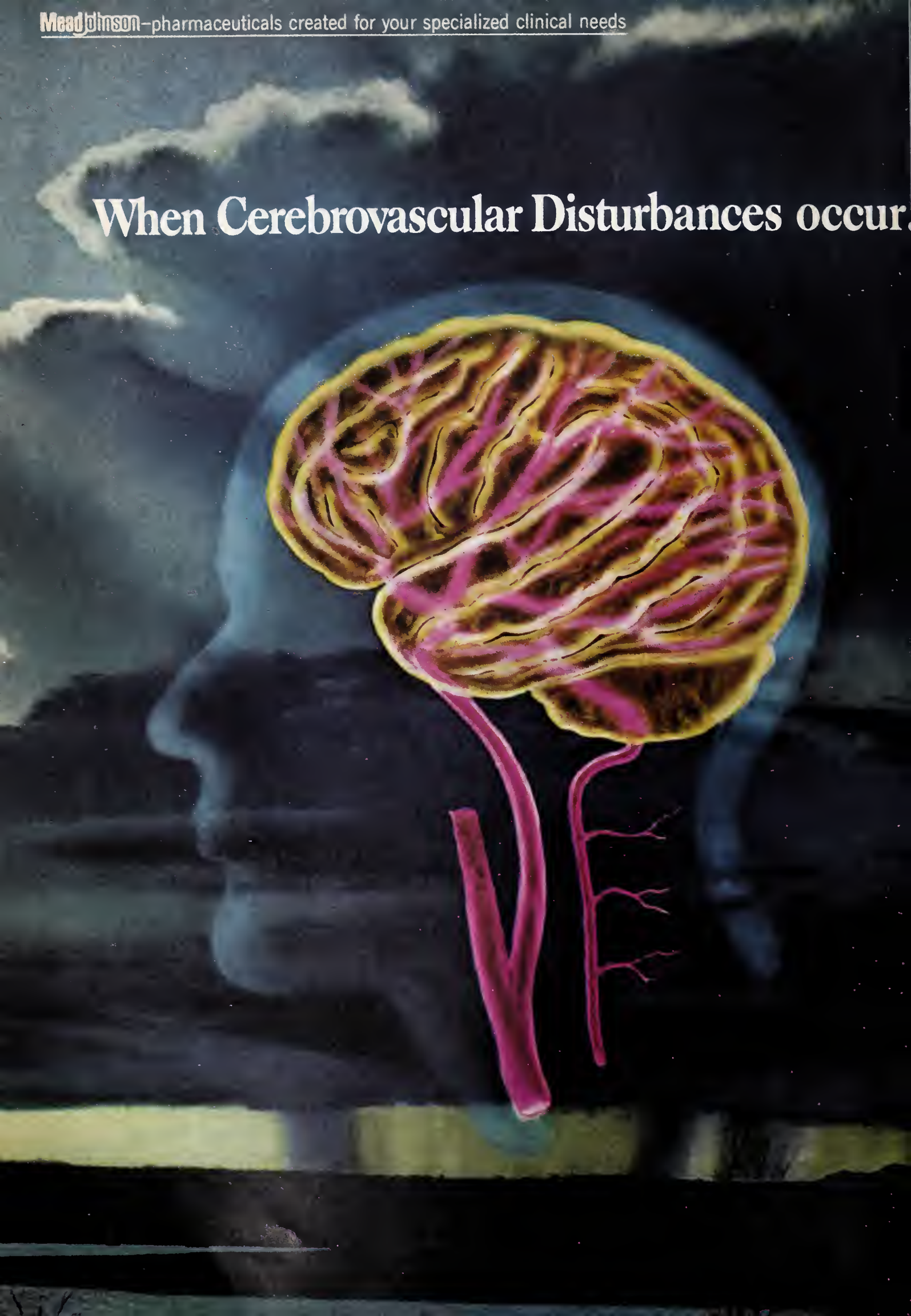
Upon adverse reaction, stop medication and treat appropriately.

Lederle LEDERLE LABORATORIES, A Division of American Cyanamid Company, Pearl River, New York 10965

534-9

Mead Johnson—pharmaceuticals created for your specialized clinical needs

When Cerebrovascular Disturbances occur



...with episodes of vertigo, headache, confusion, sensory loss, slurred speech, consider

VASODILAN®

(ISOXSUPRINE HCl)

to help relieve symptoms by preventing vasospasm and increasing cerebral blood flow

Mead Johnson
LABORATORIES

Although not all clinicians agree on the value of vasodilators in vascular disease,[1] *several investigators*[2-5] *have reported favorably on the effects of isoxsuprine on cerebral blood flow. Effects have been demonstrated both by objective measurement*[2,5] *and observation of clinical improvement.*[2-4] **Indications:** Cerebrovascular insufficiency, arteriosclerosis obliterans, diabetic vascular diseases, thromboangiitis obliterans (Buerger's disease), Raynaud's disease, postphlebitic conditions, acroparesthesia, frostbite syndrome and ulcers of the extremities (arteriosclerotic, diabetic, thrombotic). **Composition:** VASODILAN tablets, isoxsuprine hydrochloride 10 mg. **Dosage:** Oral—10 to 20 mg. (1 or 2 tablets) t.i.d. or q.i.d. **Contraindications and Cautions:** There are no known contraindications to recommended oral dosage. Do not give immediately postpartum or in the presence of arterial bleeding. **Side Effects:** Occasional palpitation and dizziness can usually be controlled by dosage reduction. As intramuscular administration of 10 mg. or more may cause brief hypotension and tachycardia, single intramuscular doses exceeding this amount are not recommended. Complete details available in product brochure from Mead Johnson Laboratories **References:** (1) Fazekas, J. F.; Alman, R. W.; Ticktin, H. E.; Ehrmantraut, W. R., and Savarese, C. J.: Angiology *15*:No. 2 (Feb.) 1964. (2) Horton, G E., and Johnson, P C., Jr.: Angiology *15*:70-74 (Feb.) 1964. (3) Clarkson, I. S., and LePere, D M · Angiology *11*:190-192 (June) 1960 (4) Dhrymiotis, A D , and Whittier, J R.: Current Therapeutic Research *4*:124-128 (April) 1962 (5) Whittier, J R.· Angiology *15*:82-87 (Feb) 1964

© 1969 MEAD JOHNSON & COMPANY • EVANSVILLE, INDIANA 47721

71169

Vasomist

(ANTIHISTAMINIC)

VASOCONSTRICTOR, NASAL DECONGESTANT AND LOCAL ANTIHISTAMINIC

Active Ingredients:
Phenylephrine Hcl ... 0.25%
Phenylpropanolamine Hcl .. 0.50%
Chlorobutanol ... 0.15%
Tripelennamine Hel ... 0.50%
In Isotonic Solution

Vasomist

(PLAIN)

VASOCONSTRICTOR AND NASAL DECONGESTANT

Active Ingredients:
Phenylephrine Hcl ... 0.25%
Phenylpropanolamine Hcl ... 0.50%
Chlorobutanol ... 0.15%
In Isotonic Solution

USE: Temporary relief of nasal congestion due to colds and hay fever.

DIRECTIONS: Adults and Children: Instill two or three drops into each nostril, using no more than needed to provide relief. Repeat every three to four hours as needed but not oftener.

AVAILABILITY

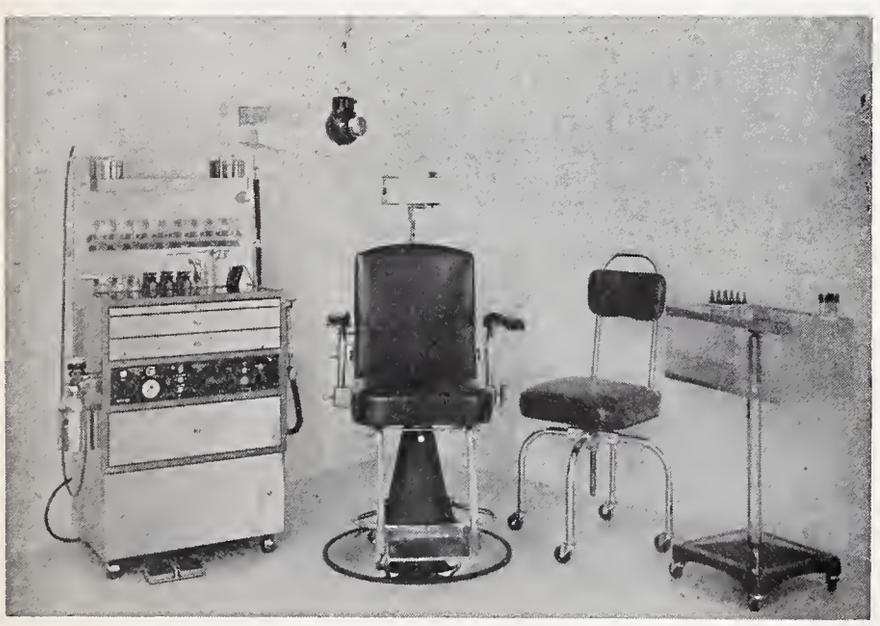
In plastic squeeze bottles containing ¼ fluid oz. and in dropper bottles containing 1 fluid oz.

HUMCO LABORATORY
TEXARKANA, ARK.-TEX.

HUMCO LABORATORY
TEXARKANA, ARK.-TEX.
Our Integrity is Your Guarantee

Serving Texas Physicians for Over Forty Years

Precision-engineered, functionally-built equipment



SMR keeps you and your patients' comfort and satisfaction in mind . . . a room that reflects professional good taste.

SMR has manufactured medical and Dental equipment for over forty years on a direct to user basis.

NEW CATALOG NOW AVAILABLE

SURGICAL MECHANICAL RESEARCH, INC.

Post Office Box 1185 • (714) 646-4405

960 W. 16th St., Newport Beach, Calif. 92663

Established Over 40 Years

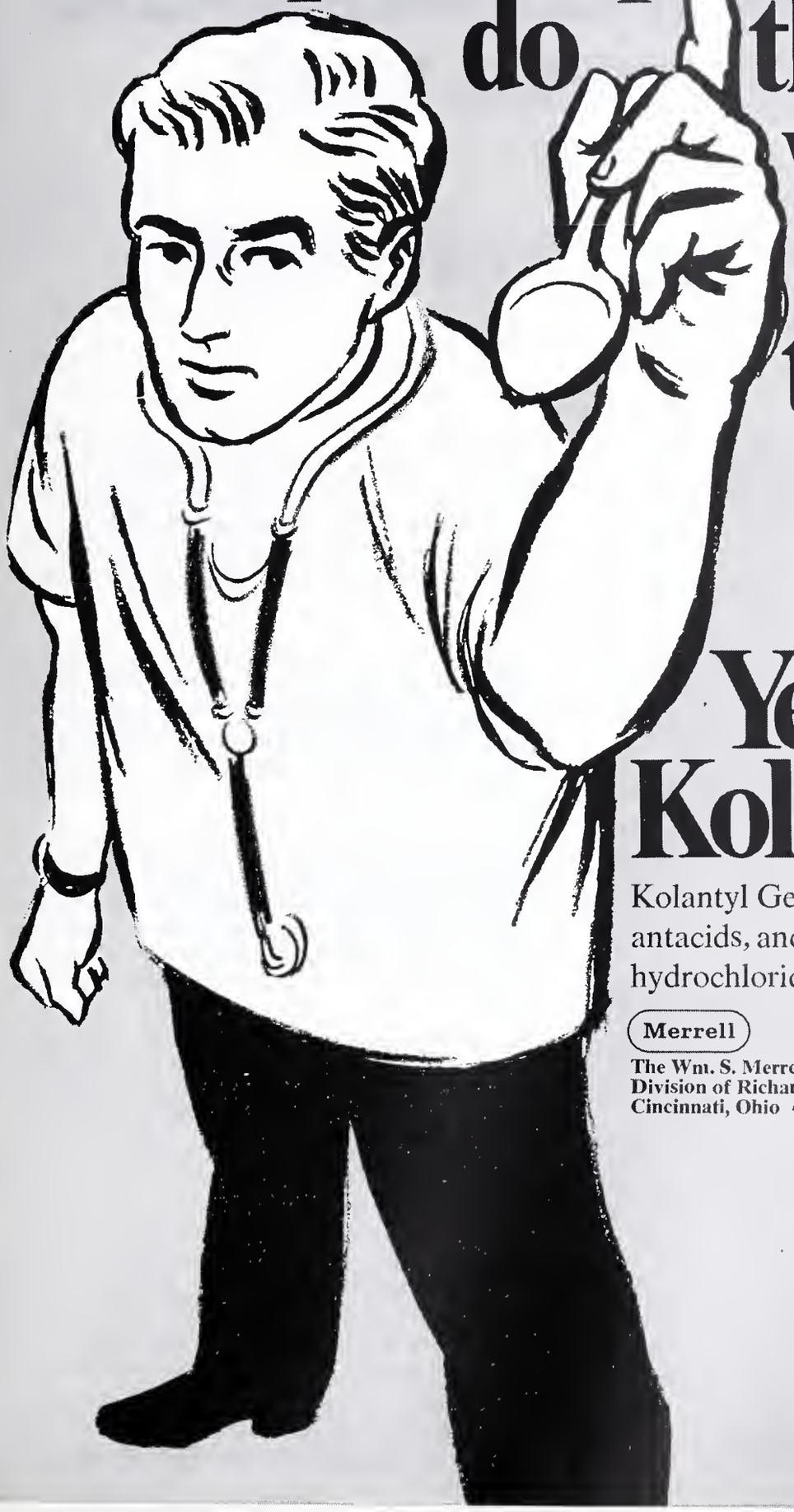
Factory Direct Sales

STAINLESS STEEL POLISH

SMR Stainless Steel Polish cleans, and preserves with superior results —ends fingerprints, watermarks and surface stains. 22 oz. economy $2.75 F.O.B. Plant

See us at Booth No. 100 TMA April 30-May 3, 1970

Can one prescription do the work of two?



Yes, Kolantyl®.

Kolantyl Gel/Wafers contain antacids, and Bentyl® (dicyclomine hydrochloride) too.

Merrell

The Wm. S. Merrell Company
Division of Richardson-Merrell Inc.
Cincinnati, Ohio 45215

9-1243

(0715)

AN ELECTROCARDIOGRAPHIC SCREENING TEST OF CARDIAC FUNCTION

LT COL FREDERIC G. JONES, USAF, MC

A survey of 100 subjects was undertaken to determine whether the recorded ECG changes in heart rate induced by the Valsalva maneuver might provide a rapid, safe, and inexpensive screening test of cardiac function. A Valsalva ratio (calculated from the ratio of the maximal R-R to the minimal R-R interval) of less than 1.50 warranted further evaluation. The lower values might suggest cardiovascular abnormalities in an apparently healthy population, or deterioration of cardiac function in a patient with known heart disease.

IN 1851 THE NOTED German physiologist Edward Weber reported in detail the circulatory effects of forced expiration against a closed glottis.[1] This was nearly 150 years after Valsalva described the usefulness of such a maneuver in expelling pus from the middle ear. After Weber's experiment the Valsalva maneuver was studied extensively as an indicant of cardiac function. Abnormal responses were found in a wide spectrum of disease states.[2,3]

Early studies were concerned with changes in arterial pressure induced by the maneuver. However, these recordings were available only with arterial cannulation. A "bedside version" using a sphygmomanometer was devised, but it was not accurate enough. Therefore, Elisberg[4] and Levin[5] developed clinical methods of recording changes in the heart rate. Reflex changes in rate occur secondary to blood pressure fluctuations, and these two investigators obtained useful information about cardiac performance from the rate changes recorded by electrocardiograph (ECG) during forced expiration.

I surveyed the responses in 100 consecutive patients who appeared for routine ECG examinations. The purpose of the study was to determine the potential value of the Valsalva maneuver as an ECG screening test of cardiac function.

Methods and Subjects: The Valsalva maneuver was performed in a standard manner after the ECG examination was completed. Emphasis was on avoiding a vigorous inspiratory effort which converts some normal responses to abnormal ones.[2]

All subjects were studied in the supine position; they maintained an expiratory pressure of 40 mm Hg for 10 seconds. I used a standard aneroid manometer attached to a mouthpiece by rubber tubing; a needle in the tubing provided an air leak, and a disposable 10 cc plastic syringe served as a mouthpiece. The ECG was run continuously during a brief control period, during a 10-second period of strain, and for 15 seconds after release of the strain.

Minimal and maximal R-R intervals were measured, the former usually occurring upon release or within one to two beats. Most often the latter was found five to ten beats later and at times it consisted of only transient slowing

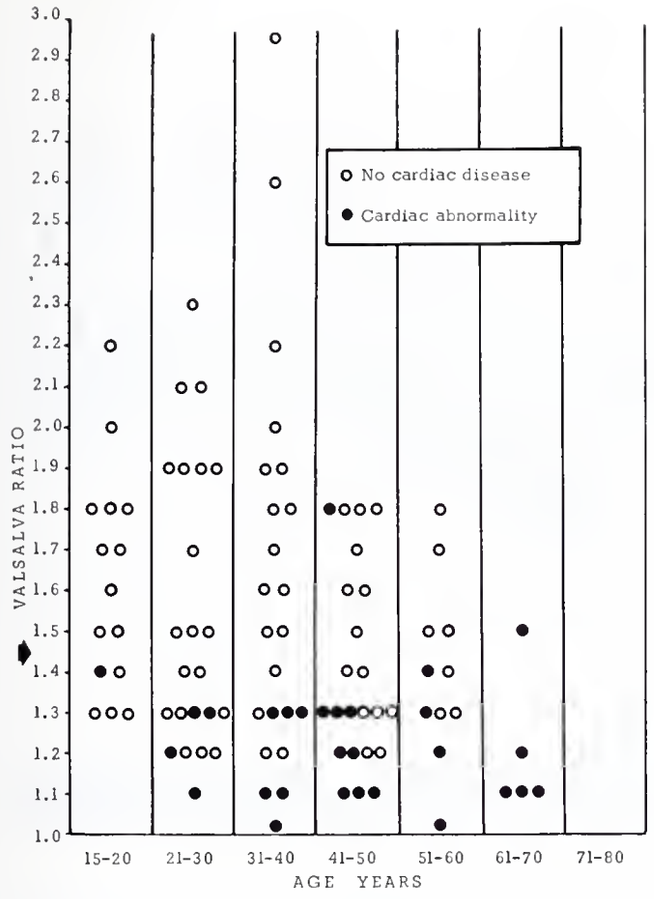


Fig 1. Results of Valsalva ratio determinations in 100 subjects.

(one to two beats). These intervals were measured with calipers and, according to Levin,[5] the Valsalva ratio was obtained by dividing the maximal R-R interval by the minimal R-R interval.

Adults of both sexes with regular sinus rhythm constituted the group. Some patients had ECGs ordered during evaluation of known cardiac disease, and many were to have ECGs for screening purposes, most commonly prior to surgery requiring general anesthesia.

A careful history and physical examination were recorded at the time of the study. The information on the requesting form was used regularly, the referring physician was consulted on occasions, and the chart perused.

Results: The initial 100 subjects consisted of 70 men and 30 women, indicating only the usual preponderance of men in a military hospital (Fig 1). The closed circles represent patients who clearly had cardiovascular disease, and the open circles represent those with no clinically detectable cardiac abnormality.

In Levin's study,[5] I found that 96% of normal subjects had Valsalva ratios of 1.50 or greater. When the results of my study were analyzed according to this definition of normal, only two subjects with clinically evident heart disease had Valsalva ratios in the normal range. Both were men with an unequivocal history of ischemic cardiac pain. Therefore, the test was not considered sensitive enough to detect their true condition even though their histories readily identified them as abnormal.

Fifty-three patients responded abnormally according to Levin's definition. Twenty-seven had clinically apparent cardiovascular abnormalities, including acquired valvular heart disease, congenital intracardiac shunts, myocardiopathies, ischemic heart disease, and severe untreated hypertension. The remaining 26 patients in the abnormal group seemed to have no cardiac dysfunction but some, being older, could be expected to have reduced values according to earlier investigations. Some had diabetes, postgastrectomy syndromes, hypertension, and other conditions that might predispose to autonomic dysfunction. Only a prospective study would establish freedom from heart disease. Careful analysis of the abnormal group revealed that no subjects with Valsalva ratios of 1.0 or 1.1, and only 7 of the total group of 23 with values lower than 1.30, were free of heart disease.

Discussion: In 1936 Hamilton and his associates reported a series of experiments that contributed to the understanding of the hemodynamics of the Valsalva maneuver.[6] Hamilton defined a normal four-phase response of the arterial pressure to an expiratory strain (Fig 2). In phase 1, at the onset of the expiratory strain, increased intrathoracic pressure is transmitted to all vessels within the chest. This increased pressure and an increase in left ventricular stroke output, secondary to the forced emptying of the pulmonary reservoir, leads to an abrupt rise in arterial pressures. The maximum rise occurs approximately at the onset of the strain, and the systolic pressure increases approximately 42 mm Hg, the diastolic 37 mm Hg, and the mean arterial pressure 39 mm Hg. Although increase in pressure acts on the carotid sinus, it may or may not induce reflex slowing of the heart rate. In phase 2, as the strain persists, venous return to the right atrium is impeded, thus depleting the central reservoir and resulting in a progressive de-

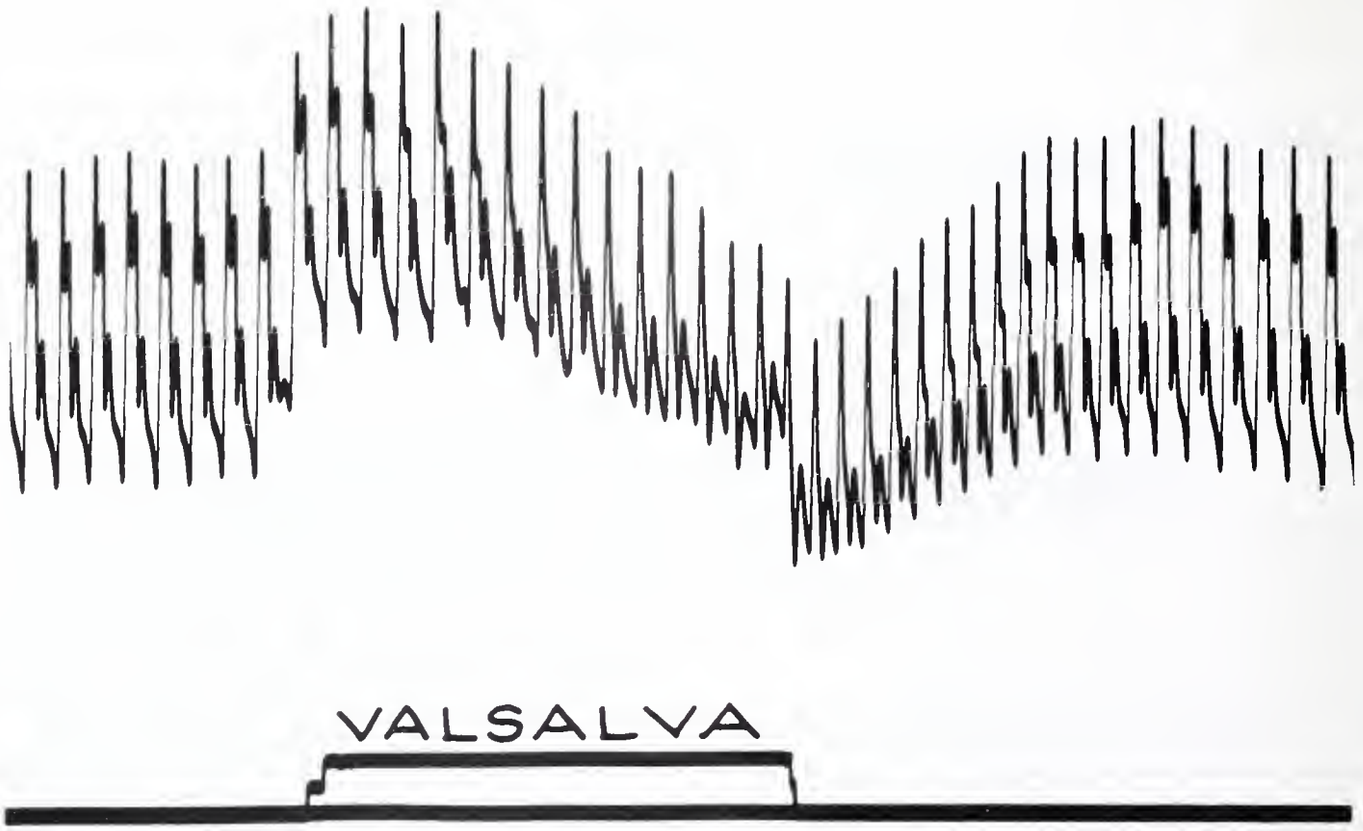


Fig 2. Brachial artery pressure responses to Valsalva maneuver in a normal subject.

crease in stroke volume and mean arterial pressure. By the midpoint of a ten-second Valsalva maneuver, the stroke value has fallen to 35% of the control value and the mean arterial pressure to 56%. The stroke volume of the left ventricle continues to fall until it is approximately 50% of the control value. The result is a decrease in the net blood pressure, even with the continued support of an increased intrathoracic pressure. Sympathetic activity manifests as tachycardia, and peripheral vasoconstriction is stimulated. In phase 3, the strain is ended abruptly. For two to three seconds the arterial pressure continues to fall as a result of the loss of support from the increased intrathoracic pressure. Although right atrial filling from the vena cavae is resumed immediately, a four- to five-second delay is encountered in the arrival of the augmented venous return at the left ventricle. With improved filling of the left ventricle, phase 4 begins. Since the initial increased output is ejected into a vasoconstricted bed, the arterial pressure rises rapidly. The reflex tachycardia that is present also contributes to the rapidity with which the arterial pressure attains control values (6-9 beats) and then exceeds these values by 25% at 10 to 15 beats after release of the strain. This rise above control value is the so-called *overshoot,* which, in turn, stimulates the increased vagal activity manifest as a bradycardia. Fig 3 shows a representative recording of a subject during a normal response to the Valsalva maneuver. As expected, the tachycardia and the bradycardia that followed were readily apparent at the bedside by palpation or auscultation.

In contrast to the normal response, patients in heart failure and some patients with a variety of other cardiac defects show an abnormal, or *square wave,* response. The pulse pressure fails to decrease significantly during the strain period and the overshoot is absent (Fig 4).

At the onset of the expiratory strain, the arterial systolic and diastolic pressures rise abruptly. However, in contrast to the normal response, the pulse pressure does not diminish as the strain continues. Consequently, in the absence of a stimulus to increased sympathetic activity, tachycardia and peripheral vasoconstriction do not develop. On release of the strain, the arterial pressure lacks the previous support of an elevated intrathoracic pressure and falls rapidly to the control value; no overshoot is recorded in this situation. The failure of tachycardia to develop during the strain and the absence of an overshoot, and hence reflex bradycardia, are illustrated in Fig 5, a continu-

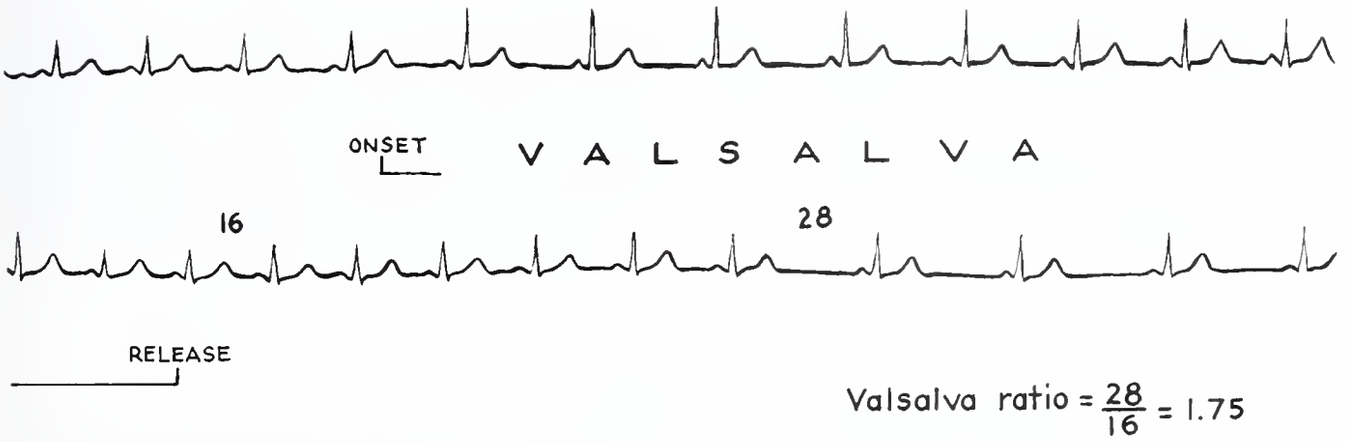


Fig 3. Electrocardiographic recording of a normal subject performing Valsalva maneuver. Minimal and maximal R-R intervals are overlined.

ous recording of a subject with a known square wave response.

The primary abnormality of the square wave response is the failure of the arterial pulse pressure to decrease significantly during the strain period. At present, most investigators believe that this abnormality is the consequence of an overdistended central reservoir of blood. This hypothesis explains the abnormal response recorded in subjects with intracardiac shunts, as well as in patients in congestive heart failure. An excessive pulmonary blood volume maintains left ventricular filling, even with impeded systemic venous return.

Other investigators emphasize the failure to develop an overshoot. Many explanations have been offered for this phase 4 abnormality. There may be impaired ventricular function manifest by inability to respond to an increase in venous return at the cessation of straining, with a consequent increase in stroke volume, despite the development of tachycardia. The limiting factor may be myocardial, pericardial, or valvular.[7] Central veins may be so distended already that additional blood cannot be stored by the veins during the strain. Therefore, when the venous system does not supply the surge of blood at the end of effort, the overshoot fails to occur.[8]

Whatever the precise mechanism of the abnormality, square wave responses have been recorded in a variety of abnormal states. The present study seems to confirm the value of the test as a screening procedure. It is consistently abnormal in atrial septal defects, whereas the response is normal in murmurs of innocent origin, in the straight back syndrome, and in other situations requiring a definition of the origin of the pulmonary systolic flow murmurs. In my experience, ventricular septal defects give less consistent results, but fortunately the physical findings are far more specific in this defect.

The test has proved useful in assessing the current status of patients who have undergone mitral valvulotomy. The physical findings of mitral stenosis may persist to a varying degree and the symptoms, or lack of them, are often confusing. At this hospital the validity of the Valsalva response has been confirmed so regularly at catheterization or reoperation that one can be confident in postponing such procedures when the response is consistently normal.

Serial determinations are valuable. Previous investigators have confirmed the reproducibility

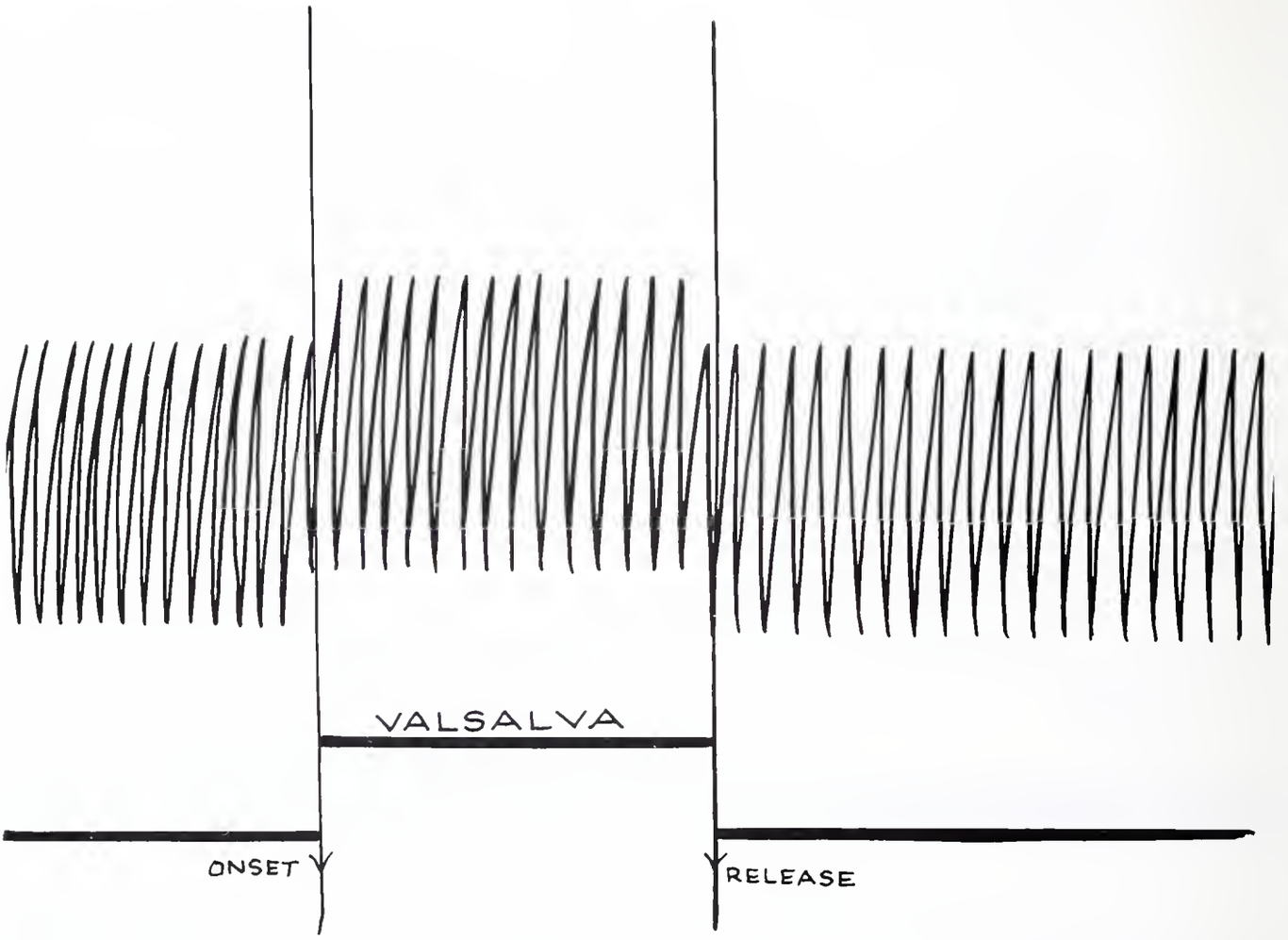


Fig 4. Arterial pressure recording of a subject with abnormal response.

of the test in normal subjects with an average difference of only 5%. The clinical course of a patient with myocardiopathy and severe congestive heart failure was assessed at frequent intervals during hospitalization. The Valsalva ratio rose after cardiomegaly, pulmonary congestion, and gallop rhythm disappeared. Perhaps even more important was the diminished response that occurred on ambulation. Had this warning been heeded, the patient might have been returned to complete bed rest without delay. However, this was not done until a loud summation gallop was heard 48 hours after the decline in the Valsalva ratio. Subsequently, the patient was returned to absolute bed rest for six additional weeks and has had continued clinical improvement with resumption of near normal activities. Serial determinations of the Valsalva ratio may have value in determining a therapeutic endpoint of bed rest therapy for congestive cardiomyopathy, which is otherwise difficult to ascertain.[9,10]

The potential hazards of the test deserve mention. Although Meyer and other investigators[11] have demonstrated that a significant decrease in cerebral blood flow can occur during a prolonged Valsalva maneuver, no episodes of syncope, giddiness, arrhythmias or angina have been precipitated during the short duration of the test. Another safety factor is that we perform the test with the patient in the recumbent position. Patient cooperation is essential, but in evaluating many subjects, all have seemed willing to cooperate and do so satisfactorily after a brief practice period. The mechanics of the test are simple; a technician who can obtain a satisfactory ECG seems equally competent to conduct the Valsalva test and assess its validity.

It must be emphasized that a valid result depends upon an intact autonomic nervous system. Abnormal results may be obtained when loss of integrity of this system occurs as the result of an organic defect or one of the diverse drugs that alter nervous system activity.[12] Other examples of altered responses found in clinical practice are diabetic neuropathy, calcification of the carotid sinus, idiopathic postural hypotension, and primary aldosteronism.[13] The presence of arrhythmias, such as atrial fibrilla-

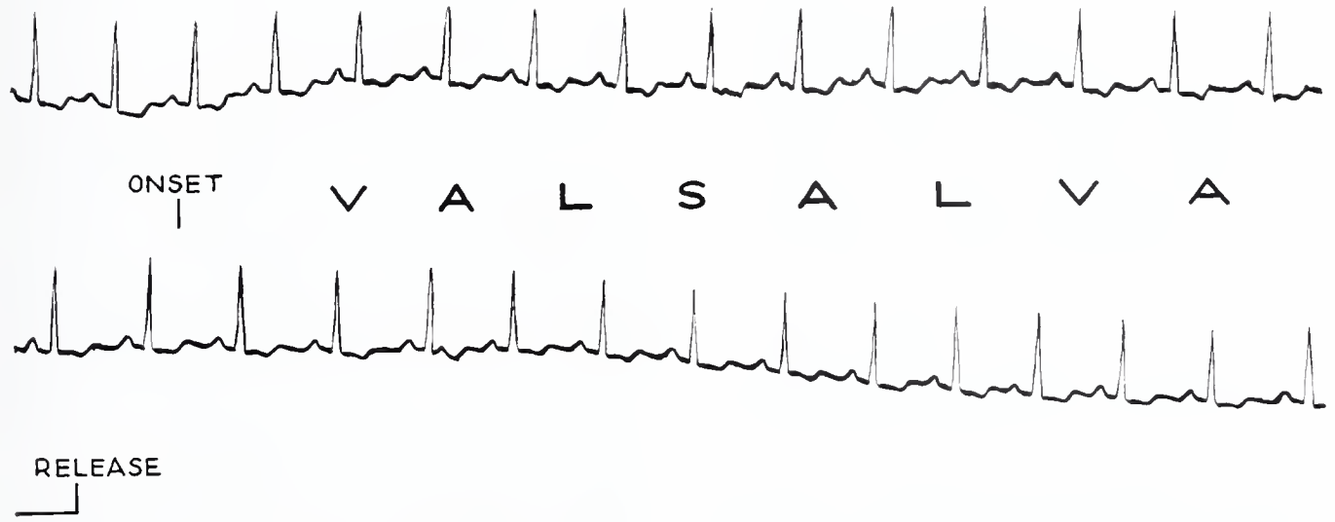


Fig 5. Electrocardiographic recording during expiratory strain by a subject with known abnormal response.

tion, make the results difficult to interpret. Such patients were excluded from the study. Finally, it seems inadvisable to perform the test in patients with recent myocardial infarction or embolic episodes.

Summary: The heart rate changes induced by the Valsalva maneuver were recorded in 100 consecutive subjects who presented for an ECG. The Valsalva ratio was calculated, and a value of 1.50 was defined as the lower limit of normal. The test was analyzed to determine whether it might be useful as a simple screening test of cardiac function. As befitted a screening method, the test seemed extremely sensitive (93%) in detecting subjects with cardiovascular abnormalities. The moderate specificity (51%) of the test at all abnormal values improved considerably when lower results were analyzed. The test was useful when performed in conjunction with routinely ordered ECGs. If the response was abnormal, further clinical evaluation was warranted to rule out unsuspected abnormalities in an apparently normal population, or evidence of deterioration of cardiac function in patients with known heart disease.

REFERENCES

1. Derbes, V J, and Kerr, A, Jr: Valsalva's Maneuver and Weber's Experiment, New Eng J Med 253:822 (Nov 10) 1955.
2. Gorlin, R, et al: The Valsalva Maneuver as a Test of Cardiac Function; Pathologic Physiology and Clinical Significance, Amer J Med 22:197 (Feb) 1957.
3. Hancock, E W, et al: Valsalva's Maneuver in Atrial Septal Defect, Amer Heart J 65:50 (Jan) 1963.
4. Elisberg, E I: Heart Rate Response to the Valsalva Maneuver as a Test of Circulatory Integrity, JAMA 186:200 (Oct 19) 1963.
5. Levin, A B: A Simple Test of Cardiac Function Based Upon the Heart Rate Changes Induced by the Valsalva Maneuver, Amer J Cardiol 18:90 (July) 1966.
6. Hamilton, W F, et al: Physiologic Relationships Between Intrathoracic, Intraspinal and Arterial Pressures, JAMA 107: 853 (Sept 12) 1936.
7. Stone, D J, et al: A Reappraisal of the Circulatory Effects of the Valsalva Maneuver, Amer J Med 39:923 (Dec) 1965.
8. Sharpey-Schafer, E P: Effects of Respiratory Acts on the Circulation, in: Hamilton, W F, and Miller, B F, Eds: Handbook of Physiology, Washington, DC, American Physiological Society, 1961, p 1875.
9. Burch, G E, and DePasquale, N P: On Resting the Human Heart, Amer J Med 44:165 (Feb) 1968.
10. Burch, G E, and DePasquale, N P: Heart Muscle Disease, DM, (May) 1968.
11. Meyer, J S, et al: Cerebral Hemodynamics, Blood Gases, and Electrolytes During Breath Holding and the Valsalva Maneuver, Circulation 33 and 34, Supp II:35, 1966.
12. Upshaw, C B, Jr: The Valsalva Maneuver in Cardiovascular Diseases. An Application of Basic Pathophysiology to Clinical Practice, Med Ann 36:14 (Jan) 1967.
13. Slayton, P E, and Biglieri, E G: Hypertension and Hyperaldosteronism of Renal and Adrenal Origin, Amer J Med 38: 324 (March) 1965.

The author, Wilford Hall USAF Hospital, Lackland AFB, Texas 78236.

Coronary arteriography and current indications for its use

JOSEPH W. LINHART, MD

Coronary arteriography prior to some heart surgery procedures can provide information that cannot be gained by other means; it is also useful in evaluating the results of operations on the coronary arteries. In addition, there are special instances in which its use as a diagnostic measure sometimes is justified. The methods, indications, contraindications, and complications are discussed.

VARIOUS TOOLS FOR CLINICAL evaluation of the coronary arteries include the patient's history, physical examination, electrocardiogram (ECG), roentgenogram of the chest, and special blood studies. Unfortunately, their results may be nonspecific and even misleading at times, and they do not elucidate any anatomic information when it may be required. Therefore, various techniques have been developed during the past 20 years to determine the in vivo anatomy of the coronary arteries. These have involved the delivery of a radiopaque contrast medium to the coronary arteries with the simultaneous recording or a permanent record through the use of various types of x-ray equipment and filming devices.

Rousthöi[1] probably was the first to show the coronary arteries angiographically in a living animal in 1933, and Radner,[2] in 1945, first accomplished this in man. Subsequently Lehman,[3] Dotter,[4] and Gensini[5] showed coronary vessels by using aortic root contrast injections and various combinations of acetylcholine arrest, timed contrast injections, and balloon occlusion of the ascending aorta with filming primarily on large film changers. These various unselective techniques were used in an attempt to intensify the degree of coronary artery opacification, and generally there was a high degree of success. In 1958, in an effort to improve the opacification further, Sones,[6,7] began using a direct selective approach to coronary visualization with filming on 35 mm motion picture film. His method is the one most commonly used today, and has been advanced by Ross,[8] Freisinger,[9] Sewell,[10] Gensini,[5] and Kasparian.[11] The basic selective technique utilizes a cutdown into the right brachial artery; however, using special catheters, many cardiologists and radiologists approach the coronary arteries percutaneously, either occasionally or routinely.[12] Also, some excellent films are obtained by semiselective methods using specially shaped aortic catheters.[13]

Methods: In our institution we use the Sones technique primarily, and occasionally the percutaneous femoral artery approach described by Judkins.[12] The latter is useful when either an extremely small, thrombosed, or otherwise abnormal brachial artery is found.

Prior to contrast visualization of the heart, we perform a complete right and left heart catheterization to determine the patient's overall cardiac status. In view of the importance of myocardial function in relation to coronary artery disease, its status must be evaluated, especially when surgery is contemplated.[14] Although the measurement of resting cardiac output, left ventricular end-diastolic pressure, and a left ventricular cineangiogram can give extremely important information regarding myocardial function in most patients, this is not always true. Therefore, since resting values may be normal in these patients, some form of stress such as exercise or an increase in afterload (angiotensin infusion) is used to test myocardial integrity.[14] Only after these studies have been completed do we proceed with the con-

trast visualization of the heart and coronary arteries.

A left ventricular cineangiogram is performed, generally in the 30° right anterior oblique projection, using Renografin 76 as the contrast agent. This angiogram enables us to evaluate gross changes in myocardial contractility, any mitral valve insufficiency, and other abnormalities such as ventricular aneurysm.

Coronary cineangiograms are then carried out using various degrees of right anterior (usually 15-30°) and left anterior (45-60°) oblique projections. Renografin 76 also is used exclusively for the coronary arteriography, since the incidence of arrhythmias is less with this contrast agent. To eliminate possible functional obstructions and to accentuate abnormalities and collateral vessels, the injections are repeated after the sublingual administration of nitroglycerin. The cine method usually provides satisfactory anatomic detail, permits viewing of the contrast injection on a television monitor during filming, and provides an excellent motion study. To enhance the degree of anatomic detail (due to superior resolution), we occasionally film on the large film changer as well as on cine film. Some angiographers believe that both methods should be used and that they are complementary,[12] but we have not found this to be routinely necessary.

The injections are monitored and filmed, using a six-inch North American Philips Company image amplifier with an overframing 100 mm lens, at 60 frames per second. An Arriflex 35 mm camera with Kodak XX negative film records the injection, and the film is developed in an O. Fisher Processal with Ethol 90 developer and Kodak rapid X-ray fixer. A Targe-Arno 35 mm cine viewer is used to evaluate the developed film.

Figs 1a and 1b are examples of relatively normal coronary arteries in a patient with mild aortic valvular regurgitation. Fig 1a depicts the left coronary artery in the left anterior oblique (LAO) projection. The left anterior descending (LAD) coronary artery passes down the center of the frame, and the large vessel to the right is the left circumflex vessel. The vessels are separated to a greater degree than normal because of some mild left ventricular hypertrophy. Fig 1b demonstrates the right coronary artery in the LAO view. This vessel passes to the left side of the frame in the right atrioventricular groove and continues as the posterior descending (PD) coronary artery.

An example from a patient with severe coronary artery disease is shown in Figs 2a and 2b. The left coronary artery in the LAO projection is seen in Fig 2a. The LAD coronary artery is passing down the center of the frame, and a definite narrowing is seen near the midpoint of this artery. A thread-like circumflex artery passes toward the right section of the frame. This vessel is almost totally occluded about 1 cm from its origin. The right coronary arteriogram is shown in Fig 2b in the LAO view. Significant narrowing is seen about 3 cm from its origin, with multiple areas of irregularity and lesser occlusive lesions noted in that portion of the right coronary artery within the atrioventricular groove. Posteriorly, at the bifurcation, narrowing involves the origin of the PD coronary artery. When the 35 mm film is seen in motion, collateral vessels are noted to pass from the PD to help fill the previously described left circumflex, in a retrograde fashion.

Indications For Coronary Arteriography: There is no unanimity of opinion on all of the different indications for studying a patient's coronary arteries.[3,5,7-10,15-17] The following are generally acceptable indications for coronary arteriography:

1. For patients with known coronary artery disease who are candidates for coronary surgery (implantation of extracardiac vessel or endarterectomy).

2. Evaluation of chest pain in patients with primary valvular heart disease, especially aortic valve disease, prior to surgery. We routinely study the coronary circulation in all men over 40 and women over 50, regardless of chest pain.[18,19]

3. In certain forms of congenital heart disease, such as coronary arteriovenous fistula and anomalous origin of left coronary artery, and to rule out an anomalous right coronary artery prior to incision into the right ventricular wall.

4. To assess the results of prior surgical pro-

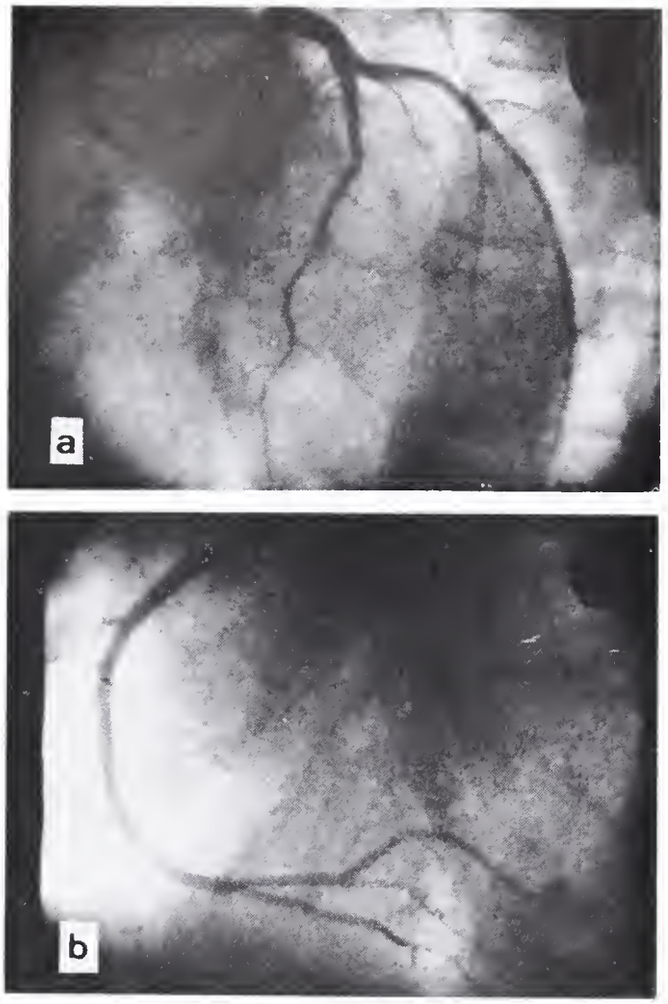


Fig 1. Normal coronary arteries. Single frames from 35 mm film show (a) the left coronary artery in the left anterior oblique (LAO) view, and (b) the right coronary artery in LAO.

cedures on the coronary arteries. This includes postoperative studies on the implanted extracardiac vessels.

The following indications are not considered appropriate by all cardiologists and radiologists, but the studies may be deemed quite necessary when the individual patient is evaluated.

1. Atypical chest pain when an appropriate diagnosis cannot be made, following a thorough evaluation, by other methods.

2. An abnormal ECG in an asymptomatic patient whose profession involves danger to himself or others (pilot, locomotive engineer). Occasionally this may be important in obtaining certain insurance policies.

3. Evaluation of "idiopathic" arrhythmias when other methods fail to indicate the etiology.

4. Evaluation of patients with cardiomegaly of unknown etiology.

5. For clinical investigative studies to evaluate natural history, the development of collateral vessels, for anatomic-clinical correlations, etcetera.

The following cases illustrate the use of coronary arteriography to evaluate patients in various clinical situations.

Case 1: A 58-year-old man had frequent episodes of severe chest pain, suggestive of angina pectoris. His ECG showed only nonspecific ST-T changes and a chest roentgenogram was normal. Since the pain was not adequately controlled by the usual medical methods, cardiac catheterization and angiography were performed. His intracardiac pressures and cardiac output were normal, as was his response to the stress of an angiotensin infusion. Left ventricular cineangiography was normal. Coronary cineangiography showed total occlusion of his right coronary artery 4 cm from the origin, with distal filling via bridging collaterals from the proximal right coronary artery. A greater than 50% occlusive lesion was present in the first 2 cm of his LAD coronary artery, with lesser narrowings and generalized irregularities noted throughout the left coronary artery system. The initial LAD coronary artery was calcified, and collateral vessels from the proximal right coronary artery helped fill the distal LAD.

Since the patient was significantly limited by his chest pain, had severe coronary artery disease with some intrinsic collateralization, and normal left ventricular function, a revascularization procedure utilizing the left internal mammary artery was performed.

Following surgery he improved considerably and returned to work as an executive. Nine months following surgery he still had occasional anginal type pain, but much less than previously. His nitroglycerin intake was reduced from 20-30 tablets per day to 1-2 per day and his general exercise tolerance improved considerably.

Repeat cardiac catheterization again demonstrated normal pressures, a normally contracting left ventricle, and a normal response to stress. Contrast visualization of the implanted left internal mammary artery showed it to be patent and to fill the distal LAD in a retrograde fashion through multiple collateral vessels. Subsequently, distinct opacification of the coronary sinus was seen.

This case illustrates the use of coronary arteriography to determine the sites and extent of coronary arteriosclerosis prior to a surgical implantation procedure. In addition, it was used to evaluate the results of surgery.

Case 2: A 71-year-old man was seen because of syncope and angina. Physical examination, ECG, and chest roentgenograms were consistent with severe aortic stenosis. In order to evaluate his aortic valve, left ventricular function, and the status of his coronary arteries, hemodynamic and angiographic studies were carried out. There was an 88 mm Hg mean gradient across his aortic valve, his left ventricular end-diastolic pressure (LVEDP) was mildly elevated, and a slight decrease in cardiac index was present. The left ventricle was slightly enlarged, with prominent myocardial hypertrophy, but the overall contractility was good. The aortic valve was calcified, rigid, and thickened, and mild aortic regurgitation was present. There was a 75% occlusive lesion in the initial part of the LAD coronary artery and in the midportion of the left circumflex. A 50% occlusive lesion was noted in the initial third of the right coronary artery. No significant intercoronary collaterals were noted.

Although the patient had significant coronary artery disease his left ventricular contractility appeared to be good, and we decided to go ahead with aortic valve replacement in view of the severe aortic stenosis.

His symptoms improved significantly following the insertion of a Starr-Edwards prosthesis. Postoperative study showed little change in his cardiac output and LVEDP. A small pressure difference was present across his prosthetic valve. The left side of the heart was still enlarged.

This patient, despite his age and definite coronary artery disease, has done rather well clinically following surgery. However, his heart has remained enlarged, his LVEDP is elevated, and there has been no improvement in his cardiac output. In a series of patients with aortic valve replacement studied previously, limitation in improvement usually was associated with significant coronary artery disease.[18,19] In addition, muscle disease secondary to the long-standing valvular abnormality and/or rheumatic disease may contribute to postoperative morbidity. Unlike this case, in other patients with aortic valvular disease the coronary arteries may be entirely normal and the angina results from the increased work load imposed upon the left ventricle by the diseased valve. In some, abnormal left ventricle function is seen, which is therefore unrelated to any coronary artery disease. These patients may also have a limited improvement after operation. Patients over age

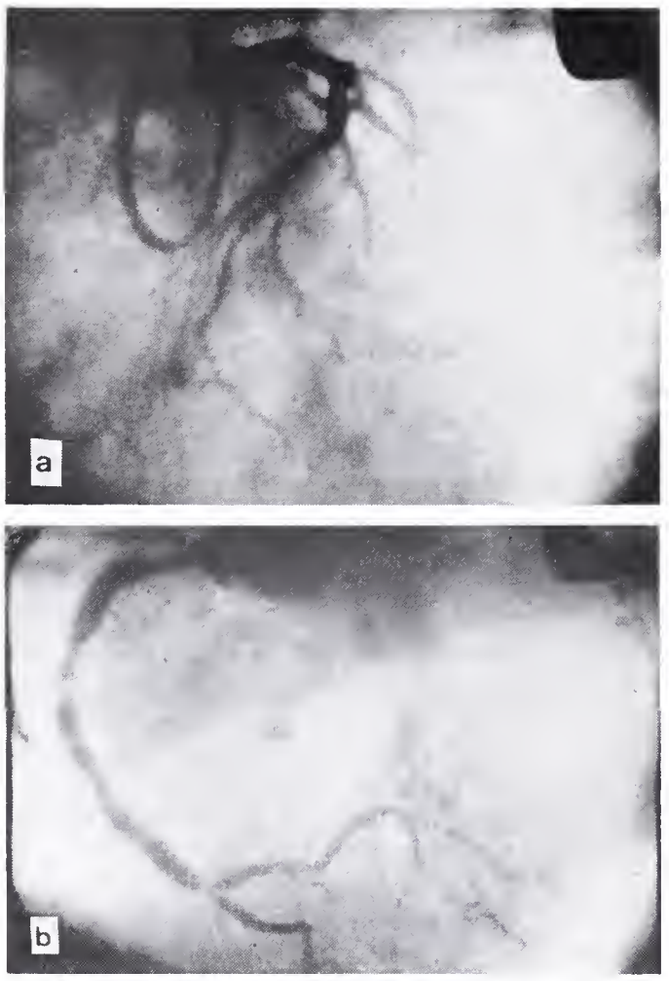


Fig 2. Coronary artery disease. (a) Left coronary artery, and (b) right coronary artery, both in LAO projection.

60 are especially prone to have a poorer postoperative result due to coronary and/or left ventricular myocardial disease.[20] In any event, in order to completely evaluate these patients, both preoperatively and postoperatively, coronary arteriography is necessary.

Case 3: A 19-year-old man was referred by his local draft board because a precordial murmur was detected during a preinduction physical examination. He was entirely asymptomatic, but a continuous murmur was present over the lower sternum and the lower left sternal border. His chest roentgenogram and ECG were normal. Since a coronary arteriovenous fistula was suspected, cardiac catheterization and angiography were performed. By selective injections, the left coronary artery was shown to be normal. The right coronary artery was huge and, although supplying branches to the anterior and posterior aspects of the right ventricle, drained predominantly into the right atrium. Other technics disclosed the magnitude of this left-to-right shunt through the right coronary arteriovenous fistula. The patient refused to undergo corrective surgery.

The complete evaluation of the congenital lesion in this man could only have been accomplished through the use of coronary arteriography.

Case 4: A 61-year-old man was evaluated because of frequent dizzy spells and occasional syncopal episodes with some mild exertional dyspnea. He denied any other cardiovascular or neurologic symptoms. Physical examination was not remarkable. His routine ECG showed occasional premature ventricular contractions (PVC) with a rare period in which two or three PVCs occurred consecutively. Continuous monitoring of his ECG in the hospital demonstrated multiple runs of ventricular tachycardia as the etiology of his dizzy spells and syncope.

In order to help elucidate the nature of his underlying heart disease (after all other studies were negative), cardiac catheterization and angiography were performed. All intracardiac pressures were normal, but his cardiac index was somewhat reduced and the left ventricular cineangiogram showed a mild generalized decrease in contractility (he was taking large doses of procaine amide at the time). Coronary arteriography showed only moderate tortuosity of large vessels with no major occlusive lesions. It was concluded that his arrhythmia could not be explained on the basis of large vessel arteriosclerotic heart disease.

Initial attempts to control the paroxysmal ventricular tachycardia with procaine amide, quinidine, and ventricular pacing were not successful. Eventually, it was controlled through a combination of quinidine and propranolol.

Case 5: A 51-year-old man was referred by the Vocational Rehabilitation Agency for recurrent chest pain of about four years duration. The pain was "like a toothache" over the left anterior thorax with radiation to the left arm. It occurred with exertion but also at rest, lasted four or five minutes, was associated with palpitations and shortness of breath, and was relieved unpredictably by nitroglycerin. He frequently had Demerol injections for the pain, and had been hospitalized at least 14 times for therapy. He had been treated with nitroglycerin, anticoagulants, diuretics, narcotic tablets, and "nerve pills." Physical examination and ECG were essentially normal.

This man's pain was not thought to be due to coronary artery disease. However, after four years of various treatments and virtual incapacity, it was believed that the exact status of his coronary arteries should be determined after all other causes of chest pain were ruled out.

As expected, all intracardiac pressures and the cardiac index were normal. He had a normal response to rapid atrial stimulation, and the left ventricle and coronary arteries were normal angiographically. Therefore, it was concluded that his chest pain was not caused by any demonstrable form of heart disease.

In many patients, the knowledge that their coronary arteries are normal is quite reassuring, and more fruitful avenues of therapy, including psychotherapy, immediately open up.

Contraindications: In general, coronary arteriography can be performed in any patient who is fit for other forms of cardiac catheterization, because the basic principles are the same. This means that the patient should have no signifi-

cant systemic disease, infections, renal or hepatic abnormalities, or allergy to the contrast agents. However, even if none of these contraindications apply, we prefer not to perform coronary arteriograms during any active myocardial disease, when the patient has unstable angina pectoris, and less than three months following a definite myocardial infarction. The potential for complications is higher during these latter three states. However, under certain extenuating circumstances, arteriograms have been performed shortly after myocardial infarction (within 24 hours) with no complications.

Complications: Generally, the most common complication of coronary arteriography is thrombosis of the brachial artery at the site of arterial cutdown. This may occur in from 1-5% of patients depending upon the experience of the catheterizing team. In almost all cases, the collateral circulation about the elbow is good, and symptoms related to the vessel occlusion are minimal or nonexistent. However, if good blood flow is not obtained following the procedure, a Fogarty embolectomy catheter may be inserted into the artery and the vessel cleared of thrombotic material. Rarely, if the pulse is lost after the patient returns to his room, direct surgical removal of the thrombus may be required.

Arrhythmias occur in 1-2% of patients if the usually mild bradycardia associated with the coronary artery injections of contrast material are excluded. The most frequent arrhythmia is ventricular fibrillation, which occurred in 0.7% of a large group of patients studied.[21] Rarely, asystole may be noted. Arrhythmias are usually handled easily during catheterization since the appropriate drugs, pacemakers, and electrical equipment is readily available.

In addition, myocardial infarction, dissection of a great vessel, allergic reactions, pyrogen reactions, and cerebral vascular accidents may rarely occur. In a series of 3,312 coronary arteriographic procedures, three deaths were related to these various complications.[21] This rate of approximately 1 death per 1,000 procedures probably is about the rate to be expected. Actually this is remarkably good when one considers the severity of the arterial disease in some of the patients studied.

REFERENCES

1. Rousthoi, P: Uber Angiokardiographie, Acta Radiol 14:419, 1933.
2. Radner, S: An Attempt at the Roentgenologic Visualization of Coronary Blood Vessels in Man, Acta Radiol 26:497, 1945.
3. Lehman, J S, et al: Coronary Arteriography, Amer J Roentgenol 81:749 (May) 1959.
4. Dotter, C T, and Frische, C H: An Approach to Coronary Arteriography, in Abrams, H: Angiography, vol 1, Boston, Little, Brown, and Company, 1961, p 259.
5. Gensini, G G: The Coronary Circulation, in Zimmerman, H A: Intravascular Catheterization, Springfield, Ill, Charles C Thomas, 1966, pp 1126-1201.
6. Sones, F M, Jr, and Shirey, E K: Cine Coronary Arteriography, Mod Concepts Cardiovasc Dis 31:735 (July) 1962.
7. Sones, F M, Jr: Cine Coronary Arteriography, in: Hurst, J W, and Logue, R B: The Heart, Arteries, and Veins, New York, McGraw-Hill, 1966, p 705.
8. Ross, R S, and Friesinger, G C: Coronary Arteriography, Amer Heart J 72:437 (Oct) 1966.
9. Friesinger, G C, and Ross, R S: Coronary Angiography: Review of Techniques and a Report of Experience with Selective Arteriography, in Cooley, R N, and Schreiber, M H: Radiology of the Heart and Great Vessels, Baltimore, Williams and Wilkins Company, 1967, p 421.
10. Sewell, W H: Surgery for Acquired Coronary Disease, Springfield, Ill, Charles C Thomas, 1967, pp 181-182.
11. Kasparian, H: Coronary Arteriography, in Brest, A N, and Moyer, J H, Eds: Cardiovascular Disorders, Philadelphia, F A Davis Company, 1968, pp 314-318.
12. Judkins, M P: Selective Coronary Arteriography; Part I: A Percutaneous Transfemoral Technic, Radiology 89:815 (Nov) 1967.
13. Paulin, S: Coronary Angiography, a Technical, Anatomic and Clinical Study, Acta Radiol 223 (Supp 1) 1964.
14. Linhart, J W, et al: Myocardial Function in Patients with Coronary Artery Disease, Amer J Cardiol 23:379 (March) 1969.
15. Harrison, T R, and Reeves, T J: Principles and Problems of Ischemic Heart Disease, Chicago, Year Book Medical Publishers, Inc, 1968.
16. Mendel, D: A Practice of Cardiac Catheterization, Oxford, Blackwell Scientific Publications, 1968, p 164.
17. Lehman, J S: Coronary Arteriography—Present Status, in Viamonte, M Jr, and Parks, R E, Eds: Progress in Angiography, Springfield, Ill, Charles C Thomas, 1964, pp 255-257.
18. Linhart, J W, and Wheat, M W, Jr: Myocardial Dysfunction Following Aortic Valve Replacement. The Significance of Coronary Artery Disease, J Thor Cardiov Surg 54:259 (Aug) 1967.
19. Linhart, J W, et al: The Significance of Coronary Artery Disease in Aortic Valve Replacement, J Thor Cardiov Surg 55:811 (June) 1968.
20. Hildner, F J, et al: Clinical and Hemodynamic Comparisons of Valve Replacement in Patients Over and Under Age 60, Ann Thor Surg 7:438 (May) 1969.
21. Ross, R S, and Gorlin, R: Coronary Arteriography, Circulation 37:(Supp 3):111-67 (May) 1968.

Dr. Linhart, University of Texas Medical School at San Antonio, 7703 Floyd Curl Drive, San Antonio, Texas 78229.

Clinicopathologic Conference

This case concerns a patient with diabetes and heart failure who died with hepatic insufficiency. The patient also had a history of moderately heavy alcohol intake and his serum iron level was elevated. A differentiation between alcoholic liver disease and hemochromatosis is presented as well as a discussion of iron overload disorders and therapy of these conditions.

CASE PRESENTATION: *Dr. Shropshire:* This 52-year-old Latin American man, sporadically employed at odd jobs, first came to the emergency room with a knee injury. Hematuria and bilirubinuria were incidentally noted at this time. He apparently had been in good health except for occasional low back pain. He had hepatomegaly to three fingers' breadth below the right costal margin. Urinalysis showed no sugar or albumin, but microscopic hematuria was noted. He was sent to the Urology Clinic; an intravenous pyelogram was unremarkable, but the patient kept no further clinic appointments. He was seen again in the emergency room for a hand injury, and at that time severe degenerative changes in most of the joints of his hands and digits were seen on roentgenograms.

Six months later he was admitted to the hospital for the first time with a three-month history of 40-lb weight loss and progressive weakness. He said that two months before admission his personal physician had diagnosed diabetes mellitus and prescribed oral medications, but the patient had not taken them for the month prior to his admission. He admitted to moderate alcohol consumption, and his dietary history revealed adequate, though primarily carbohydrate, intake. His parents were both diabetic, but both lived to their ninth decade. Two sisters had died with cancer, and another sibling was diabetic. The only positive physical finding was hepatomegaly. On admission his blood glucose level was 356 mg/100 ml and ketoacidosis was present. His diabetes was controlled with insulin. A stool guaiac test had been positive, but roentgenographic examination of the upper gastrointestinal tract, barium enema, and proctoscopic examinations showed no abnormalities. Hematuria was again present, but an intravenous pyelogram and aortogram were within normal limits. Chest roentgenograms revealed a normal heart silhouette and ill-defined infiltrates in the right and left midlung fields. An electrocardiogram (ECG) was normal. He was discharged with a diagnosis of adult onset diabetes mellitus, and hepatomegaly presumably secondary to alcoholic cirrhosis.

The patient returned to the clinic for several visits, apparently did well on his insulin, and had no other complaints until four months later, when he came to the emergency room with swelling of his abdomen and feet and progressive shortness of breath. His blood pressure was 140/90 mm Hg, and he had bilateral basilar rales and a left border of cardiac dullness at the anterior axillary line. No gallops were heard. Edema was present to the knees, and his heart was enlarged. An ECG revealed diminished voltage in all leads. The venous pressure was 33 cm, increasing to 37 cm with hepatic pressure, and the circulation time was 25 seconds. Urinalysis again showed microscopic hematuria. The patient was digitalized and sent home.

His next hospital admission was one month later; he complained of progressive shortness

Spencer Shropshire, MD

Eugene P. Frenkel, MD

Gregory Whelan, MD

Lawrence S. Cohen, MD

Hugo Jasin, MD

Alexander Kosinski, MD

Edwin H. Eigenbrodt, MD, Guest Editor

of breath and aching abdominal pain. Physically, he appeared to be chronically ill and mildly icteric, with a blood pressure of 120/90 mm Hg, percussion dullness at both lung bases, and undetectable cardiac impulse, and a liver that measured 20 cm beneath the right costal margin. Pitting edema (4+) was again noted and a venous pressure of 32 cm was recorded. Circulation time was 50 seconds. Following treatment with bed rest, sodium restriction, and diuretics, the patient improved symptomatically. Laboratory work on this admission revealed these values: hemoglobin 12.8 gm/100 ml; hematocrit 37%; white blood cells 3,850, with a normal differential count except for 9% eosinophils. Urinalysis revealed albuminuria and microscopic hematuria. Bone marrow aspiration revealed slight erythroid hyperplasia with slightly diminished stainable iron deposits. A liver biopsy showed moderate cirrhosis with peripheral lobular stainable iron pigment. Total serum iron on two occasions was 235 μg/100 ml and greater than 290 μg/100 ml, and the corresponding total iron binding capacities were 319 and 363 μg/100 ml, respectively. The patient's weight dropped from 144 to 128 lb, and he was discharged with his diabetes well-controlled on 20 units of NPH insulin.

The last admission was one month later, this time with a history of coffee-ground vomitus and black, tarry stools. The patient was stuporous and combative. His blood pressure was 130/70 mm Hg, and he had obvious fetor hepaticus. Percussion dullness was present at the right lung base; cardiac gallops were present; the liver was palpated 11 cm beneath the right costal margin. Pitting edema (1+) was present and no asterixis was noted. Laboratory values were hemoglobin 9.4 gm/100 ml; hematocrit 28%; white blood cells 7,400; and microscopic hematuria. His blood urea nitrogen was 27 mg/100 ml; creatinine 1 mg/100 ml; blood glucose 130 mg/100 ml; and electrolytes normal. At the time of admission, blood ammonia level was 559 μg/100 ml. An electroencephalogram (EEG) indicated a severe diffuse disturbance of cerebral function. Progressive difficulty with respiratory secretions required tracheostomy, and despite oral and rectal neomycin and continuous enemas, the patient became progressively obtunded and died.

Clinical Discussion: *Dr. Frenkel:* The house staff noted that this patient's alcoholic intake was only of modest amounts. However, they also noted that he had progressive hepatomegaly, and that his skin was slate gray. These observations led to the serum iron and iron binding capacity determinations.

The elevated serum iron values limit the differential diagnosis. One must first rule out ingestion or, more commonly, parenteral administration, of iron; second, significant hepatic necrosis with liberation of iron; or third, some form of iron overload.

Neither of the first two possibilities appeared to be reasonable, so we can turn to types of iron overload. To paraphrase Bothwell and Finch,[1] iron overload can be divided into three general categories. The first is focal iron overload which can occur, for instance, in the kidneys with long-standing intravascular hemolysis, in the lungs in idiopathic hemosiderosis, and in the liver in patients with portacaval shunts. A second category includes reticuloendothelial (RE) iron overload. Classically, this occurs in patients who have had excessive

blood transfusions; it also can occur in chronic hemolytic anemias, especially of the congenital type. Long-standing ineffective erythropoiesis, as may be seen in megaloblastic states, primary refractory anemias, or the pyridoxine-responsive anemias can lead to a phenomenal RE loading with iron secondary to the scavenger and salvage function of the RE cells. It is clear from the protocol that all of these considerations can be eliminated. The final group to be considered is parenchymal cell iron overload resulting from either a physiologic, pharmacologic, or pathologic increase in iron absorption. The physiologic stimuli to iron absorption are either iron lack or increased erythropoiesis. Examples of this might be anemic patients with chronic hemolysis or patients who have ineffective erythropoiesis. These patients will have increased iron absorption in spite of increased iron already present in the body. In this type of iron overload there is resultant distribution to both the RE system and parenchymal tissues. Again, we can rule out such a physiologic mechanism. The classic pharmacologic mechanism is that of the Bantu, where contamination of food from iron pots yields massive daily oral iron exposure. Whether such a circumstance exists in the United States is highly questionable. Mallory and MacDonald[2] have tried to make a case for an analogous circumstance in ordinary alcoholics who, for questionable reasons, may be exposed to or absorb excessive iron.

We have to turn to the pathologic mechanism as the most reasonable in this case, that of idiopathic hemochromatosis. This disease state may be due to a genetic, or perhaps acquired, defect associated with increased iron absorption.

A second question relates to the lack of evident iron overload in the marrow aspirate. It should be stressed that the identification of iron depends first on the form of tissue iron. Iron exists in at least two forms, ferritin and hemosiderin. Ferritin is not detectable by iron stains because it is water soluble and may be lost in processing the tissue. Second, even under the best of conditions, staining inadequacies occur and "stainable iron" may not be identified although it might be present when subsequent studies are done. Finally, not all tissues are homogenously involved, and some authors have contended that this is evidence of multiple "pools of iron." The variable distribution of iron may be enhanced in the presence of liver damage, since an inordinate amount may remain in the damaged liver, exemplified by patients following portacaval shunt.

We thought that this patient had nongenetic iron overload, that is, acquired idiopathic hemochromatosis. The consensus view is that removal of the iron can result in functional improvement in such patients. The first step was to measure his oral iron absorption by the dual-isotope (iron 55 and iron 59) technique. We then planned to remove the iron serially. Most such patients have 20 to 100 gm of excess iron present in the body. Phlebotomy is the most effective way to remove it, since each unit of blood removed will eliminate approximately 250 mg of elemental iron. These patients can be bled one to three times per week and, unlike patients with primary hematologic diseases, they will repair and maintain normal hemoglobin values. The other available technique is to use an iron chelate, of which deferoxamine is the best. Deferoxamine is unique among the iron chelating agents because of its selective avidity for trivalent ionic iron. Brown and coworkers[3] have shown that tachyphylaxis does not truly occur, and that the mean urinary loss per 24 hours ranges between 3 and 25 mg. Effective loss is obvious since amounts greater than 10 mg per day turn the urine a salmon color. There is also an increased gastrointestinal loss with this compound so an exact calculation of iron balance is not possible and the

TMA ANNUAL SESSION

DALLAS

TEXAS MEDICAL ASSOCIATION 1970 ANNUAL SESSION APRIL 30-MAY 3

FEATURING

38 GUEST SPEAKERS
plus 225 special and TMA-member speakers

13 SECTION PROGRAMS
Oigestive Oiseases, General Practice, Internal Medicine, Nervous and Mental Oiseases, Obstetrics and Gynecology, Ophthalmology, Otolaryngology, Pathology, Pediatrics, Physical Medicine and Rehabilitation, Public Health, Radiology, and Surgery

20 CURBSTONE CONSULTATIONS
Informal round table discussions on medical toplcs

7 CONTINENTAL BREAKFAST ROUND TABLES
Have breakfast with a guest speaker. Enjoy juice, coffee, and rolls while the speaker makes a 20-minute presentation, then participate in the informal, 50-minute, open forum discussion period that will follow. Attendance is limited and tickets, at no charge, are necessary.

28 SPECIALTY SOCIETY PROGRAMS

7 SPECIAL SYMPOSIUMS

2 GENERAL MEETINGS & LUNCHEONS

175 SCIENTIFIC & TECHNICAL EXHIBITS

FILM PROGRAM

PHYSICIANS' AND WIVES' ART EXHIBITION

SPORTS / ENTERTAINMENT
Golf, Tennis, Skeet and Trap, Fraternity and Alumni Parties, Class Reunions and the fabulous "Saturday Night at the Fairmont" party and dance.

NOW, FOR THE FIRST TIME, YOU CAN REGISTER IN ADVANCE!

Save time and effort by registering in advance. Fill out the card below, mail it to TMA, and your registration packet will be waiting for you. There is no registration fee for TMA members.

A handy form for ordering tickets to luncheons, the "Saturday Night at the Fairmont" party, and other events is located on the back of this Advance Registration card. Save even more time by ordering your tickets now.

ADVANCE REGISTRATION

TEXAS MEDICAL ASSOCIATION ANNUAL SESSION APRIL 30 MAY 3 DALLAS 1970

Name _____

City of residence _____

Member of _____ County Medical Society

Non-Member Physician ☐ Intern or Resident ☐ Nurse ☐

Other Paramedical Profession _____

Specialty _____

Guest representing _____

Expected residence at the meeting _____

MAIL TO: TEXAS MEDICAL ASSOCIATION, 1801 NORTH LAMAR BLVD., AUSTIN, TEXAS 78701

SAVE TIME! USE HANDY ADVANCE TICKET ORDER FORM ON OTHER SIDE

MAKE YOUR HOTEL RESERVATIONS TODAY!

Select your first, second and third choice of hotels from the list below, complete the housing request form, and mail it to the TMA Housing Bureau. Preferences will be honored as far as possible, and confirmation of reservations will be sent directly to you from the hotel.

DOWNTOWN DALLAS HOTELS

RATES	SINGLES	DOUBLES	TWINS	SUITES
FAIRMONT HOTEL** Scientific Sessions Headquarters	$22.00-$36	$28.00-$42	$28.00-$42	$50.00-$120
STATLER HILTON HOTEL* Business Sessions Headquarters	$15.00-$22	$21.00-$28	$21.00-$28	$64.00-$ 95
SHERATON-DALLAS HOTEL* Woman's Auxiliary Headquarters	$15.50-$22	$20.00-$28	$21.50-$28	$45.00-$125
HOTEL ADOLPHUS*	$11.50-$22	$16.50-$27	$16.50-$27	$45.00-$175
BAKER HOTEL*	$11.00-$17	$14.00-$21	$17.00-$22	$35.00-$ 47

**Room will not be held after 4 p.m. without deposit or payment guaranteed.
*Room will not be held after 6 p.m. unless requested.

REQUEST FOR HOTEL RESERVATION

PLEASE PRINT OR TYPE THREE CHOICES

1st _____

2nd _____

3rd _____

ROOM WILL BE OCCUPIED BY:

NAME _____

STREET _____

CITY _____ STATE _____ ZIP _____

ADDITIONAL OCCUPANTS _____

TYPE OF ACCOMMODATIONS

_____ Single
_____ Double
_____ Twin
_____ 2 Room Suite
_____ 3 Room Suite

_____ DATE ARRIVING
HOUR _____ AM PM
_____ DATE DEPARTING

TEXAS MEDICAL ASSOCIATION ANNUAL SESSION APRIL 30-MAY 3 DALLAS

TEXAS MEDICAL ASSOCIATION
1970 ANNUAL SESSION DALLAS
APRIL 30—MAY 3

PLAN NOW TO ATTEND!
USE THESE HANDY FORMS TO REGISTER IN ADVANCE, BUY TICKETS AND MAKE HOTEL RESERVATIONS

_____

_____

_____

STAMP

TEXAS MEDICAL ASSOCIATION
DALLAS HOUSING BUREAU
1507 PACIFIC AVENUE
DALLAS, TEXAS 75201

38 GUEST SPEAKERS

plus 225 special and TMA-member speakers

JOHN ADRIANI, M.D.
New Orleans, anesthesiology

STEPHEN M. AYRES, M.D.
New York, internal medicine

KURT BENIRSCHKE, M.D.
Hanover, N.H., pathology

WILLIAM J. BROWN, M.D.
Atlanta, preventive medicine

WILLIAM D. DAVIS, JR., M.D.
New Orleans, internal medicine

JAMES L. DENNIS, M.D.
Oklahoma City, pediatrics

PHILIP P. ELLIS, M.D.
Denver, ophthalmology

ROBERT J. FREEARK, M.D.
Chicago, surgery

JACK CHANDLER HUGHSTON, M.D.
Columbus, Ga., orthopaedic surgery

STANLEY E. GITLOW, M.D.
New York, internal medicine

ALAN F. GUTTMACHER, M.D.
New York, obstetrics and gynecology

CARL V. GRANGER, M.D.
Boston, physical medicine and rehabilitation

J. WILLIAM HILLMAN, M.D.
Nashville, orthopaedic surgery

BARRETT KENNEDY, M.D.
New Orleans, dermatology

THOMAS J. KIRBY, M.D.
Rochester, Minn., ophthalmology

BARBARA M. KORSCH, M.D.
Los Angeles, pediatrics

JOHN L. LEWIS, JR., M.D.
New York, obstetrics and gynecology

ROSS L. McLEAN, M.D.
Austin, internal medicine

DELBERT OBERTEUFFER, Ph.D.
Columbus, Ohio, Editor,
The Journal of School Health

FRANCIS X. PALETTA, M.D.
St. Louis, plastic and reconstructive surgery

WILLIAM G. REESE, M.D.
Little Rock, psychiatry

GEORGE P. ROSEMOND, M.D.
Philadelphia, surgery

ANTHONY RUPPERSBERG, M.D.
Columbus, Ohio, obstetrics and gynecology

MAYNARD I. SHAPIRO, M.D.
Chicago, Immediate Past President American Academy of Gen. Practice

JAMES L. SHEEHY, M.D.
Los Angeles, otolaryngology

GABRIEL F. TUCKER, M.D.
Philadelphia, otolaryngology

P. V. SIEGEL, M.D.
Washington, D.C., federal air surgeon

MARVIN STEIN, M.D.
Brooklyn, psychiatry

FRANK L. WEAKLEY, M.D.
Cleveland, proctology

LUNCHEON SPEAKERS

GERALD D. DORMAN, M.D.
New York, President,
American Medical Association

MAJ. GEN. J. B. MEDARIS, USA (Ret.)
Winter Park, Fla.
Former Commanding General,
US Army Ordnance Missle Command

HAVE YOUR TICKETS READY FOR YOU WHEN YOU GET TO DALLAS

Avoid the lines, the last minute rush, and the possibility of missing out on the TMA functions listed below. Fill out this form, mail it to TMA with your check, and your tickets will be waiting for you.

GENERAL MEETING LUNCHEON—FRIDAY, MAY 1, Statler-Hilton Hotel. Featured speaker will be Maj. Gen. J. B. Medaris (Ret.), former commanding general, US Army Ordnance Missle Command.

GENERAL MEETING LUNCHEON—SATURDAY, May 2, Statler-Hilton Hotel. Featured speaker will be Gerald D. Dorman, M.D., president, American Medical Association.

"SATURDAY NIGHT AT THE FAIRMONT"—A fabulous cocktail party, dinner, and dance, Saturday, May 2, in the Regency Ballroom of the elegant new Fairmont Hotel. Dress is optional. Price includes cocktail party, dinner, entertainment, and set-ups after dinner. This will be the party of the year!

CONTINENTAL BREAKFAST ROUND TABLES—FRIDAY, MAY 1, Fairmont Hotel. There is no charge, but attendance is limited and tickets necessary. Have juice, coffee, and rolls with a guest speaker, then participate in the informal discussion period.

CURBSTONE CONSULTATIONS—FRIDAY, MAY 1, 5-6:30, and Saturday, 4-5:30, Fairmont Hotel. Twenty informal "shop talk" round table sessions (10 each day), with beer, coffee and soft drinks served. No charge but tickets needed.

ADVANCE TICKET ORDERS

NUMBER OF TICKETS	FUNCTION AND PRICE	AMOUNT
_____	LUNCHEON—FRIDAY @ $4.50 each	_____
_____	LUNCHEON—SATURDAY @ $4.50 each	_____
_____	"SATURDAY NIGHT AT THE FAIRMONT" @ $17.25 each	_____
_____	CONTINENTAL BREAKFAST ROUND TABLES (see list at right) 1. ☐ 2. ☐ 3. ☐ 4. ☐ 5. ☐ 6. ☐ 7. ☐	No Charge
_____	CURBSTONE CONSULTATIONS—FRIDAY	No Charge
_____	CURBSTONE CONSULTATIONS—SATURDAY	No Charge

Check enclosed for total $_____

Mail to: Texas Medical Association, 1801 North Lamar Blvd., Austin, Texas 78701

BE SURE TO FILL OUT THE ADVANCE REGISTRATION FORM ON OTHER SIDE!

CONTINENTAL BREAKFAST ROUND TABLES
Friday, May 1 8:15-10 a.m.

1. *Treatment and Evaluation of Shock*
   Stephen M. Ayers, M.D.
   New York, internal medicine
2. *Ocular Complications of Systemic Medications*
   Philip P. Ellis, M.D.
   Denver, ophthalmology
3. *Pitfalls in the Diagnosis of the Acute Surgical Abdomen*
   Robert J. Freeark, M.D.
   Chicago, surgery
4. Sports Medicine—Orthopaedic Oriented
   Jack Chandler Hughston, M.D.
   Columbus Ga., orthopaedic surgery
5. *The Interview and the Pediatric Patient*
   Barbara M. Korsch, M.D.
   Los Angeles, pediatrics
6. *Acute Injuries of the Hand*
   Francis X. Paletta, M.D.
   St. Louis, plastic and reconstructive surgery
7. Thyroid Nodule
   George P. Rosomond, M.D.
   Philadelphia, surgery

numbers cited are minimum values. In spite of these advantages, the drug is expensive and must be given intramuscularly, preferably more than once per day. The ease and economy of phlebotomy, then, makes use of the drug a second choice. Perhaps the greatest value of deferoxamine is in chronic iron overload states occurring in the sideroblastic anemias where the red cell values may be so low that phlebotomy is precluded.

Dr. Whelan: Today's case is of a 52-year-old man who has diabetes and heart failure, whose alcohol intake is moderately heavy, and who died following a gastrointestinal hemorrhage associated with hepatic coma. At first glance this seems to be the fairly common story of an alcoholic who has diabetes and heart failure secondary to atherosclerosis. However, the high level of serum iron, approximately 80% saturated, raises the question of hemochromatosis. Can we differentiate the two clinically?

Skin pigmentation—which in hemochromatosis is caused by a combination of increased melanin in the basal layer of the epidermis and atrophy of the epidermis—hepatomegaly, and gonadal atrophy do not help in differentiating alcoholic cirrhosis from hemochromatosis. Abdominal pain, of obscure etiology, is more common in hemochromatosis but in this patient it could have been due to heart failure enlarging his liver. Diabetes is to be expected in some 50% of patients with hemochromatosis, and may occur in alcoholics with chronic pancreatitis. Heart failure in diabetes with coronary artery disease is not always preceded by angina. However, cardiomyopathy resulting from hemochromatosis would also explain his heart disease. Several other clinical features warrant a mention: persistent hematuria with no renal abnormalities suggests diabetic glomerular involvement. The radiological evidence of joint disease may reflect the degenerative changes described in hemochromatosis that have been attributed to deposition of iron in the joint synovial membrane. The patient maintained good hepatic function until his last admission.

Therefore, the question arises: Was his ascites due to liver disease or heart failure? A protein estimation on the ascitic fluid would have helped, since it is usually low in cirrhosis and high in heart failure.

Dr. Frenkel has discussed the factors producing iron overload, so we can go on to the question of how do we diagnose hemochromatosis? First, we must ascertain that there is an increase in tissue iron. Because it is accessible for biopsy and has a good distribution of iron, the liver may be useful in making a diagnosis. In idiopathic hemochromatosis the amount of iron in the reticuloendothelial (RE) system is variable, and increases with time, but iron deposition is always greater in the parenchymal cells. The fibrous tissue reaction commences as periportal fibrosis and progresses to cirrhosis. In the congenital chronic refractory anemias, iron is concentrated in the RE system, and is also present to some extent within the parenchyma. Some patients develop periportal fibrosis or cirrhosis, or both. There is usually less iron storage in acquired anemias. In cirrhosis with iron storage, the fibrotic process is well developed. Iron is uncommonly found in the RE system, and levels may vary from low to high within the hepatic parenchymal cells. Bantus have high iron levels in the RE system and liver cells and sometimes develop cirrhosis.

What other tests can be done to confirm or refute such a diagnosis? Iron stores can be approximately calculated from the effects of a parenterally administered chelating agent such as deferoxamine on urinary iron excretion. Unfortunately, some alcoholic cirrhotics excrete as much iron as patients with hemochromatosis, and this lessens the value of the test. A recently described differential ferrioxamine

test, staining for iron-laden macrophages in the blood buffy coat, and the absence of gastroferrin in the gastric juice may be helpful. However, none of these three tests have been used long enough to know whether they will serve as clinically useful means of differentiation.

In this case, it would be helpful to know if the patient's relatives had hemochromatosis. From the evidence available, I would favor a diagnosis of idiopathic hemochromatosis, and would have tried to confirm this, had the patient survived, by measuring his iron stores. This can be estimated by the number of phlebotomies needed to remove excess iron. Cirrhotic patients rarely have more than about 5 gm excess iron storage. The Bantu rarely exceeds 10 gm, and most patients with hemochromatosis have more than 15 gm and many have 50-100 gm.

From the brief outline of this patient's terminal illness, it seems that he bled into his gastrointestinal tract, developed hepatic encephalopathy, and died in coma. Most hemochromatotics die from heart disease, hepatic failure, hepatic cell carcinoma, or from other complications of liver disease such as ruptured varices. Without more information it is not possible to say what was the source of his bleeding. At autopsy, I would expect to find iron in many organs in addition to the liver, especially in the heart, pancreas, and gonads. Although it has been used for many years as a form of therapy, there is not much evidence that phlebotomy helps patients with hemochromatosis. Certainly they will feel better and their livers will get smaller. The only evidence that I am aware of, which supports the impression that removal of iron significantly improves tissue damage, is found in the reports of Crosby[4] (two patients) and Monroe[5] (one patient). They showed reversal of cirrhosis after removal of iron. The effect of phlebotomy on insulin requirement is difficult to assess since insulin requirements may fall in all diabetics with time, once they are on a good dietary regimen and are closely followed. There is some evidence that cardiac function—especially in young people with hemochromatosis secondary to congenital hemolytic anemia—will improve with phlebotomy. Arrhythmias tend to decrease in frequency and heart failure improves. There is little in the literature concerning heart failure in idiopathic hemochromatosis. However, in light of the poor prognosis without therapy and the reports of Crosby[4] and Monroe,[5] I think it is wise to commence phlebotomy once the diagnosis is made, and remove sufficient blood to stay ahead of the patient's increased iron absorption. This usually requires one to three phlebotomies weekly until the hemoglobin level reaches 11 gm/100 ml and signs of early iron depletion appear. Once optimal therapy has been performed you will achieve (1) a fall in the reticulocyte count from 5% to usually less than 1%; (2) low level of serum iron which stays down; and (3) depletion of tissue iron on liver biopsy. Then, allow the hemoglobin level to rise to normal, and bleed just often enough to maintain a low normal serum iron level and an iron-free liver biopsy.

Dr. Cohen: The classic monograph by Finch and Finch[6] makes an interesting point in outlining when, in the life history of a hemochromatotic, cardiac failure and death may occur. It indicates that cardiac failure is the most frequent cause of death in patients with hemochromatosis, and we'll assume that this patient had that disease. When cardiac failure does occur, it seems to be more common in the younger patient with hemochromatosis. If a patient has hemochromatosis and survives until the sixth or seventh decade, it is likely that he will die of a hepatoma. In the third or fourth decade, two-thirds of the deaths will be from cardiac failure.

Cardiac failure can mimic acute viral myocarditis in many ways. We have seen patients who

have been perfectly well from a cardiac point of view, and then in a fulminant two- or three-week course develop all of the findings of acute myocarditis: rapidly enlarging globular-shaped heart, diastolic and atrial gallops, systolic murmurs, and mitral regurgitation. For all intent and purpose they appear to have myocarditis and at postmortem examination, the only finding is hemochromatosis.

The two major features of cardiac disease in these patients are arrhythmias and cardiac failure. The arrhythmias are of some interest in that James[7] studied five patients with hemochromatosis; at autopsy, for unknown reasons, the atrioventricular node was infiltrated totally and fully with iron deposits. Yet, peculiarly, the sinus node was spared. Why the sinus node in hemochromatosis is spared and the atrioventricular node is not is inexplicable.

A uric acid determination, though not done, might have been of interest. Ayvazian and associates[8] reported a patient who died of hemochromatosis and who also had xanthinuria. He had a xanthine oxidase deficiency. There was some controversy at that time whether or not this was a coincidence of two uncommon diseases in the same patient, or whether they might in some way be related. In the intermediate metabolism of hypoxanthine and xanthine to uric acid, xanthine oxidase is necessary. It acts as the electron transfer enzyme and in going from the oxidized to the reduced state in the transformation of xanthines to uric acid, ferric-ferritin is changed to ferrous-ferritin. Ferric-ferritin cannot be mobilized from the liver, whereas ferrous-ferritin can. It is intriguing and tantalizing to think that possibly xanthine oxidase deficiency may be related etiologically to hemochromatosis.

Dr. Jasin: Regarding the effects of xanthine oxidase deficiency in the metabolism of iron, there is a similar clinical situation where this problem has been studied. Patients taking allopurinol have, in effect, a xanthine oxidase deficiency, since this drug is a potent inhibitor of the enzyme. In patients taking allopurinol for up to 20 months, no evidence of increased iron storage by the liver has been found.[9]

Dr. Frenkel: I would like to add three points. First, we did do an iron stain on this patient's buffy coat and it was negative. However, Crosby and others[10] showed that classic hemochromatosis does not always produce a positive reaction, and that some other iron storage problems may. Thus, I would not use this test to define anyone's iron overload state.

Second, I think the data supporting a gastric hormone, so-called gastroferrin, is extremely doubtful. Dr. Sheehan has studied this question extensively and there is little data to support this otherwise attractive hypothesis.[11]

Finally, I believe the evidence in support of iron as causing damage to the tissues is much stronger than implied. In a recent grand rounds here, an impressive case was made for improved liver function as well as a structural improvement after phlebotomy. One can argue that good nutrition was a factor. However, other data also exist. Cardiac arrhythmias have already been mentioned; classically, these have been reversed with serial removal of excess iron in patients with congenital hemolytic anemias, such as thalassemia, as well as hemochromatosis. Finally, in the type of iron overload associated with sideroblastic anemia, iron removal results in improvement of red cell values toward, and in some cases, up to, normal. I think the evidence for a damaging effect of long-term excess iron is quite strong.

Pathological Findings: *Dr. Kosinski:* The important features of the autopsy findings relate to the basic disease, hemochromatosis. Multi-

ple organs were involved with the deposition of large stores of iron.

The liver weighed 2,240 gm and was a grayish-chocolate brown. Multiple nodules were found throughout the liver; most were small, but there was a scattering a larger nodules. Microscopic examination revealed a pigmentary type of cirrhosis with immense peripheral lobular parenchymal iron deposition. Iron pigment was also seen in the bile duct cells. As opposed to typical portal cirrhosis seen in alcoholics with poor nutrition, many central veins were present in the liver lobules.

The heart weighed 430 gm and was greatly dilated. There was no atherosclerosis of the coronary vessels and no evidence of either recent or old infarction. Microscopically, diffuse fibrosis was present in the myocardium, and again deposition of large amounts of iron pigment in the myocardial muscle fibers.

The pancreas was of normal size but had a very firm consistency and was dark brown. Again there was extensive fibrosis and iron deposition in parenchymal cells, particularly the islets.

Lesser amounts of iron were in the adrenals, thyroid, testes, pituitary, and parathyroids.

No focal lesions were present in the gastrointestinal tract to explain the bleeding present at the time of the last hospital admission; we presume that there was diffuse bleeding from acute gastritis which, after almost two weeks, would not be expected to show histologic changes.

The kidneys showed no lesions which could explain the constant microscopic hematuria; this blood may have come from lower in the urinary tract. No renal lesions of genetic diabetes mellitus were present in the glomeruli.

The bone marrow showed no increased iron storage. This would rule out generalized hemosiderosis, but would not affect a diagnosis of idiopathic hemochromatosis. The marrow iron stores are quite labile, and since this patient was chronically slightly anemic and had previous guaiac-positive stools, as well as a terminal large bleed, the marrow iron stores apparently remained relatively depleted.

The patient's death was hastened by an occlusive thrombus in both the portal and splenic veins and a thrombotic pulmonary embolus with a recent hemorrhagic pulmonary infarct in the left lower lobe of the lung.

Cause of death was idiopathic hemochromatosis.

REFERENCES

1. Bothwell, T H, and Finch, C A: Iron Metabolism, Boston, Little, Brown & Company, 1962.
2. MacDonald, R A, and Mallory, G K: Hemochromatosis and Hemosiderosis, Study of 211 Autopsied Cases, Arch Intern Med 105:686 (May) 1960.
3. Hwang, Y, and Brown, E B: Evaluation of Deferoxamine in Iron Overload, Arch Intern Med 114:741 (Dec) 1964.
4. Weintraub, L R, et al: The Treatment of Hemochromatosis by Phlebotomy, Med Clin N Amer 50:1579 (Nov) 1966.
5. Knauer, C, et al: The Reversal of Hemochromatotic Cirrhosis by Multiple Phlebotomies, Report of a Case, Gastroenterol 49:667 (Dec) 1965.
6. Finch, S C, and Finch, C A: Idiopathic Hemochromatosis, An Iron Storage Disease, Medicine 34:381 (Dec) 1955.
7. James, T N: Pathology of the Cardiac Conduction System in Hemochromatosis, New Eng J Med 271:92 (July) 9) 1964.
8. Ayvazian, J H: Xanthinuria and Hemochromatosis, New Eng J Med 270:18 (Jan 2) 1964.
9. Emmerson, B T: Effects of Allopurinol on Iron Metabolism in Man, Ann Rheum Dis 25:700, 1966.
10. Yan, L T, et al: Circulating Iron-Containing Macrophages in Hemochromatosis, New Eng J Med 279:512 (Sept 5) 1968.
11. Sheehan, R G, and Frenkel, E P: Unpublished data.

Dr. Shropshire, Parkland Memorial Hospital, 5201 Harry Hines Blvd, Dallas, Tex 75235.

Drs. Frenkel, Whelan, Cohen, Jasin, and Eigenbrodt, University of Texas (Southwestern) Medical School, 5323 Harry Hines, Dallas, Tex 75235.

Dr. Kosinski, Veterans Administration Hospital, 4500 South Lancaster Road, Dallas, Tex.

Senior Consultants
Perry C. Talkington, M.D.
Charles L. Bloss, M.D.

Psychiatrist-In-Chief
Howard M. Burkett, M.D.

Medical Director
James K. Peden, M.D.

Associate Psychiatrists
Jerry M. Lewis, M.D.
Claude L. Jackson, M.D.
Dode Mae Hanke, M.D.
Thomas H. Allison, M.D.
Maurice S. Green, M.D.
Doyle I. Carson, M.D.
Stanley L. Seaton, M.D.
Keith H. Johansen, M.D.
Charles G. Markward, M.D.
Joe W. King, M.D.
Claude R. Nichols, M.D.
Larry E. Tripp, M.D.
Aretta J. Rathmell, M.D.
Donald N. Offutt, M.D.

Clinical Psychology
David H. Lipsher, Ph.D.
John T. Gossett, Ph.D.
Dale R. Turner, Ph.D.
Robert W. Hagebak, Ph.D.

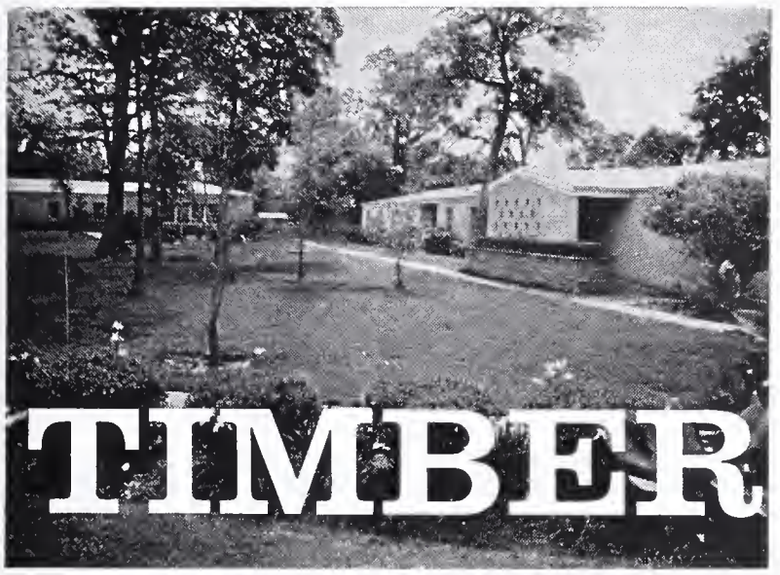
Social Work
Sally Stansfield, M.S.W.
Robert O'Connor, M.S.S.W.
Kathleen Wood, M.S.W.
Margie W. Buell, M.S.S.W.
Robert P. Stewart, M.S.S.W.
Cecilia Coffelt, M.S.S.W.

Occupational Therapy
Geraldine Skinner, B.S., O.T.R., Director

Recreational Therapy
Lois Timmins, Ed.D., Director

Director of Nurses
Mae Belle James, R.N.

Business Manager
Ralph M. Barnette, B.B.A.



PSYCHIATRIC HOSPITAL

DAY HOSPITAL

DEPARTMENT OF OUT PATIENT PSYCHIATRY

DEPARTMENT OF ADOLESCENT PSYCHIATRY

Narcotic Cases Not Admitted

TIMBERLAWN
PSYCHIATRIC HOSPITAL

381-7181 Dallas, Texas 75223 P. O. Box 11288

KELSEY-SEYBOLD CLINIC

6624 FANNIN STREET HOUSTON, TEXAS 77025

526-2671

INTERNAL MEDICINE

Endocrine and Metabolic Diseases
Mavis P. Kelsey, M.D., F.A.C.P.
Alfred E. Leiser, M.D., F.A.C.P.
E. Peter Pequegnat, M.D., F.R.C.P.(C)

Pulmonary Diseases
H. Irving Schweppe, Jr., M.D., F.A.C.P.
Stanton P. Fischer, M.D., F.A.C.P.

Gastrointestinal Diseases, Gastroscopy
John R. Kelsey, M.D., F.A.C.P.
Philip S. Bentlif, M.D., F.A.C.P.
Ralph D. Eichhorn, M.D., F.A.C.P.
F. Scott O'Neil, M.D. F.A.C.P.
James W. McBee, M.D., F.A.C.P.

Heart Disease and Cardiac Catheterization
Earl F. Beard, M.D., F.A.C.P.
Efrain Garcia, M.D., F.A.C.P.
Wayne E. Dear, M.D.

Arthritis and Rheumatic Diseases
James W. Kemper, M.D., F.A.C.P.

Hypertension and Peripheral Vascular Diseases
Gene E. Burke, M.D.

Cancer Chemothcrapy
Carlos F. Taboada, M.D.

Nephrology
Francis X. Schloeder, M.D., F.A.C.P.

Hematology
Jerome B. Bart, M.D.

Infectious Diseases
Stuart Riggs, M.D., F.A.C.P.

Occupational Health Services
Paul E. Wright, M.D., M.P.H., F.A.C.P.
Maurice B. Johnston, M.D., F.A.C.Pr.M.
Richard M. Fenno, M.D., M.P.H., F.A.C.P.
Cannon A. Owen, M.D., F.A.C.S.
Edward A. Anderson, M.D., F.A.C.Pr.M.
William E. Froemming, M.D., F.A.C.P., F.A.C.Pr.M.

GENERAL & THORACIC SURGERY
William D. Seybold, M.D., F.A.C.S.
James D. McMurrey, M.D., F.A.C.S.
Jerry L. Doggett, M.D.

OBSTETRICS & GYNECOLOGY
Melville L. Cody, M.D., F.A.C.S.
William A. Johnson, III, M.D.

PSYCHIATRY
Chester G. Cochran, M.D.
*Ricardo Daichman, M.D.
William H. Boylston, M.D.

PEDIATRICS
Rheumatology
Earl J. Brewer, Jr., M.D., F.A.A.P.
Allergy
Charles W. Ewing, M.D., F.A.A.P.

OTO-LARYNGOLOGY
J. Charles Dickson, M.D., F.A.C.S.
James L. Smith, M.D., F.A.C.S.
Joseph S. Weycer, M.D.

NEUROLOGY
Robert R. Pierce, M.D.

DERMATOLOGY
Wilson M. Fraser, M.D., F.A.A.P.
Donald W. Owens, M.D.

UROLOGY
Don W. Pranke, M.D., F.A.C.S.
J. David Wright, M.D.

ORTHOPEDIC SURGERY
W. Malcolm Granberry, M.D.
Jesse H. Dickson, M.D.

OPHTHALMOLOGY
Henry E. Wahlen, M.D., D.A.B.O.

RADIOLOGY
David M. Rulfs, M.D.
John D. Brooks, M.D.

PATHOLOGY
Robert A. Jordan, M.D.

DENTISTRY
Eugene W. Gray, D.D.S.

PSYCHOLOGY
Mrs. Ruth Blackman, M.A.
Robert de von Flindt, Ph.D.
Cheryl McBride, M.A.

SPEECH PATHOLOGY AND AUDIOLOGY
Donna R. Fox, Ph.D.
Carolyn C. Garcia, M.S.

CONSULTANTS
Maxillo Facial Surgery
Edward C. Hinds, M.D., D.D.S., F.A.C.S.
Psychiatry
Albert Owers, M.D.
Ophthalmology
W. Eugene Alford, M.D.
Infectious Diseases
Fred F. Barrett, M.D., F.A.A.P.
Gastrointestinal Diseases, Gastroscopy
Theodore Hersh, M.D.
Occupational Medicine
Valliant C. Baird, M.D., F.A.C.Pr.M.

SPECIAL FACILITIES
Radioisotope Laboratory
Registered Dietitian
Electroencephalography
Electrocardiography
Vectorcardiography
Registered Physiotherapist
Pulmonary Function Laboratory
Regional Immunization Center
FAA Examinations
Complete Endoscopy
Audiology Laboratory
Electrolysis

ADMINISTRATOR
James A. Bakken

*Military Service

February, 1970, Is Open Enrollment Month For Major Medical Coverage Under The Texas Medical Association Group Insurance Plan

Enrollment during the month of February on Major Medical coverage is available to all members under age 60, with no medical evidence required except on those members who were rejected by the previous carrier.

The effective date of Major Medical coverage under the new Texas Medical Association Group Plans is April 1, 1970.

the Prudential
INSURANCE COMPANY OF AMERICA
SOUTHWESTERN HOME OFFICE HOUSTON, TEXAS
LIFE INSURANCE • HEALTH INSURANCE • ANNUITIES • GROUP INSURANCE • GROUP PENSIONS

Complete and clip the attached coupon and mail it today to the Association and you will be sent the necessary enrollment materials.

To: Texas Medical Association
1801 North Lamar Blvd.
Austin, Texas 78701

Please mail me Texas Medical Association Major Medical enrollment forms.

MEMBER_____

ADDRESS_____

CITY_____

NEWS

Annual Session Agenda Includes Special Programs

In addition to hearing 31 guest speakers, participating in Curbstone Consultations, or presenting and discussing material at a forum on original research, delegates to the 1970 Annual Session of the Texas Medical Association will be able to attend seven special programs being planned by various groups during the April 30-May 3 meeting in Dallas. They are the following:

1. The Texas Academy of General Practice will sponsor a seminar discussing medical problems of the elderly from 1 to 5 p.m. Thursday, April 30, at the Fairmont Hotel. Topics to be presented include "Peripheral Vascular Disease in the Geriatric Age Group," "Infections in the Elderly," "Urinary Obstruction and Its Management," "Disorders of the Lower Bowel and Anus in the Elderly Patient," and "The General Care of Geriatric Patients."

2. The Texas Commission on Alcoholism will sponsor a Symposium on Alcoholism at 8 p.m. Thursday, April 30. "Sedativism" will be the topic of discussion. Featured speaker will be Dr. Stanley E. Gitlow, associate clinical professor of medicine, The Mount Sinai School of Medicine of the City University of New York (NYC).

3. An All-day Symposium on Cardiovascular Diseases will be held on April 30 under the sponsorship of the Texas Heart Association and Texas Medical Association's Committee on Cardiovascular Diseases.

4. TMA's Committee on Maternal Health will offer a Symposium on Maternal Deaths in Texas from 10 a.m. to noon on Friday, May 1. Various aspects of the causes of death in pregnancy—from hemorrhage, toxemia, infection, abortion, anesthesia, and other causes—will be discussed. Guest speaker for the symposium will be Dr. Anthony Ruppersberg, Jr., associate professor of obstetrics and gynecology, Ohio State University College of Medicine at Columbus, and chairman, State of Ohio Committee on Maternal Health.

5. Although plans are not complete at this time, the TMA Committee on Disaster Medical Care is considering the sponsorship of a Symposium on Trauma from 2-5 p.m., Friday, May 1, during the Annual Session.

6. "The History of Anesthesia in Texas" has been selected as the topic for the special dinner session of the TMA Committee on Medical History on April 30. Dr. Robert B. Krause of San Antonio will deliver the presentation.

7. Theme of the Conference on School Health, sponsored by the TMA Committee on School Health, will be "An Optimum School Health Program." The editor of the *Journal of School Health,* Dr. Delbert Oberteuffer (PhD) of Columbus, Ohio, has been obtained as keynote speaker for the conference to be held Thursday, April 30.

Medical Writing Seminar. Another special feature planned for the 1970 Annual Session in Dallas is a Seminar on Medical Writing. The Texas chapter of the American Medical Writers Association has scheduled a luncheon, a business session, and a postgraduate course in medical writing on Sunday, May 3, beginning at 9:30 a.m. Dr. E. Clinton Texter, Jr., of Temple is in charge of arrangements for the seminar.

Additional Guest Speaker. A new guest speaker has been added to those previously obtained, bringing the total to 31. Dr. J. William Hillman, professor of orthopedic surgery at Vanderbilt University School of Medicine at Nashville, Tenn., will be sponsored by the United Cerebral Palsy Association of Texas, Inc. The 30 additional speakers who have already accepted invitations to speak at the Annual Session were listed in the October and December issues of *Texas Medicine.*

Hotel Accommodations. Rooms have been reserved at five Dallas hotels for TMA members attending the 1970 Annual Session. Requests for housing should include an individual's first, second, and third choices and be sent to the TMA Housing Bureau, 1507 Pacific Ave., Dallas 75201. Preferences will be honored as far as is possible. Confirmation of reservations will be sent to the registrants directly from the hotel.

Hotels include the Fairmont Hotel, Scientific Sessions headquarters; Statler Hilton Hotel, Business Sessions headquarters; Sheraton-Dallas Hotel, Woman's Auxiliary headquarters; Hotel Adolphus; and Baker Hotel. Further housing information and reservation card are on pp. 85-88.

Catheter Trays Recalled; Immediate Removal Urged

The Food and Drug Administration has recently appealed to health professionals across the nation to assist in removing from all hospitals and nursing and convalescent homes 49 types of catheter trays and kits produced by C. R. Bard, Inc., of Murray Hill, N.J., under the trade name Bardex.

This action was taken as a result of a marked increase in severe genitourinary infections associated with the use of the catheter trays despite earlier warnings in September and October and a voluntary recall by Bard of the kits from distributors and hospitals in the United States and Canada which the FDA said was ineffective.

The catheter trays and kits contain a detergent solution which has been found contaminated with pseudomonas, a potentially harmful bacteria; and its use may result in severe genitourinary infections. The contaminated kits can be identified by outside labels which say, "Detergicide," "Detergicide Prep Solution," "Cleansing Solution," or "Anti-Septic Towlette."

Additional investigation by the FDA has revealed non-sterility of some of the lubricant jelly packs also contained in the Bard trays.

Bioinformation Center Acquires New Director

Director of instructional communications in the new Florence Bioinformation Center of The University of Texas Southwestern Medical School at Dallas will be Dr. Fred L. Christen (PhD).

Dr. Christen, director of media and data processing of the Education Service Center—Region 20, San Antonio, for the past three years, will be responsible for planning and carrying out a program of service, education, and research in the application of programmed learning, computer-assisted instruction, and other instructional communications media such as audio tapes, video tapes, motion pictures, and photographs.

The Florence Bioinformation Center will include the medical school library, computer center, medical art, instructional communications, and bioinformation science components. A new building to house the center will be erected in the near future as a part of the campus development program.

Studies Need Milk From Breast Cancer Patients

Special studies by physicians at The University of Texas MD Anderson Hospital and Tumor Institute at Houston require milk from lactating patients with breast cancer, from patients with a history of treated breast cancer, or from patients with a history of breast cancer in their immediate families.

Physicians interested in having the milk from their patients considered for the study should write to Dr. Gabriel Seman (PhD), Department of Virology, The University of Texas at Houston, MD Anderson Hospital and Tumor Institute, Houston 77025, or call collect 713 526-5411, Ext. 383.

Report Examines Urban Mental Health Problems

The paradox of the cities as one of civilization's crowning achievements and most challenging scourges—and what is being done to solve urban mental health problems—are examined in a new report by the National Institute of Mental Health.

Entitled "The Mental Health of Urban America—The Urban Programs of the National Institute of Mental Health," the 140-page report emphasizes how research, training, and service activities interact in the search for solutions to urban mental health problems and cites 240 specific urban projects conducted or supported by the institute. Seven out of every ten Americans or 140 million, live in cities today, the report says, but by 2000 this figure will rise to 80% of the population, or 285 million.

Coupled with this rising trend in the urban population is an already disproportionately high urban incidence of mental illness, crime, delinquency, drug abuse, violence, illegitimacy, suicide, alcoholism, and other social problems. How these special mental health problems of the cities are being tackled is described in the report, covering projects in such areas as riot prevention, prevention and treatment of delinquency, and drugs as an urban problem.

Bringing mental health services to the urban community is the aim of many institute programs, according to the report. These include activities for the development of community centers, demonstrations in helping slum residents, and neighborhood service programs. Manpower needs and training to develop various kinds of personnel to combat urban mental health problems are outlined in the report. Descriptions of projects to train entirely new kinds of professional as well as allied workers emphasize the innovative aspects of manpower development, while programs are also cited for increasing the pool of psychiatrists, psychologists, psychiatric nurses, and mental health social workers.

Single copies of "The Mental Health of Urban America" (PHS Publication No. 1906) are available free from the National Institute of Mental Health. Additional copies are for sale at $1 each by the Superintendent of Documents, US Government Printing Office, Washington, D.C. 20402.

SMA Picks Dr. Esposito As New President-Elect

New president-elect of the Southern Medical Association is Dr. Albert C. Esposito of Huntington, W. Va. He was installed at the recent annual meeting in Atlanta, Ga., of the nation's second largest general medical organization and will serve as president-elect until the next annual meeting of the association in November, 1970, in Dallas.

Dr. Esposito is chairman of the department of ophthalmology at St. Mary's Hospital in Huntington and is a member of the teaching staff of the American Academy of Ophthalmology and Otolaryngology. He is a member of many medical and ophthalmological societies in this country and abroad and is the author of numerous papers on his specialty.

St. Philip's Grad Ranks Highest on LVN Exam

Highest ranking candidate on the October examination conducted by the Texas State Board of Vocational Nurse Examiners was Mrs. Sandra F. Price, a graduate of the St. Philip's College School of Vocational Nursing in San Antonio.

Mrs. Price scored 726 on the state board test pool examination, on which the minimum passing standard score was 350. She was graduated from high school in Eagle Lake, Tex., in 1960.

Candidates from 106 approved vocational nursing programs participated in the October examination, and 1,194 candidates passed and were issued vocational nurse licenses. In addition, 87 applicants from other states were granted reciprocity licenses.

The next state board examination is set for March 26-28, 1970, in Austin. Applications must be received one month in advance.

Activated Charcoal Treats Acute Drug Intoxication

Perhaps the single most valuable agent physicians possess for treatment of acute drug intoxication is activated charcoal, according to Dr. Robert H. Fiser, Jr., who is now with the US Army Medical Research Institute of Infectious Disease at Fort Detrick, Md.

"An overdose (of the charcoal) is impossible," and it is particularly safe for home use because it is not toxic, he said.

As reported in the Dec. 8, 1969, issue of *JAMA*, Dr. Fiser studied the efficacy of activated charcoal in the treatment of barbiturate and glutethimide poisoning in dogs in a study conducted at William Beaumont General Hospital in El Paso.

Ten fasting dogs each received a 400 mg dose of secobarbital or 72 mg/kg of phenobarbital by stomach tube. The dogs received the same dose two weeks later, but 20 gm activated charcoal in an aqueous slurry were given one half hour after administration.

When activated charcoal was given, systemic absorption of each drug was markedly reduced. There was an average reduction in serum concentration of 53% for secobarbital, from .77 mg/100 ml at one hour to .43 mg/100 ml. For phenobarbital, there was a 56% reduction, from 7.0 mg/100 ml at one hour to 3.1 mg/100 ml. In addition, there was no evidence of central nervous system depression when activated charcoal was given.

A 30-minute interval between drug and charcoal administration was selected because that is the average time between drug ingestion and presentation for treatment at William Beaumont.

No significant inhibition of systemic absorption occurred when administration of charcoal was delayed for one hour after secobarbital administration. When a short-acting drug has been ingested, prompt administration of activated charcoal is obviously mandatory, Dr. Fiser said.

When 20 gm activated charcoal were given after a 3 gm dose of glutethimide in five other dogs, there was a 74% reduction in the mean serum concentration of the drug over baseline levels obtained two weeks earlier. The concentration dropped from 1.2 mg/100 ml at one hour to .50 mg/100 ml. Central nervous depression was still noticeable with glutethimide; but when activated charcoal was given after the drug, it was much less severe.

One objection raised to the use of activated charcoal, according to Dr. Fiser, has been "possible elution of

the poison from the charcoal as the pH of the environment changes during passage through the gastrointestinal tract." Dr. Fiser found that the complex of activated charcoal and drug is stable, and there was no significant dissociation.

UT Regents Approve Affiliation Agreement

An affiliation agreement with Temple's Scott and White Clinic, Scott and White Memorial Hospital, and Scott, Sherwood and Brindley Foundation has been approved by the regents of The University of Texas System.

Purpose of the agreement, which extends for ten years, is "to establish a broad framework of institutional policies to facilitate cooperation between the university and Scott and White at the departmental or service level, or both." Officials of both institutions also hope to facilitate provision of the finest possible medical care and participation in the education of physicians and other health personnel for the future by establishing a closer working relationship.

Traffic Deaths, Drivers Increase Proportionately

Are you having trouble finding a big enough break in traffic to get your automobile out of the driveway? Well, don't expect things to get better. US government forecasts indicate that there will be 126 million licensed drivers in the United States by 1975, 26 million more than today. Statisticians of Metropolitan Insurance Company say the number of traffic fatalities will increase proportionately.

The largest proportionate increases in the numbers driving between 1961 and 1966 (the last year for which figures are available) occurred at ages under 20 and among those 65 years and older. There are approximately 10 million drivers at ages under 20, or about 60 percent more than five years ago. The number of elderly drivers has risen by a third, to an estimated 8 million.

The rise in the volume of motor vehicle traffic has been accompanied by a steadily mounting number of fatalities. The death toll has climbed to a new high in each of the five years surveyed, from 40,000 in 1962 to an estimated 53,000 in 1966.

The increase in the motor vehicle fatality rate reflects an upward trend in the motor vehicle hazard for both sexes at virtually all ages. Among males at ages 15-19, the motor vehicle fatality rate rose by almost a fourth, while at ages 25-64 it increased by about a fifth. The motor vehicle fatality rate among men 20-24 is far higher than at any other period of life, about 80 per 100,000 population. The next highest fatality rates have been recorded among men 75 and over and boys 15-19 years of age.

The motor vehicle fatality rate increases were greater among females than among males. They ranged from 16 to 41 percent for each age group during the same five-year period.

A greater toll among drivers and passengers accounts for practically all of the higher motor vehicle accident mortality among both adolescents and adults. The non-pedestrian motor vehicle fatality rate has risen but not nearly as much, reflecting mainly an increase in the number of drivers.

Criteria Suggested For Living Longer

Want to add years to your life?

In theory, at least, you do just that if you are: (1) getting a better education, (2) improving your career, or (3) making your marriage a successful one.

According to the Health Insurance Institute, insurance company statistical studies indicate all these are related to longer life. Income is also a factor in longevity, although not to the same degree as education. One study showed that in the 25 to 64 age group, men with one or more years of college had a death rate of only 73% of men who did not go beyond elementary school.

There is also evidence indicating that prominent professional and business men live on the average far longer than men in the general population. No one knows exactly why, but men in this group usually enjoy better diets, exercise more, and on the whole take better care of themselves than the average person does. Scientists, for instance, register the lowest mortality rate among the prominent men, while the highest mortality rate is registered by journalists.

All the latest statistics confirm the longevity advantage of men with successful marriages. Most studies indicate that married men have a considerably lower death rate than bachelors, widowers, or divorcees. Divorced persons, reports the institute, register the highest death rates at every age.

UT System Names MD To Fill Health Post

New vice chancellor for health planning in The University of Texas System will be Dr. Joseph A. Gallagher of Washington, D.C.

Dr. Gallagher is now assistant surgeon general of the US Public Health Service and deputy director of the Bureau of Health Professions Education and Manpower Training.

Tentative effective date of his appointment is April, 1970, pending approval of his retirement by the office of the US Secretary of Health, Education, and Welfare.

The position to be occupied by Dr. Gallagher was created in an administrative reorganization of UT System offices last summer. He will report to the executive vice chancellor for health affairs, still to be named.

Dr. Gallagher, 54, was born in Denver, Colo., and was graduated from the University of Colorado School of Medicine in 1948 with an MD degree. He served an internship in the US Public Health Service Hospital in San Francisco in 1948-49, and after a few months in the private practice of medicine in 1949 he entered the Public Health Service. He has held positions at federal health installations in Miami, Fla.; Savannah, Ga.; St. Louis, Mo.; Staten Island, N.Y.; Anchorage, Alaska; and Bethesda, Md. (headquarters of the National Institutes of Health).

From July, 1962, to July, 1964, Dr. Gallagher was medical director of the Peace Corps in Washington, D.C. He has held his present position since December, 1968. In June, 1969, he received the Meritorious Service Award of the US Public Health Service.

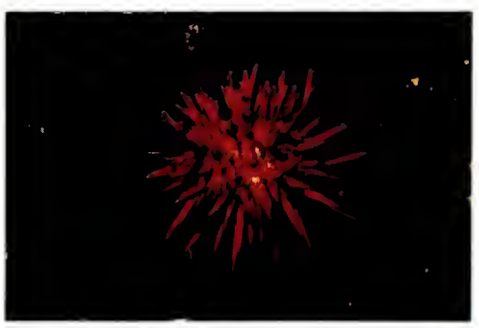
US Pharmacopeia Uses Old Senate Chamber

The United States Pharmacopeia was granted permission to use the Old Senate Chamber of the Capitol Building in Washington, D.C., for a commemorative ceremony on Jan. 2, 1970, in celebration of the organization's sesquicentennial year.

In the past, Senate authorities have refused requests by outside organizations to utilize the Old Senate Chamber. However, because of the unusual historical background of the pharmacopeial convention, use of the chamber by this year's convention was authorized.

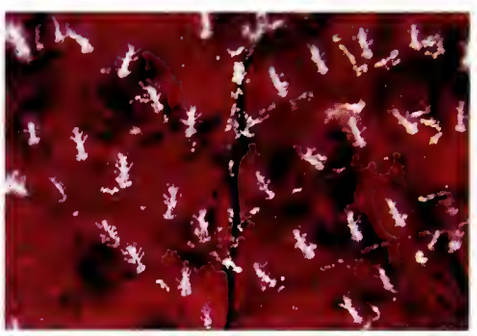
"Blue Bells"—tunicate on soft coral (taken without flash in available light).

Gold medals become by-product of relaxation for doctor-diver



"Astrourchin"—a close-up of a rare red sea urchin.

French angel fish and sponge.



Hydroids in front of sponge (magnification 1 to 1). Award: Silver Sea Star Trophy by Mondo Sommerso *(Italian Sports Magazine), 1969.*

Squirrel fish—fish in foreground is frightened as evidenced by elevated dorsal fin not seen in fish in background.

An adolescent interest in land photography and a ride in a glass-bottomed boat led Dr. S. Harold Reuter into the ocean depths for the first time a few years ago, and the Houston physician has since emerged as one of the most avid and authoritative among the cult of scuba divers and underwater photographers.

So impressed was Dr. Reuter with the underwater beauty viewed on his boat trip that he decided to combine his interest in photography with a self-diagnosed need for physical activity. He enrolled in a YMCA course and became a certified scuba diver, then made his first excursion in the tropical waters off Cozumel, Mex. He has since made photographic expeditions in the Florida Keys, the Caribbean, the Bahamas, the West Indies, and Central America and has returned to Cozumel 12 times within the past three years. In 1968 he was elected "Diver of the Year" by the 196-member Houston Underwater Club, largest club of its kind in this part of the country.

Now serving as that club's president, Dr. Reuter has lectured to numerous audiences on scuba diving, medical aspects of scuba diving, and underwater photography, always emphasizing that scuba diving is not dangerous with the proper training. He has been interviewed more than once on all Houston television channels and is currently writing a book entitled *The Medical Aspects of Scuba Diving*, which he hopes to follow with a *Scuba Diving Medical Companion* for the lay person. Many of his prize-winning photographs, some of which are shown on this and the following page, have appeared in various magazines and newspapers.

When he is not below sea level, Dr. Reuter practices medicine privately, specializing in surgery and diseases of the ear, nose, and throat. He also serves on the Texas Gulf Coast Council of Diving Clubs and is a member of the Biological Photographic Association. He was instrumental in organizing a Texas Chapter of the International Underwater Photographic Society and was in charge of the International Underwater Film Festival held in Houston in October.

Not only does Dr. Reuter enjoy scuba diving and photography as a sport and form of relaxation just as others enjoy hunting, fishing, or golfing, but he also realizes and is fascinated by the importance of underwater life in man's future.

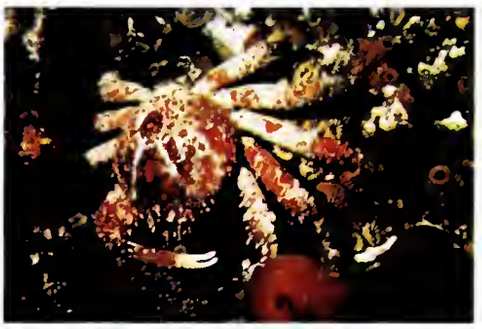
Fire coral at top and flower coral with sponge on the right.

A blue reef fish against a background of sponges.

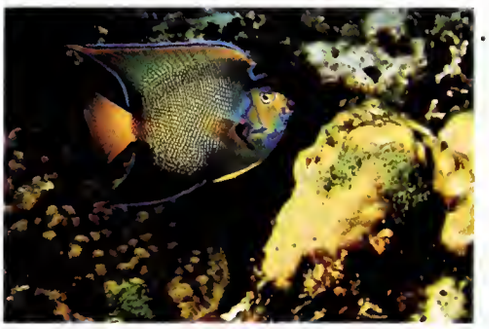
Underwater seascape.
Award: Gold medal in Pacific Northwest Underwater Photographic Society 1969 Film Festival.

French grunts under staghorn coral.
Award: First prize trophy at the Texas Gulf Coast Council of Diving Clubs, 1968.

Black angel fish and sponge.
Awards: Gold medal and best of show (equivalent to academy award for underwater photography) at the Ninth International Underwater Photographic Society Exhibition, 1969.
First prize at the 1969 TMA Art Exhibit in San Antonio.



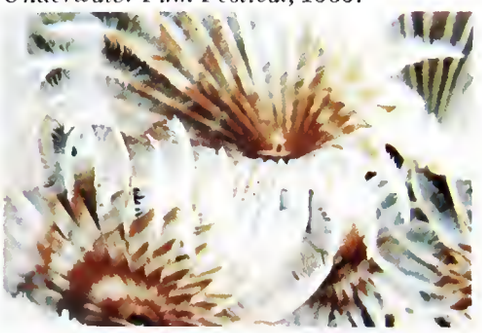
Crab



Queen angel fish

Banded butterfly fish

Feather Dusters
Award: First prize in design category at the 12th International Underwater Film Festival, 1969.



Surgical Transplants Change Insurance Plans

Radical new developments in surgical transplant techniques are bringing changes in health insurance, the Health Insurance Institute says.

No policy now specifically includes provisions for transplant. However, companies are paying benefits through existing policies toward some of the older, more widely-accepted surgical advances, such as kidney transplants. Benefits go toward both hospital and surgical bills and for both the donor and recipient of the kidney. But most medical men consider surgical procedures such as heart transplants to be still in the experimental stage. Health insurance is designed to pay for proven medical treatment.

However, when it comes to hospital expenses of heart transplant patients, for instance, benefits are payable under hospital policies as well as under major medical and comprehensive policies, which now protect some 67 million Americans simply because the insurance covers this contingency regardless of the cause.

Major medical policies commonly provide maximum benefits of $10,000 to $15,000 of specific health care expenses. Insurers believe that by increasing the maximum and broadening other provisions, adequate health insurance financing can be designed in the future for the new pattern of medicine. In fact, a trend is already under way in this direction, with many new major medical plans providing maximums of $20,000, $50,000, and even $100,000 under several labor-management negotiated contracts.

As for the economic facts of heart transplant surgery—they have been and will continue to be staggering. Hospital bills alone run upward of $20,000 per case. One medical educator estimates the total cost at about $50,000. Insurance authorities believe these costs will become completely insurable after heart transplants are no longer experimental. In anticipation of this development, at least one insurance company has announced coverage to pay unlimited medical benefits toward organ transplants after all available benefits are paid by a policyholder's major medical or basic health insurance.

This particular plan will pay 100% of this excess health care coverage rather than the 75 or 80% paid by the health insurance major medical or basic plan. Under this type of plan, the policyholder would pay the first $500, for example, if his medical expenses. His insurance would pay 80% of subsequent costs, up to $10,000. After this, the insurance would pay additional medical care charges no matter how high they go.

Future plans, as they may be developed, may have deductible amounts of perhaps $750 or $1,000 to keep total premiums low.

Alcohol Plays Culprit In Many Home Fatalities

A study by Metropolitan Life Insurance Company of fatal home accidents indicates that alcohol plays an important role in such accidents among young adults and the middle-aged. Home accidents among persons in their prime working years, 15-64, account for about 8,300 fatalities and more than 8.5 million nonfatal injuries annually.

The study covered persons aged 15-64 who held ordinary life insurance policies and who died in home accidents during 1964 and 1965. It involved 537 male and 310 female fatalities, of which nearly 15 percent of the former and about 20 percent of the latter were found to be associated with drinking.

Sixty-one home accident fatalities were due to acute poisoning by solids and liquids, and half of these were associated with drinking. Barbiturates were the culprit in nearly 75 percent of these alcohol-associated poisonings, underscoring the lack of understanding about the accentuated effects of drugs (especially barbiturates) when taken with alcohol.

Alcohol was involved in nearly 20 percent of 87 accidental home deaths reported due to absorption of poisonous gases and vapors, mostly motor vehicle exhausts. Many of the victims lost their lives inhaling lethal amounts of carbon monoxide while sitting in automobiles in the family garage with motors running as they slept or just rested from overdrinking.

Falls from stairs or steps accounted for 117 accidents in and about the home, and about 20 percent of the victims were reported to have been under the influence of alcohol.

Falling asleep with a lit cigaret, cigar, or pipe is a serious hazard for the tired smoker, even when he is not under the influence of alcohol. Alcohol figured in about 25 percent of the 67 accidental deaths reported due to fires and other burns among careless smokers.

Drinking was implicated in about 15 percent of the firearm accidents at home, about 12 percent of the deaths from choking on food, about 20 percent of the drownings, and all of the deaths from freezing.

Research Grants Fund Medical School Projects

Grants totaling more than $55,000 from the San Antonio Heart Association and more than $32,000 from the National Institute of Child Health and Human Development will fund research projects at The University of Texas Medical School at San Antonio.

Principal investigators for research projects sponsored by the San Antonio Heart Association include:

Dr. Leo Cuello, associate professor of surgery, for his study of "Transplantation of the Heart: Surgical Technique, Methods of Preservation and Immunological Studies;" Dr. Marvin Forland, associate professor of physiology and medicine, a grant for "Studies of the Renal Excretory and Hemodynamic Effects of Acriflavine;" and Dr. Arthur Briggs, professor and chairman of the department of pharmacology, a grant for research on "The Role of Relaxing Factors in Hypertension."

Also, Dr. Barry M. Beller, associate professor of physiology and medicine and Freeman Heart Association Professor in Cardiovascular Diseases, funds to investigate "Physiological Determinants of Actomyosin Synthesis in Heart Muscle" and "Studies of the Toxic Effects of Pharmacologic and Chemical Agents on Myocardial Protein Synthesis;" Dr. Sandra Smith (PhD), assistant professor of pharmacology, funds for work in "Subcellular Mechanism of Action of the Cardiac Glycosides;" Dr. Vernon S. Bishop (PhD), associate professor of pharmacology, for research on "Control of Ventricular Function in the Conscious Dog;" and Dr. Oliver Carrier, Jr. (PhD), "The Role of Electrolytes in Vascular Smooth Muscle Function."

The three-year grant awarded by the National Institute of Child Health and Human Development will enable Dr. Carl J. Pauerstein, associate professor in the department of obstetrics-gynecology, to study the control system which causes a fertilized ovum to be held back for several days before it can enter the uterus, where it develops.

If the phenomenon is understood, Dr. Pauerstein said, it may be possible to develop a new type of birth control pill. The pill's effectiveness would result from allowing the ovum to be released into the uterus too soon to develop.

Let's be specific about Campbell's Soups... and *reducing diets*

There are more than 30 million people in America who are overweight. During the next year, you probably will see more than 1,000 of them in your own practice.

One good way to help these patients is to give them a reducing diet based on ordinary eating patterns.

Campbell has prepared a sensible plan for weight control based on ordinary eating patterns. The plan consists of a patient instruction booklet and a set of menus which provide approximately 1,400 calories daily. The menus are balanced to provide the minimum daily requirements of nutrients.

To obtain a supply for your office write to:
Campbell Soup Company, Box 265, Camden, N. J. 08101

NOW IS THE TIME... TO GIVE HER TIME WITH OVULEN-21®

Each tablet contains ethynodiol diacetate 1 mg., mestronol 0.1 mg.

The new mother needs time . . .
to adjust to motherhood,
to give her new baby all the love
and attention he requires.
She needs time for her husband . . .
and for herself as well . . . .
so that she can come to terms
with the increased cares
and responsibilities now facing her.
She needs time to decide
when she will have additional children
and how many she will have.

OVULEN-21®

Each tablet contains ethynodiol diacetate 1 mg., mestranol 0.1 mg.

GIVES HER TIME

Your prescription for Ovulen-21 gives the new mother time to meet her family's present needs...to plan for her family's future.

She can take Ovulen-21 confidently and comfortably month after month. Its dependability is enhanced by its simplicity of use. A woman needs little or no time to learn the simple Ovulen-21 regimen: three weeks on—one week off. And the automatic record-keeping of the petite, virtually "potient-proof" Ovulen-21 Compack® helps to maintain her schedule...helps put time on her side.

Immediately post partum is the time

It is the time when motivation is highest—when a new mother needs expert advice for the future, so she can space her children and limit her family.

It is also the most opportune time, since she is conveniently present in the hospital, for her to be given both instructions and a prescription.

Non-nursing mothers may begin Ovulen-21 immediately after delivery, on the day of departure from the hospital or at the first postpartum visit, as desired. It is recommended that nursing mothers begin Ovulen-21 four weeks after delivery.

A small fraction of the hormonal agents in oral contraceptive pills has been identified in the milk of mothers receiving these drugs. The long-range effect on the nursing infant cannot be determined at this time.

Indication—Oral contraception.

Contraindications—Thrombophlebitis, thromboembolic disorders, cerebral apoplexy or a past history of these conditions, markedly impaired liver function, known or suspected carcinoma of the breast, known or suspected estrogen-dependent neoplasia, undiagnosed abnormal genital bleeding.

Warnings—Watch for the earliest manifestations of thrombotic disorders (thrombophlebitis, cerebravascular disorders, pulmonary embolism, retinal thrombosis); if present or suspected discontinue the drug immediately.

British studies reported in April 1968[1,2] estimate there is a seven- to tenfold increase in mortality and morbidity due to thromboembolic diseases in women taking oral contraceptives. In these controlled retrospective studies, involving 36 reported deaths and 58 hospitalizations due to "idiopathic" thromboembolism, statistical evaluation indicated that the differences observed between users and non-users were highly significant. The conclusions reached in the studies are summarized in the table below:

Comparison of Mortality and Hospitalization Rates Due to Thromboembolic Disease in Users and Non-Users of Oral Contraceptives in Britain.

Category	Mortality Rates		Hospitalization Rates (Morbidity)
	Age 20-34	Age 35-44	Age 20-44
Users of Oral Contraceptives	1.5/100,000	3.9/100,000	47/100,000
Non-Users	0.2/100,000	0.5/100,000	5/100,000

No comparable studies are yet available in the United States. The British data, especially as they indicate the magnitude of the increased risk to the individual patient, cannot be applied directly to women in other countries in which the incidences of spontaneously occurring thromboembolic disease may differ.

Discontinue medication pending examination if there is sudden partial or complete loss of vision, or sudden onset of proptosis, diplopia or migraine. Withdraw medication if papilledema or retinal vascular lesions are found.

Since the safety of Ovulen in pregnancy has not been demonstrated, it is recommended that pregnancy be ruled out for any patient who has missed two consecutive periods before continuing the contraceptive regimen. If the patient has not adhered to the prescribed schedule the possibility of pregnancy should be considered at the first missed period.

A small fraction of the hormone agents in oral contraceptives has been identified in the milk of mothers receiving these drugs. The long-range effect on the nursing infant cannot be determined at this time.

Precautions—Pretreatment physical examination should include special reference to the breasts and pelvic organs, and a Papanicolaou smear.

Endocrine and possibly liver function tests may be affected by Ovulen. Therefore, it is recommended that such tests if abnormal be repeated after the drug has been withdrawn for two months.

Pre-existing uterine fibromyomas may increase in size under the influence of progestogen-estrogen preparations.

Because these agents may cause some degree of fluid retention, conditions which might be influenced by this factor, such as epilepsy, migraine, asthma, cardiac or renal dysfunction, require careful observation.

In breakthrough bleeding, and all irregular vaginal bleeding, consider nonfunctional causes. Adequate diagnostic measures are indicated in undiagnosed vaginal bleeding.

Carefully observe patients with a history of psychic depression and discontinue the drug if severe depression recurs.

Any possible influence of prolonged Ovulen therapy on pituitary, ovarian, adrenal, hepatic or uterine function awaits further study.

A decrease in glucose tolerance has occurred in a significant percentage of patients on oral contraceptives. The mechanism of this decrease is obscure. For this reason, diabetic patients should be observed carefully while receiving Ovulen.

Because of the effects of estrogens on epiphyseal closure Ovulen should be used judiciously in young patients in whom bone growth is not complete.

The age of the patient constitutes no absolute limiting factor, although Ovulen therapy may mask the onset of the climacteric.

The pathologist should be informed of Ovulen therapy when relevant specimens are submitted.

Adverse Reactions—A statistically significant association has been shown between use of oral contraceptives and the following serious adverse reactions: thrombophlebitis, pulmonary embolism.

Although available evidence is suggestive of an association, such a relationship has been neither confirmed nor refuted for the following serious adverse reactions: cerebrovascular accidents, neuro-ocular lesions, e.g., retinal thrombosis and optic neuritis.

The following adverse reactions are known to occur in patients receiving oral contraceptives: nausea, vomiting, gastrointestinal symptoms (such as abdominal cramps and bloating), breakthrough bleeding, spotting, change in menstrual flow, amenorrhea during and after treatment, edema, chloasma or melasma, breast changes (tenderness, enlargement, secretion), change in weight, changes in cervical erosion and cervical secretions, suppression of lactation when given immediately post partum, cholestatic jaundice, migraine, allergic rash, rise in blood pressure in susceptible individuals, mental depression.

Although the following adverse reactions have been reported in users of oral contraceptives, an association has been neither confirmed nor refuted: anovulation post treatment, premenstrual-like syndrome, changes in libido, changes in appetite, cystitis-like syndrome, headache, nervousness, dizziness, fatigue, backache, hirsutism, loss of scalp hair, erythema multiforme and nodosum, hemorrhagic eruption, itching. The following laboratory results may be altered by oral contraceptives: hepatic function: increased sulfobromaphthalein and other tests; coagulation tests: increase in prothrombin, Factors VII, VIII, IX and X; thyroid function: increase in PBI and butanol extractable protein bound iodine, and decrease in T^3 uptake values; metyrapone test; pregnanediol determination.

References: 1. Inmon, W. H. W., and Vessey, M. P.: Brit. Med. J. 2:193-199 (April 27) 1968. 2. Vessey, M. P., and Doll, R.: Brit. Med. J. 2:199-205 (April 27) 1968.

Before prescribing see complete prescribing information.

Where "The Pill" Began

G. D. SEARLE & CO., P.O. Box 5110, Chicago, Ill. 60680 SEARLE

Nose clear as a whistle

(THANKS TO DIMETAPP®)

Dimetapp Extentabs® does an outstanding job of helping to clear up the stuffiness, drip and congestion of colds and upper respiratory allergies and infections. Each Extentab keeps working up to 12 hours. And for most patients drowsiness or overstimulation is unlikely. Try Dimetapp. It clearly works.

FOR UPPER RESPIRATORY ALLERGIES AND INFECTIONS

Dimetapp Extentabs®

Dimetane® (brompheniramine maleate), 12 mg.; phenylephrine HCl, 15 mg.; phenylpropanolamine HCl, 15 mg.

UP TO 12 HOURS CLEAR BREATHING ON ONE TABLET

Indications: Dimetapp is indicated for symptomatic relief of the allergic manifestations of respiratory illnesses, such as the common cold and bronchial asthma, seasonal allergies, sinusitis, rhinitis, conjunctivitis, and otitis.
Contraindications: Hypersensitivity to antihistamines. Not recommended for use during pregnancy.
Precautions: Until patient's response has been determined, he should be cautioned against engaging in operations requiring alertness. Administer with care to patients with cardiac or peripheral vascular diseases or hypertension.
Side Effects: Hypersensitivity reactions including skin rashes, urticaria, hypotension and thrombocytopenia, have been reported on rare occasions. Drowsiness, lassitude, nausea, giddiness, dryness of the mouth, mydriasis, increased irritability or excitement may be encountered.
Dosage: 1 Extentab morning and evening.
Supplied: Bottles of 100 and 500.

A.H. ROBINS COMPANY
RICHMOND, VA. 23220

A·H·ROBINS

Reading Choices Encompass Syndromes, Stamps, and Sports Medicine

Illustrated Dictionary of Eponymic Syndromes and Diseases and Their Synonyms, Stanley Jablonski, 335 pp., illus., Philadelphia, W. B. Saunders Co., 1969, $12.75.

SYNONYMS AS WELL AS a brief description of the syndrome or disease and its original citation are given under each listing in this dictionary. Illustrations are used to enhance the definitions when the author apparently felt that verbal descriptions were not adequate. In order to be included in this reference, a syndrome had to be listed at least twice in the cited literature.

Purpose of this book was to bring together in one volume eponyms and descriptive synonyms used to designate syndromes, for example:

Cooley's disease. See Cooley's anemia.

Cooley's syndrome. See Cooley's anemia.

Cooley-Lee Syndrome. See Cooley's anemia.

This book should be used along with the *Encyclopedia of Medical Syndromes* by Robert H. Durham, M.D. Although many syndromes are included in both books, there are also syndromes, such as Prune-Belly Syndrome, that are not found in either listing.

MEMORIAL LIBRARY STAFF

Private Die Proprietary Medicine Stamps, American Topical Association Handbook No. 66, George B. Griffenhagen, 78 pp., illus., Milwaukee, American Topical Association, 1969, $4.

THE STORY OF the revenue tax stamps required on patent medicines, the firms involved, and the facts concerning the products which were taxed is told in this 78-page handbook. The stamps are described, some are illustrated, and catalogue numbers are given.

Philatelists will probably compose the largest number of users of this handbook. Pharmaceutical and medical historians tracing the history of various proprietary medicine firms and also bottle collectors should find this compilation of interest and value. It should assist bottle collectors in dating their specimens more accurately with or without their accompanying private die proprietary medicine stamps.

Exemplifying these private dies is the list of over 40 stamps affixed to such products as Ayer's Sarsaparilla (composed of sarsaparilla, stillingia, yellow dock, may apple, and potassium and iron iodide) which were used since 1863 by J. C. Ayer and Company.

Manufacturers of the nostrums are listed alphabetically and are cross indexed; and a brief bibliography is included in this thoroughly interesting and, in some instances, amusing publication.

ALBERT A. TISDALE, M.D.,
Austin, Tex.

American Academy of Orthopaedic Surgeons: Symposium on Sports Medicine, Oklahoma City, August, 1967, 217 pp., illus., St. Louis, The C. V. Mosby Co., 1969, $15.

APPROPRIATELY DEDICATED to Dr. Don O'Donoghue who has done so much to popularize and improve the diagnosis and treatment of athletic injuries, this book represents papers presented at the first postgraduate course on Sports Medicine, sponsored by the Committee on Sports Medicine of the American Academy of Orthopaedic Surgeons.

This volume does not purport to be a full dissertation on athletic injuries, but it is an excellent symposium on various aspects of sports medicine. Its scope varies from a dissertation on "Gastroenteritis of Travelers in Athletes" (Dr. Clayton Thomas) to detailed discussion of acute ligament injuries about the knee (Drs. Don O'Donoghue and Don Slocum) and from "The Olympic Games at Altitude" (Dr. Allan J. Ryan) to "Subluxation of the Patella in Athletes" (Dr. Jack C. Hughston).

None of the articles is too long, and the book therefore furnishes interesting and informative reading for anyone interested in sports medicine and athletic injuries.

LOUIS J. LEVY, M.D.,
Fort Worth, Tex.

Practical Urology, Chester C. Winter, 249 pp., illus., St. Louis, The C. V. Mosby Co., 1969, $11.

THIS SHORT (240 pages) but surprisingly complete presentation of the entire field of clinical urology is clear, concise, and well written. The illustrations, especially important in a urology text because of the many different instruments and special procedures which belong to the field, are numerous and good. Coverage is complete with sections on medical kidney disease, hypertension, and male infertility and impotence included.

Questions at the end of each chapter help the reader review the material just presented, and each chapter has a rather long bibliography plus a list of available motion pictures.

This is an excellent short textbook and should be ideal for new urology residents as well as medical students, interns, and general surgical residents spending a few weeks on the urology service.

ROBERT B. STELL, M.D.,
San Angelo, Tex.

NEW BOOKS IN TMA LIBRARY

Barber, H. R. K., and Graber, E. A., eds.: *Quick Reference to OB-GYN Procedures,* Obstetrical and Gynecological Staff, Lenox Hill Hospital,

for the debilitated geriatric patient

Berocca®

TABLETS
high potency B-complex and C
for nutritional support

AVAILABLE ONLY ON Rx

contains water-soluble vitamins only

b.i.d. dosage

good patient acceptance

no odor, and virtually no aftertaste

Each Berocca Tablet contains:

Thiamine mononitrate	15 mg
Riboflavin	15 mg
Pyridoxine HCl	5 mg
Niacinamide	100 mg
Calcium pantothenate	20 mg
Cyanocobalamin	5 mcg
Folic acid	0.5 mg
Ascorbic acid	500 mg

Usual dosage is one tablet b.i.d.

Indications: Nutritional supplementation in conditions in which water-soluble vitamins are required prophylactically or therapeutically.

Warning: Not intended for treatment of pernicious anemia or other primary or secondary anemias. Neurologic involvement may develop or progress, despite temporary remission of anemia, in patients with pernicious anemia who receive more than 0.1 mg of folic acid per day and who are inadequately treated with vitamin B_{12}.

Dosage: 1 or 2 tablets daily, as indicated by clinical need.

Available: In bottles of 100.

ROCHE

Roche
LABORATORIES

Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

New York, Philadelphia, J. B. Lippincott Co., 1969.
Botsford, T. W., and Wilson, R. E.: *The Acute Abdomen*, vol. 10 of *Major Problems in Clinical Surgery*, Philadelphia, W. B. Saunders Co., 1969.
Burris, D. S., ed.: *The Right to Treatment; A Symposium*, reprinted from *The Georgetown Law Journal*, vol. 57, March, 1969, New York, Springer Publishing Co., Inc., 1969.
Crabbe, W. A.: *Orthopaedics for the Undergraduate*, Philadelphia, Lea & Febiger, 1969.
Crosby, R. M. N., and Liston, R. A.: *The Waysiders: A New Approach to Reading and the Dyslexic Child*, New York, Delacorte Press, 1968.
Duke-Elder, W. S.: *The Practice of Refraction*, ed. 8, St. Louis, The C. V. Mosby Co., 1969.
Egan, D. F.: *Fundamentals of Inhalation Therapy*, St. Louis, The C. V. Mosby Co., 1969.
Ellis, P. P., and Smith, D. L.: *Handbook of ocular therapeutics and pharmacology*, ed. 3, St. Louis, The C. V. Mosby Co., 1969.
Hanitzsch, E. G.: *The Treatment of Highway Injury: An International Bibliography*, Highway Safety Research Institute, The University of Michigan, Ann Arbor, 1969, $5. Copies may be obtained from The University of Michigan Publications Distribution Service, 615 E. University Ave., Ann Arbor, Mich. 48104.
Harper, R. A. K.: *Radiology of the Duodenum*, Philadelphia, J. B. Lippincott Co., 1967.
Jablonski, S.: *Illustrated Dictionary of Eponymic Syndromes and Diseases and Their Synonyms*, Philadelphia, W. B. Saunders Co., 1969.
Muehrcke, R. C.: *Acute Renal Failure: Diagnosis and Management*, St. Louis, The C. V. Mosby Co., 1969.
New Orleans Academy of Ophthalmology, Transactions of: *Symposium on retina and retinal surgery*, St. Louis, The C. V. Mosby Co., 1969.
Reid, L.: *The Pathology of Emphysema*, Philadelphia, J. B. Lippincott Co., 1967.
Scheinfeld, A.: *Twins and Supertwins*, Philadelphia, J. B. Lippincott Co., 1967.
Smith, P.: *Arrows of Mercy*, Garden City, N.Y., Doubleday & Co., Inc., 1969.
Stephenson, H. E., Jr.: *Cardiac Arrest and Resuscitation*, ed. 3, St. Louis, The C. V. Mosby Co., 1969.
Weale, F. E.: *An Introduction to Surgical Haemodynamics*, Chicago, Year Book Medical Publishers, Inc., 1967.
Weibel, J., and Fields, W. S.: *Atlas of Arteriography in Occlusive Cerebrovascular Disease*, Philadelphia, W. B. Saunders Co., 1969.
Wolstenholme, G. E. W., and O'Connor, M., eds.: *Bacterial Episomes and Plasmids, A Ciba Foundation Symposium*, Boston, Little, Brown & Co., 1969.
Wolstenholme, G. E. W., and O'Connor, M., eds.: *Circulatory and Respiratory Mass Transport, A Ciba Foundation Symposium*, Boston, Little, Brown & Company, 1969.

PERSONALS

Gov. Preston Smith has recently appointed **Dr. W. Tom Arnold** of Houston to the Gulf Coast Waste Disposal Authority, which was created by the 1969 Legislature. Dr. Arnold is a gastroenterologist at the Diagnostic Center Hospital in Houston.

Dr. Robert W. Shirey of Hillsboro has recently been named to the Texas State Board of Vocational Nurse Examiners by Gov. Preston Smith. He is the only physician member of the board.

New president of the Harris County Medical Society for 1971 will be **Dr. Eugene L. Slataper** of Houston. Other officers elected to serve in 1971 include **Drs. Robert L. Donald,** vice president; **Samuel J. Skinner,** secretary; and **Ben B. White,** treasurer.

The staff of the pediatric department at The University of Texas Medical School at San Antonio will acquire a new assistant professor of pediatrics in the section of cardiology, **Dr. J. B. Norton, Jr.** A native of San Antonio, he will join the staff July 1, 1970, coming from the University of California School of Medicine at San Francisco.

Lt. Cols. Frank R. LeCocq and **Edwin M. Bradley** have been named to receive the McLester Award of the Association of Military Surgeons of the U.S. for their outstanding work in the field of nutrition and dietetics. Dr. LeCocq is chief of the environmental medicine function, environmental medicine branch, US Air Force School of Aerospace Medicine, Brooks AFB at San Antonio. Dr. Bradley is director of education at Wilford Hall USAF Hospital.

The following Texas physicians have been elected to section offices in the Southern Medical Association: **Dr. John M. Dietschy,** Dallas, vice-chairman, section on gastroenterology; **Dr. Joseph T. Painter,** Houston, vice-chairman, section on medicine; **Dr. William P. Devereux,** Dallas, chairman, section on obstetrics; **Dr. M. Ray Harrington,** Dallas, chairman-elect, section on ophthalmology; **Dr. Edward C. Ferguson, III,** Galveston, vice-chairman, section on ophthalmology; **Dr. John B. Lynch,** Galveston, assistant secretary, section on plastic and reconstructive surgery; **Dr. John R. Shull,** Dallas, secretary, section on physical medicine and rehabilitation; **Dr. F. Brantley Scott,** Houston, chairman, section on urology; and **Dr. Claude D. Winborn,** Dallas, vice-chairman, section on otolaryngology.

Dr. Robert W. McConnell, chief of the nuclear radiology division, department of radiology, St. Paul Hospital, Dallas, has been reelected chairman of the American College of Radiology Board of Chancellors. His second year in office will begin during the annual meeting of the college in April, 1970, in Dallas.

Dean of The University of Texas Southwestern Medical School at Dallas, **Dr. Charles C. Sprague,** has been elected chairman of the Council of Deans of the Association of American Medical Colleges. He will serve during 1970 for a one-year term.

Recipient of the American Cancer Society's National Divisional Award is **Dr. B. L. Aronoff** of Dallas. A past president of the society's Texas Division and member of several national and state committees, he was honored in recognition of distinguished service in Texas.

Dr. Thomas K. Burnap of Dallas won first prize at the recent annual meeting of the American Society of Anesthesiologists, Inc., for a scientific exhibit on "Teaching Cardiopulmonary Resuscitation."

Dr. James C. Thompson will return to his alma mater, The University of Texas Medical Branch at Galveston, in the spring of 1970 to serve as professor and chairman of the department of surgery. He is now professor of surgery at the University of California School of Medicine at Los Angeles, chief of surgery at Harbor General Hospital, and chairman of the surgical education committee of the Society of University Surgeons.

Recently honored as "Analyst of the Year" by the Dallas Society of Analytical Chemists was **Dr. Morton F. Mason** (PhD), director of the Dallas City-County Criminal Investigation Laboratory and of Parkland Memorial Hospital's chemistry laboratory and professor of forensic medicine and toxicology at The University of Texas Southwestern Medical School at Dallas.

Dr. Ben M. Primer, Sr., of Austin is serving as secretary-treasurer of the American Association of Public Health Physicians.

PAMPHLET

"Tips on Athletic Training VIII" is now available to team physicians working with young athletes in both high schools and colleges. Published in 1969 under the auspices of the Committee on the Medical Aspects of Sports of the American Medical Association, this new 26-page handbook covers the health examination for athletic participation, physical readiness for football, hot weather hints, herpes simplex among wrestlers, the athlete and VD, androgenic-anabolic steroids and sports, the knee in sports, safety in track and field, and a first aid chart for athletic injuries.

Single copies may be requested from the AMA Order Department, 535 N. Dearborn St., Chicago 60610, at 15 cents each, with less cost in quantities, ranging down to eight cents each for 1,000 or more. A 50% discount, however, is standard on all AMA literature when ordered on medical society letterhead stationery or forms.

Recent Deaths

DR. PIGFORD

Dr. C. A. Pigford

Dr. Charles Alfred Pigford, nationally known public health figure, died of an apparent heart attack Oct. 26, 1969, at his home in Houston. He was 62.

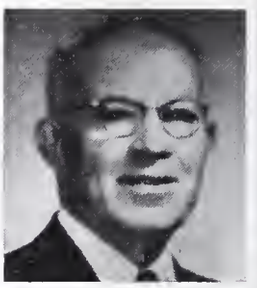
Born in Mobile, Ala., on July 26, 1907, he was the son of C. C. and Pauline Lindsey Pigford. He received his BS degree in 1930 from the University of Mississippi and received his MD degree in 1932 from the University of Tennessee College of Medicine. In 1932-1933 he served internship at Gorgas Hospital in Ancon, Canal Zone. He served in the US Army Medical Corps from 1933 to 1936 and from 1939 to 1945, attaining the rank of first lieutenant colonel. He received his MPH degree in 1956 from Tulane University.

From 1952 to 1953 Dr. Pigford served as director of the Midland Health Department, and from 1953 to 1957 he was director of the Lubbock City-County Health Unit. He moved to Phoenix, Ariz., in 1957 and served as the Maricopa County Health Officer for that city until 1958, when he returned to Lubbock as the health director until 1961. He then moved to Houston and served as that city's health director until his death. Prior to his public health service, he had been in general practice in Tulsa, Okla., and Seagraves, Lockney, and Overton, Tex.

A past president of the Texas Public Health Association, the United States-Mexico Border Public Health Association, and the Texas Association of Public Health Physicians, Dr. Pigford was a member of the Board of Trustees of the US Conference of City Health Officers, a fellow of the American College of Preventive Medicine, and a fellow of the American Public Health Association. He had been appointed chairman of the 98th Annual Meeting of the American Public Health Association to be held in Houston Oct. 26-30, 1970. He belonged to Harris County Medical Society, Texas Medical Association, American Medical Association, Delta Omega public health honorary fraternity, and was a charter member of American Association of Public Health Physicians and of American Academy of General Practice. He was a Mason and was a member of Sigma Alpha Epsilon social fraternity and of the Christ Church Cathedral Episcopal Church.

Dr. Pigford is survived by his wife, the former Postelle O'Neal, of Houston; a son, Walter W. Pigford of Lubbock; and two daughters, Mrs. Joe W. Cox of Abilene and Mrs. Gene Lusk of Cleburne, Tex.

DR. BAILEY



Dr. W. M. Bailey

Dr. William Marvin Bailey, Tyler general practitioner, died Nov. 10, 1969, of uremia. He was 83.

The son of William Henry and Amanda Sexton Bailey, Dr. Bailey was born April 30, 1886, in Walton, Tex. He received his MD degree in 1916 from Baylor College of Medicine and did postgraduate work at Tulane University School of Medicine at New Orleans, New York Post-Graduate School of Medicine, and Columbia University College of Physicians and Surgeons at New York City. Previously, he had taught in the schools of Van Zandt County and had served as a deputy county clerk. He attained the rank of lieutenant colonel in the US Army Medical Corps Reserves. From 1916 to 1920 he practiced medicine in Chisholm, Tex.; and from 1920 to 1930 he practiced in Forney, Tex. In 1930 he moved to Tyler and practiced there until his retirement in 1961.

Having held the positions of medical examiner for the Civil Aeronautics Administration, US Compensation Commission surgeon, ad interim Smith County Health Officer, and US Department of Justice physician for 30 years, Dr. Bailey had also been medical advisor for the local board of Selective Service during World War II. He was an original member of the staff of Mother Frances Hospital of Tyler. A member of American Medical Association, Texas Medical Association, and Kaufman County Medical Society, he had served as secretary-treasurer of Smith County Medical Society for a number of years. He was an active participant in the work of the Boy Scouts of America and received one of the organization's highest honors, the Silver Beaver Award. He was also health and safety chairman for the East Texas area Boy Scouts. A Master Mason, past master and life member of St. John's Lodge, he belonged to Tyler York Rite Masons, Dallas Scottish Rite Masons, and Hella Temple Shrine. He was an honorary life member of the official board of Marvin United Methodist Church in Tyler, and he sang for 40 years in that church's choir.

Surviving Dr. Bailey are his wife, the

former Florence Shook of Tyler; a son, William M. Bailey, Jr., of Slidell, La.; and two daughters, Mrs. R. K. Peters, Jr., and Mrs. George B. Allen, both of Tyler.

Dr. C. Rosser

Dr. Curtice Rosser, 78, a proctologic surgeon in Dallas for 50 years, died Oct. 23, 1969, in Dallas. He was the victim of a rare blood disease.

Born Jan. 3, 1891, in Dallas, Dr. Rosser was the son of Dr. Charles M. and Elma Curtice Rosser. His father was a prominent surgeon in Dallas who was a founder of what later became Baylor University Medical Center and Baylor College of Medicine. His father owned a small hospital, the Good Samaritan Hospital, on the present site of Baylor University Medical Center. Dr. Curtice Rosser was twice president of the Baylor medical staff and twice president of the medical staff of Gaston Episcopal Hospital, which he helped found.

Dr. Rosser was graduated from The University of Texas at Austin in 1911, received a law degree in 1913, and was graduated cum laude in 1917 from Northwestern University Medical School at Chicago. He interned at Massachusetts General Hospital in Boston in 1917 and 1918 and did postgraduate study in England and at the University of Vienna. He was honored with a doctor of science degree from Southern Methodist University in 1955. During World War I, he served as a lieutenant with the US Naval Reserves.

Internationally known as a writer, speaker, and teacher in the field of proctology, Dr. Rosser practiced medicine in Dallas from 1919 until his illness in May, 1969. He was clinical professor of proctology and chairman of the division of proctology at UT Southwestern Medical School at Dallas. He received the Marchman Award from the Dallas Southern Clinical Society in 1951 for distinguished service to medicine. He also received the first Distinguished Service Award from the Southern Medical Association in 1957.

A diplomate and first president of the American Board of Colon and Rectal Surgery, Dr. Rosser was a fellow in the Texas Surgical Society, Southern Surgical Association; a fellow and past governor of the American College of Surgeons; a fellow, past president, and honorary member of the American Proctologic Society; a past president of the Dallas County Medical Society; and a past president of the Dallas Southern Clinical Society. He was an honorary member of Texas Medical Association and of American Medical Association and served in the latter's House of Delegates for seven years; he was also an honorary member of the Brazilian, Mexican, Pennsylvanian, and New York proctologic societies.

Dr. Rosser was a past senior warden of the Episcopal Church of the Incarnation, and he was a 33rd degree Mason. He was a member of the Idlewild and Terpsichorean Clubs in Dallas, having served as president of the latter. He belonged to Alpha Omega Alpha honorary medical fraternity and to Town and Gown Club of Dallas. He was a founder and the first abbot of the Friars Society at The University of Texas.

Surviving Dr. Rosser are his wife, Mrs. Lillian McCune Rosser and a sister, Mrs. Elma Rosser McBlair. His first wife, the former Mary McGregor, died in 1957.

Dr. J. W. Youngblood

Dallas eye, ear, nose, and throat specialist Dr. John Wade Youngblood died Oct. 16, 1969, in Dallas. He was 60.

The son of Mr. and Mrs. W. H. Youngblood, Dr. Youngblood was born March 24, 1909, in Lakeview, Tex. He attended West Texas State University and Texas Tech University and was graduated with an MD degree in 1934 from Baylor College of Medicine, then located in Dallas. He interned at the Medical Arts Hospital of Dallas and served a residency at the New York Eye and Ear Infirmary in New York City in 1936. He practiced medicine in Stamford, Tex., from 1936 to 1946, excluding two years he spent during World War II serving with the US Army at Walter Reed General Hospital in Washington, D.C. He moved to Dallas in 1946, where he had practiced until his retirement in 1960 due to ill health.

A member of Highland Park Methodist Church, Dr. Youngblood was elected to inactive membership in Dallas County Medical Society, Texas Medical Association, and American Medical Association. He belonged to American Academy of Ophthalmology and Otolaryngology, Dallas Academy of Otolaryngology, and Texas Society of Ophthalmology and Otolaryngology and was a diplomate of the American Board of Otolaryngology.

Survivors include his wife, the former Elizabeth King, of Dallas; three sons, Dr. John W. Youngblood, Jr., of Austin, William C. Youngblood of Sydney, Australia, and David L. Youngblood of Ponca City, Okla.; his mother of Amarillo; a brother, W. M. Youngblood of Montclair, Calif.; three sisters, Mrs. Frank Harrison, of Amarillo, Mrs. T. H. Gattis of Brice, Tex., and Mrs. Meade Haile of San Angelo; and six grandchildren.

Dr. C. R. Williams

Dr. Charles Raines Williams, 68, Mineral Wells eye, ear, nose, and throat specialist, died July 30, 1969, in Veterans Administration Hospital in Dallas. Cause of death was respiratory and cardiac arrest and arteriosclerotic heart disease.

Born Jan. 1, 1901, in Mineral Wells, Dr. Williams was the son of Dr. C. B. and Alice Raines Williams. He attended Austin College at Sherman and was graduated from The University of Texas at Austin. He received his MD degree in 1926 from the UT Medical Branch at Galveston, where he was a student instructor in ophthalmology and otolaryngology during his junior and senior years. In 1927 he completed his internship at Methodist Hospital in Houston, and he took postgraduate training in his specialty at the University of Pennsylvania School of Medicine at Philadelphia. He began practice of ophthalmology and otolaryngology in association with his father in Mineral Wells in 1928. He served with the Texas National Guard from 1928 through 1940, during which time he did three tours of duty under Texas martial law. In 1940 the Guard was federalized, and he served as a captain in the 112th Medical Detachment of the US Army. He later served as

DR. ROSSER

DR. YOUNGBLOOD

DR. WILLIAMS

commander of the 181st General Hospital in India for two years and attained the rank of colonel. In 1944 he became commander of the station hospital at Jefferson Barracks, Mo., until the end of World War II. He was retired as full colonel in the US Army Medical Corps Reserve in 1961. He retired from active practice of medicine in 1964 for health reasons.

A ruling elder in the First Presbyterian Church in Mineral Wells and a charter member of the Lions club, Dr. Williams formerly served as president for two nonconsecutive terms and as secretary of Palo Pinto-Parker-Jack Counties Medical Society. He was a member of American Medical Association, American Academy of Ophthalmology and Otolaryngology, and the New York Academy of Science. He was named to Who's Who in Medicine and was elected to honorary membership in Texas Medical Association in 1965.

Dr. Williams is survived by his wife, the former Alice Leah Haman, of Mineral Wells; his step-mother, Mrs. C. B. Williams of Mineral Wells; two step-brothers, George W. Schober of Louisville, Ky., and Louis C. Schober of Mineral Wells; and one step-sister, Mrs. George M. Green of Odessa, Tex.

Dr. W. P. Ball

General Practitioner of the Year in 1958 in Texas, Dr. William P. Ball, 98, died Sept. 24, 1969, in a Cleburne hospital. He had practiced medicine in Cleburne from 1900 until his retirement in 1966 and had been ill for the past three years.

Born Feb. 26, 1871, in Greenwood, Miss., Dr. Ball was the son of Dr. John L. and Addie Pinck Scales Ball. He received a BS degree from Baylor University in Waco in 1892 and his MD degree from the University of Tennessee College of Medicine at Memphis in 1899. He interned at Memphis City Hospital in Memphis, Tenn., and did postgraduate work at Chicago Polyclinic and at the Mayo Clinic, Rochester, Minn. During World War II, he served four years uncompensated time in the Selective Service System. He received a certificate of appreciation signed by President Franklin D. Roosevelt and a Congress of the United States Selective Service Medal signed by President Harry S. Truman for his service.

A member of American Medical Association, honorary member of Texas Medical Association, former president and secretary of Johnson County Medical Society, and former president of District 12 Medical Society, Dr. Ball was awarded a Golden T certificate in 1949 by the University of Tennessee in recognition of 50 years of loyalty and service. Active in the Masonic Lodge for more than 50 years, he was a charter member of the Cleburne Chamber of Commerce, a director of Cleburne Savings & Loan Association, and a director of Texas Lime Co. He served two terms as city Alderman and was a deacon in the First Baptist Church of Cleburne. A member of the Cleburne Lions Club for more than 20 years, he was also named an honorary Kiwanian. He served one year as the first Chief of Staff at Johnson County Memorial Hospital.

During his 66 years of practice, it was estimated that Dr. Ball delivered more than 3,000 babies in Johnson County. He contributed to scholarship funds at Cleburne High School and Southwestern Union College at Keene, near Cleburne. He established perpetual scholarships for premedical and nursing students at Baylor University in 1941, and he equipped the nursery at Johnson County Memorial Hospital when it opened in 1948 as a memorial to his father who was a pioneer physician in Johnson County. He and his brother, the late Scales Ball, provided the gifts which started the Dr. John L. Ball Memorial Chapel at First Baptist Church in Cleburne in honor of their parents.

Dr. Ball was preceded in death in 1931 by his wife, the former Maggie Lockett of Cleburne.

DR. BALL

Dr. F. D. Walsworth

Long time Harlingen general practitioner, Dr. Frank D. Walsworth, died July 24, 1969, in a Harlingen hospital following a long illness. He was 90.

The son of James T. and Louella Walsworth, Dr. Walsworth was born July 23, 1879, at Dorchester, Neb. He was graduated from the University of Kansas School of Medicine at Kansas City in 1901 with an MD degree. He practiced medicine in Topeka, Kan., from 1902 to 1909 and in Wichita, Kan., from 1909 to 1922. From 1923 until his retirement in 1967 he had practiced in Harlingen, where he had served as city health officer.

A member of Cameron-Willacy Counties Medical Society, Texas Medical Association, and American Medical Association, Dr. Walsworth was elected to inactive membership in TMA in 1968.

Survivors include Dr. Walsworth's wife, the former Thelma Martin, of Houston; a son, William Walsworth of Westville, Ind.; and a daughter, Mrs. Lady Belle Taylor of Pueblo, Colo.

Dr. M. E. Robau

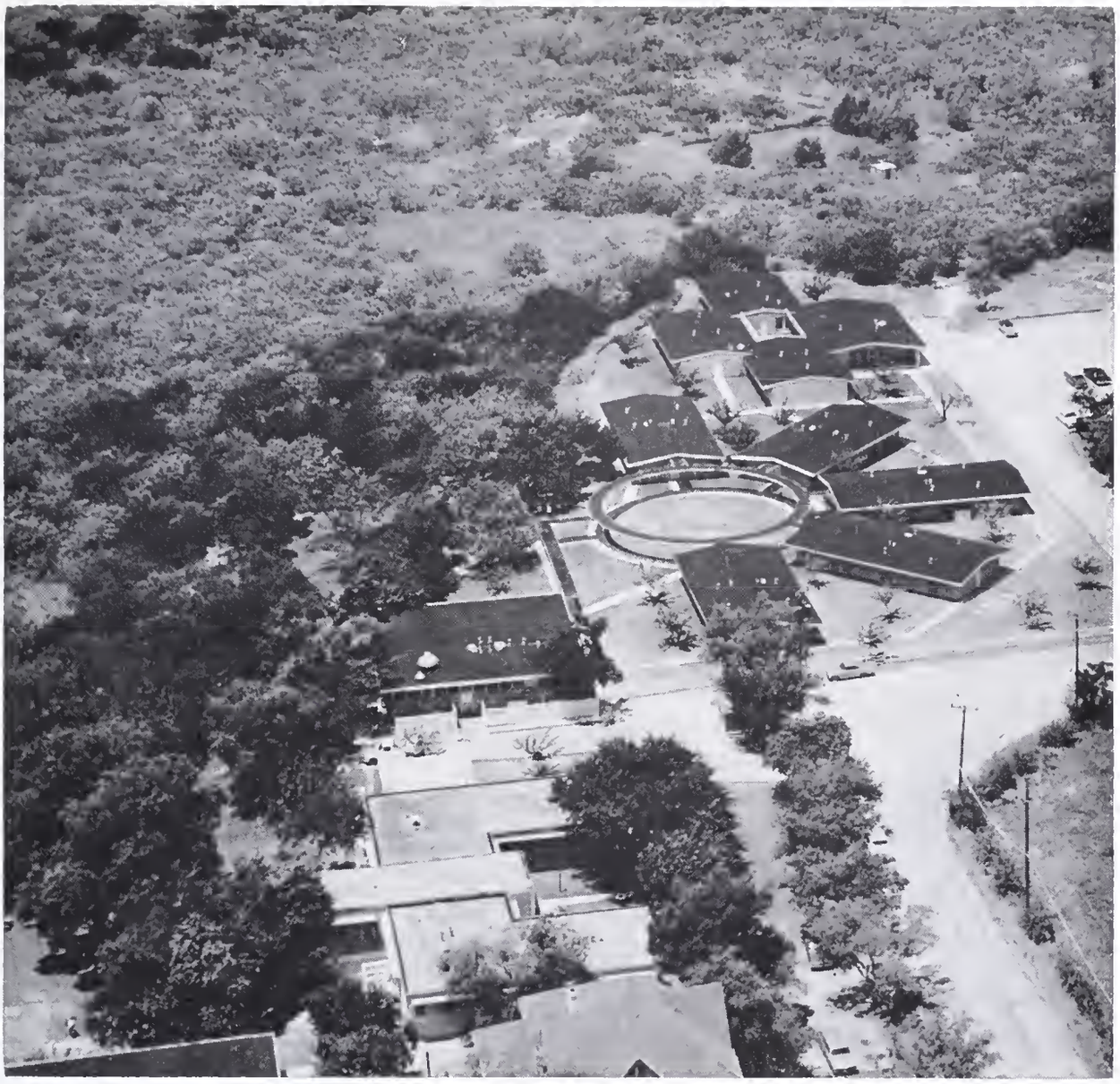
Dr. Mario E. Robau, Brookshire, Tex., general practitioner, died June 22, 1969, in a Houston hospital of reticulum cell sarcoma. He was 60.

Born Aug. 14, 1908, in Santa Clara, Cuba, Dr. Robau was the son of Jose Luis and Maria Robau. He attended Colegio de Bele in Havana, Cuba, and was graduated from the University of Havana School of Medicine in 1934 with an MD degree. From 1934 to 1936 he interned at Calixto Garcia Hospital in Havana, and he served a residency from 1936 to 1940 in cancerology and gynecology at Curie Cancer Institute in Havana. He practiced medicine in Havana until 1964, when he moved to Houston and began studies in preparation for the state board examination required of foreign medical school graduates before they are licensed to practice medicine in Texas. In 1966 he moved to Wichita Falls where he was associated with the Wichita Falls State Hospital. He received his Texas medical license in 1967 and began his practice in Brookshire. He was a member of the staff of the Waller County Hospital in Hempstead.

Dr. Robau was a member of Austin-Grimes-Waller Counties Medical Society, Texas Medical Association, American Medical Association, and Cuban Medical Association in Exile. He belonged to the Sacred Heart Catholic Church. Previous memberships included the Cuban Cancer Society and the Cuban Academy of Physical and Natural Medical Sciences. He received an honorary doctor's degree from the University of Guadalajara in Mexico.

Surviving Dr. Robau are his wife, the former Yrmenia Martin, now of Houston; a son, Mario of Houston; a daughter, Yrmenia Gonzalez of Cuba; a brother, Jose L. Robau of Houston; and a sister, Maria L. Sanchez of Houston.

DR. ROBAU



BEVERLY HILLS HOSPITAL
BEVERLY HILLS CLINIC

PSYCHIATRY
INPATIENT — OUTPATIENT

Multiple-approach treatment of thinking disorders. Established diagnostic procedures available. Secluded in-town location convenient to the medical community.

Psychiatry

Joseph L. Knapp, M.D. — Fred H. Jordan, M.D.
Jackson H. Speegle, M.D. — Joseph H. Lindsay, M.D.
Jack R. Tomlinson, M.D.

Psychology

Traudl E. Jordan-Diener, Ph.D. — R. A. Mitchell, M.S. — David K. Fooshee, M.S.

1353 North Westmoreland Avenue — Dallas, Texas 75211 — 214 331-8331

Starlite Village Clinic

Center Point, Texas

Ph.: ME 4-2426

- - - A specialized clinic dedicated to the physical, mental, and spiritual treatment of men and women suffering from alcoholic and similar disturbances.

F. E. Seale, M.D.
Medical Director

Bland Seale
Administrator

RADIOLOGY ASSOCIATES OF FORT WORTH

John S. Alexander, M.D., M.A.C.R.
Robert J. Atcheson, M.D., M.A.C.R.
Douglas E. Bibby, M.D., F.A.C.R.
James W. Buice, M.D., F.A.C.R.
Richard C. Gasser, M.D., M.A.C.R.
James A. Holland, M.D., M.A.C.R.
Paul W. Mathews, Jr., M.D., M.A.C.R.
Preston W. Nash, M.D., M.A.C.R.
Rolland F. Oakes, M.D., M.A.C.R.
Norman L. Presley, M.D., M.A.C.R.
Sanford Reitman, M.D., M.A.C.R.
Gomer W. Roberts, M.D., M.A.C.R.
Herman C. Sehested, M.D., F.A.C.R.
Glenn A. Stokdyk, M.D., M.A.C.R.
C. H. Tseng, M.D., M.A.C.R.
Claude Williams, M.D., M.A.C.R.

DIPLOMATES OF THE AMERICAN BOARD OF RADIOLOGY

Offices:

100 Medical Tower Bldg. — 336-8681
1217 West Cannon — 336-8627
900 W. Randol Mill Rd., Arlington, Texas 76010 — 277-7681

TRAVIS CLINIC ASSOCIATION AND THE NAN TRAVIS MEMORIAL HOSPITAL

JACKSONVILLE, TEXAS

STAFF

General Surgery:
L. L. Travis, M.D.
J. S. O'Hare, M.D.
R. K. Willms, M.D.

Orthopedic Surgery:
E. L. Mahon, Jr., M.D.

Urology:
H. F. Rives, M.D.

Pathology:
Harbert Davenport, Jr., M.D.

Internal Medicine:
J. T. Boyd, M.D.
F. H. Verheyden, M.D.
J. T. Scogin, M.D.
J. H. Pesnell, M.D.
Mary A. Bone, M.D.

Obstetrics and Gynecology:
J. C. Rucker, M.D.
J. D. Crawford, M.D.

Ophthalmology:
Fred Haberle, M.D.

Pediatrics:
M. L. Gray, M.D.

Radiology and Radioactive Isotopes:
L. W. Ralston, M.D.

William J. Fowler
Administrator of Nan Travis Memorial Hospital

J. G. Casey
Business Manager of Travis Clinic

MEDICAL ARTS CLINIC

Box 841
Corsicana, Texas

PEDIATRICS
JOHN W. GRIFFIN, M.D., F.A.A.P.*
JAMES E. SPEIER, M.D.
INTERNAL MEDICINE
ROBERT D. BONE, M.D., F.A.C.P.*
JAMES F. WITTEN, M.D., F.A.C.P.*
CHARLES I. BILTZ, M.D.*
OBSTETRICS & GYNECOLOGY
KELLY PAUL BURKHART, M.D., F.A.C.O.G.*
DERMATOLOGY
JOSEPH M. GLICKSMAN, M.D.
BUSINESS MANAGER
OWEN G. ELLIOTT, M.G.M.A.
SURGERY
LOUIS E. GIBSON, M.D., F.A.C.S.*
E. SCOTT MIDDLETON, M.D.
OPHTHALMOLOGY
ROBERT D. MERTZ, M.D., F.A.A.O.O.*
EAR, NOSE, THROAT
PHILLIP M. AWTREY, M.D.,* F.A.A.O.O.
DENTISTRY
ROBERT A. LANG, D.D.S.

*Diplomate of the American Board

A once-popular treatment for back pains was to have the seventh son of a seventh son stand or walk on the patient's back.

The pain of earache was allegedly relieved by holding a hot roasted onion to the ear.

For headache, a sovereign remedy was to wear a snakeskin round one's head.

A realistic approach to pain relief

'Empirin'®

Compound with Codeine Phosphate gr. 1/2 No. 3

Each tablet contains:
Codeine Phosphate gr. 1/2 (Warning—May be habit forming), Phenacetin gr. 2 1/2, Aspirin gr. 3 1/2, Caffeine gr. 1/2.

keeps the promise of pain relief

'B.W. & Co.' narcotic products are Class "B", and as such are available on oral prescription, where State law permits.

BURROUGHS WELLCOME & CO. (U.S.A.) INC.
Tuckahoe, N.Y.

Contraindications: Edema, danger of cardiac decompensation; history or symptoms of peptic ulcer; renal, hepatic or cardiac damage; history of drug allergy, history of blood dyscrasia. The drug should not be given when the patient is senile or when other potent drugs are given concurrently. Large doses of the alka formulation are contraindicated in glaucoma.

Warning: If coumarin-type anticoagulants are given simultaneously, watch for excessive increase in prothrombin time. Instances of severe bleeding have occurred. Persistent or severe dyspepsia may indicate peptic ulcer; perform upper gastrointestinal x-ray diagnostic tests if drug is continued. Pyrazole compounds may potentiate the pharmacologic action of sulfonylurea, sulfonamide-type agents and insulin. Carefully observe patients receiving such therapy. Use with caution in the first trimester of pregnancy and in patients with thyroid disease.

Precautions: Before prescribing, carefully select patients, avoiding those responsive to routine measures as well as contraindicated patients. Obtain a detailed history and a complete physical and laboratory examination, including a blood count. Patients should not exceed recommended dosage, should be closely supervised and should be warned to discontinue the drug and report immediately if fever, sore throat, or mouth lesions (symptoms of blood dyscrasia); sudden weight gain (water retention), skin reactions, black or tarry stools or other evidence of intestinal hemorrhage occur. Make complete blood counts at weekly intervals during early therapy and at 2-week intervals thereafter. Discontinue the drug immediately and institute countermeasures if the white count changes significantly, granulocytes decrease, or immature forms appear. Use greater care in the elderly and in hypertensives.

Adverse Reactions: The more common are nausea and edema. Swelling of the ankles or face may be minimized by withholding dietary salt, reduction in dosage or use of diuretics. In elderly patients and in those with hypertension the drug should be discontinued with the appearance of edema. The drug has been associated with peptic ulcer and may reactivate a latent peptic ulcer. The patient should be instructed to take doses immediately before or after meals or with milk to minimize gastric upset. Drug rash occasionally occurs. If it does, promptly discontinue the drug. Agranulocytosis, exfoliative derma-

Sandy sails again!
After an arthritic flare-up.

His rheumatoid arthritis flared out of aspirin control.
It meant weeks of pain, stiffness,
swelling and tenderness...and a lot of sun and wind that
somebody else took advantage of.

Next time, after aspirin, consider Butazolidin alka:
prompt anti-inflammatory effectiveness
short trial period
low maintenance dosage
usual dosage: 1 capsule q.i.d. initially, then 1 or 2 daily

Butazolidin® alka

100 mg. phenylbutazone
100 mg. dried aluminum hydroxide gel
150 mg. magnesium trisilicate

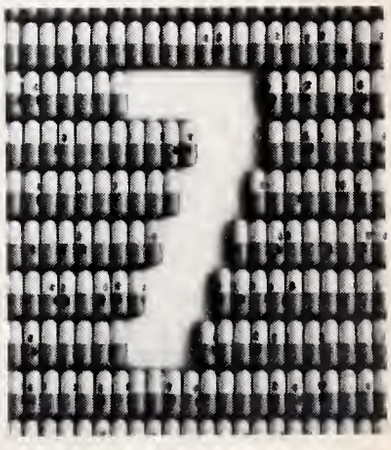
Serious side effects can occur. Select patients carefully (particularly the elderly) and follow them closely in line with the drug's precautions, warnings and contraindications. Read the prescribing information. It's summarized below.

titis, Stevens-Johnson syndrome, Lyell's syndrome (toxic necrotizing epidermolysis), or a generalized allergic reaction similar to serum sickness may occur and require permanent withdrawal of medication. Agranulocytosis can occur suddenly in spite of regular, repeated normal white counts. Stomatitis and, rarely, salivary gland enlargement may require cessation of treatment. Such patients should not receive subsequent courses of the drug. Vomiting, vertigo and languor may occur. Leukemia and leukemoid reactions have been reported. While not definitely attributable to the drug, a causal relationship cannot be excluded. Thrombocytopenic purpura and aplastic anemia may occur. Confusional states, agitation, headache, blurred vision, optic neuritis and transient hearing loss have been reported, as have hyperglycemia, hepatitis, jaundice, hypersensitivity angiitis, pericarditis and several cases of anuria, glomerulonephritis and hematuria. With long-term use, reversible thyroid hyperplasia may occur infrequently. Moderate lowering of the red cell count due to hemodilution may occur.

Dosage in Rheumatoid Arthritis: Initial: 3 to 6 capsules daily in 3 or 4 equal doses. Trial period: 1 week. Maintenance dosage should not exceed 4 capsules daily; response is often achieved with 1 or 2 capsules daily. In selecting the appropriate dosage in any specific case, consideration should be given to the patient's weight, general health, age and any other factors influencing drug response. (B)46-070-C

For complete details, please see full prescribing information.

Geigy Pharmaceuticals
Division of
Geigy Chemical Corporation
Ardsley, New York 10502



If it doesn't work in a week, forget it.

Remember how great milk of magnesia tasted?

Almost as good as castor oil.
But now you can spare the taste buds and spoil the patient with a modern Dulcolax tablet or suppository.

And Dulcolax works so predictably that the time of bowel movement can often be predicted. Tablets taken at night usually produce a bowel movement the following morning. Suppositories generally work in 15 minutes to an hour.

For preoperative preparation, a combination of tablets at night and a suppository the next morning usually cleans the bowel thoroughly.

Dulcolax suppositories may be particularly helpful when straining should be avoided, as in postoperative care. Keep in mind, however, that the drug is contraindicated in the acute surgical abdomen.

Dulcolax®...it's predictable
bisacodyl

Under license from Boehringer Ingelheim G.m.b.H. Geigy Pharmaceuticals, Division of Geigy Chemical Corporation, Ardsley, New York 10502 DU-70

Painful night leg cramps...

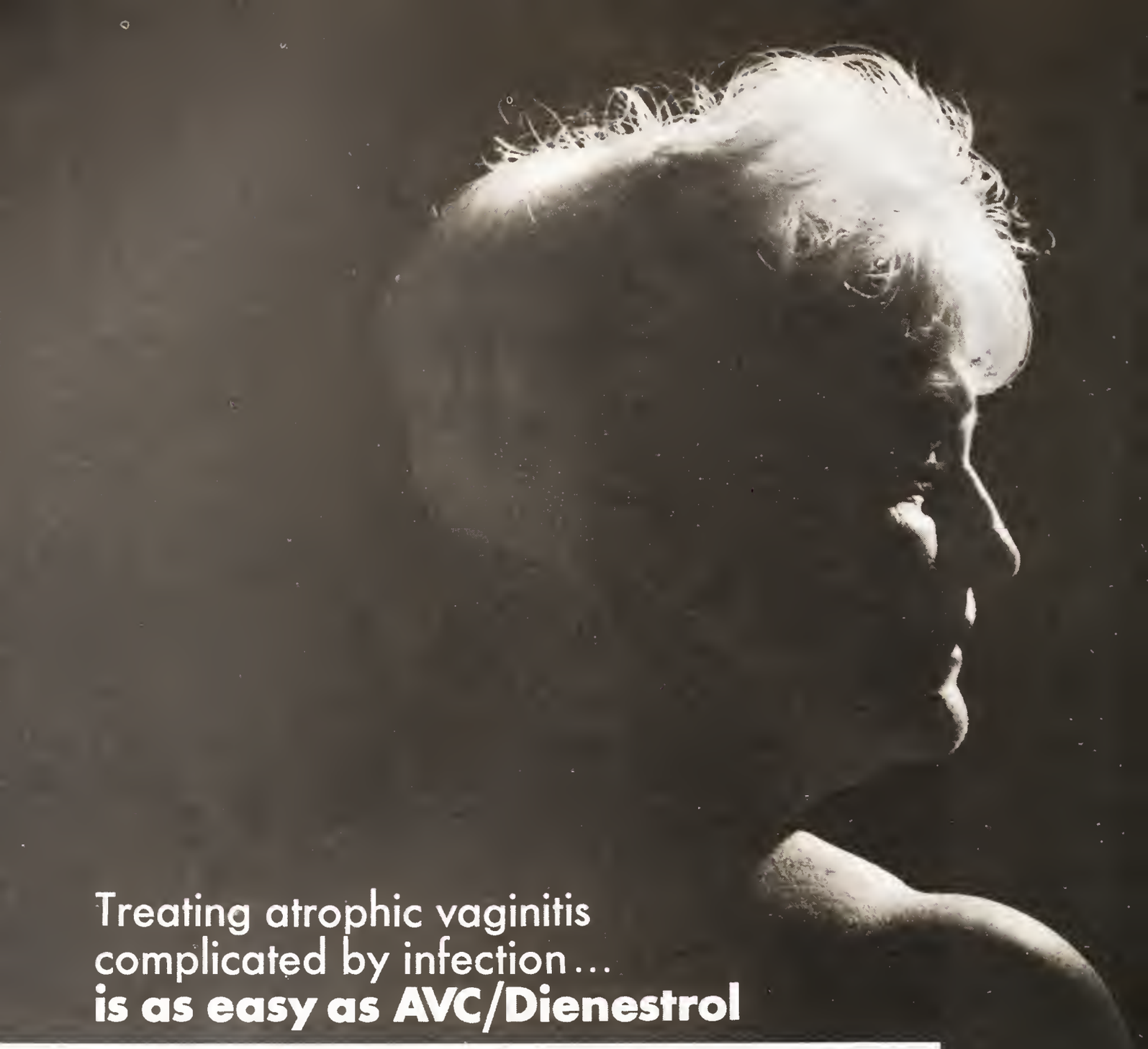
unwelcome bedfellow for any patient– including those with arthritis, diabetes or PVD

One thing patients can sleep without, particularly patients with chronic disease conditions such as arthritis, diabetes or PVD, is painful night leg cramps. Although seldom the presenting complaint, night leg cramps can tie your patients up in painful knots. Now, just one tablet of QUINAMM at bedtime can usually bring an end to shattered sleep and needless suffering. Your patients will sleep restfully—gratefully—with QUINAMM, specific therapy to prevent painful night leg cramps.

Prescribing Informotion—Composition: Each white, beveled, compressed toblet contains: Quinine sulfate, 260 mg., Aminophylline, 195 mg. **Indicotions:** For the prevention and treatment of nocturnal ond recumbency leg muscle cramps, including those ossociated with arthritis, diabetes, varicose veins, thrombophlebitis, arteriosclerosis and stotic foot deformities. **Controindicotions:** QUINAMM is controindicoted in pregnoncy because of its quinine content. **Precoutions/Adverse Reactions:** Aminophylline may produce intestinol cramps in some instances, and quinine may produce symptoms of cinchonism, such as tinnitus, dizziness, and gastrointestinal disturbance. Discantinue use if ringing in the ears, deafness, skin rosh, or visuol disturbances accur. **Dosoge:** One tablet upon retiring. Where necessary, dosage may be increased to one tablet following the evening meal and one toblet upon retiring. **Supplied:** Bottles of 100 and 500 toblets.

THE NATIONAL DRUG COMPANY
DIVISION OF RICHARDSON-MERRELL INC.
PHILADELPHIA, PENNSYLVANIA 19144

Quinamm™ Specific therapy for night leg cramps
(quinine sulfate 260 mg., aminophylline 195 mg.)



Treating atrophic vaginitis complicated by infection... **is as easy as AVC/Dienestrol**

Dienestrol helps restore estrogen-deficient vaginal mucosa.
It is the *particular* ingredient in AVC/Dienestrol that improves cell maturation counts[1,2] — helps stimulate the restoration of normal vaginal epithelium to resist infection.

Two recent studies reconfirm AVC/Dienestrol efficacy.[1,2] AVC/Dienestrol is proven effective against monilial, trichomonal, nonspecific bacterial vaginitis, and mixed infections.[1,2] AVC/Dienestrol combats infection, helps restore tissue resistance to reinfection.

So even in complex cases, the treatment can remain the same. Comprehensive. Effective. Easy as AVC/D.

Contraindications: Known sensitivity to sulfanamides; diagnosis or familial history of carcinoma of the genitol troct or breosts; precarcinamatous lesions of the vagina or vulvo; palpable uterine fibromyama; mammary fibraadenama; depressed liver function.

Precautions/Adverse Reactions: The usual precautions for topical and systemic sulfonomides shauld be observed becouse of the passibility of absarption. Burning, increased local discomfort, skin rosh, urticoria or ather manifestations of sulfanomide toxicity or sensitivity ore reosons to discontinue treatment. The use of AVC/Dienestrol daes nat preclude the necessity for coreful diagnastic measures to eliminate the possibility of neoplosia of the vulva or vagina. Manifestations of excessive estrogenic stimulation through dienestrol absorptian may occur. These include uterine bleeding, breast tenderness, exocerbation of menstrual irregularity and pravocation of serious bleeding in women sterilized because of endametriosis. Endometriol withdrowal bleeding may occur if use is suddenly discontinued.

Dosage: One applicatorful or one suppasitory intravoginolly once or twice daily.

Supplied: 'AVC/Dienestrol Cream'—Four ounce tube *with* applicotor. 'AVC' and 'AVC/Dienestrol Suppositories'—Box of 12 *with* applicotor.

References: (1) Solerno, L. J.; Ortiz, G., ond Turkel, V.: Vaginitis: A Diagnostic ond Therapeutic Approach, Scientific Exhibit, presented ot the 115th Annuol A.M.A. Convention, Chicoga, Illinais, June 1966. (2) Nugent, F. B., and Myers, J. E.: Pennsylvonio Med. 69:44, 1966.

THE NATIONAL DRUG COMPANY
DIVISION OF RICHARDSON-MERRELL INC
PHILADELPHIA, PENNSYLVANIA 19144

AVC/Dienestrol

Cream (dienestrol .01%, sulfonilamide 15.0%, aminocrine hydrochloride 0.2%, allantoin 2.0%)
Suppositories (dienestrol 0.70 mg., sulfanilomide 1.05 Gm., aminocrine hydrochloride 0.014 Gm., allantoin 0.14 Gm.)

TRADEMARK: A V C AV-920A 7/69

ANNOUNCING
THE THIRTY-THIRD ANNUAL MEETING
of
THE NEW ORLEANS GRADUATE
MEDICAL ASSEMBLY

Conference Headquarters — The Roosevelt Hotel
March 2, 3, 4, 5, 1970

GUEST SPEAKERS

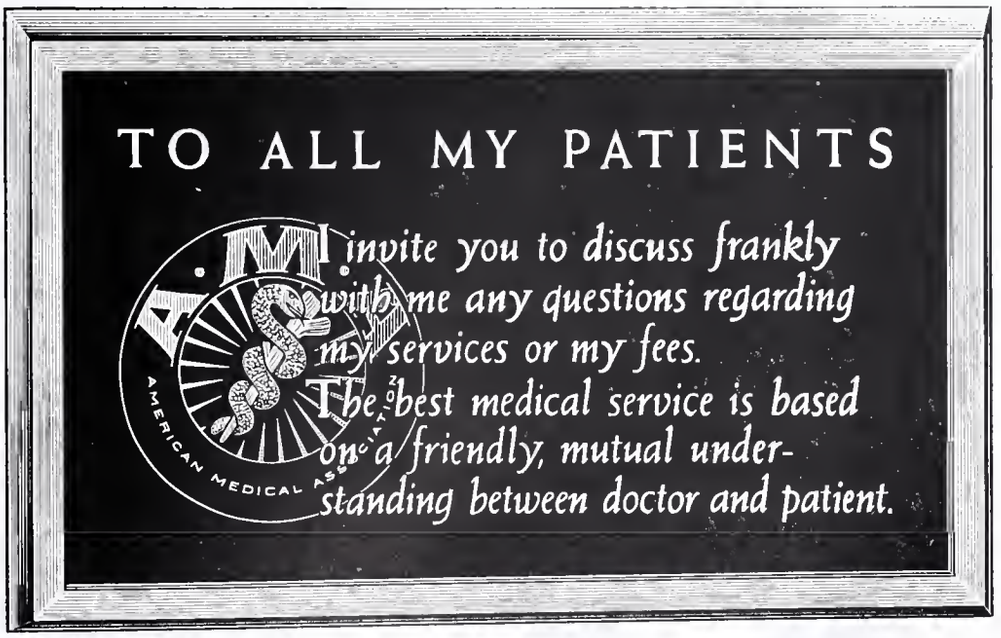
John J. Bonica, M.D., Seattle, Wash.
Anesthesiology
John R. Hill, M.D., Rochester, Minn.
Colon and Rectal Surgery
Walter B. Shelley, M.D., Philadelphia, Pa.
Dermatology
H. M. Pollard, M.D., Ann Arbor, Mich.
Gastroenterology
Walter Lane, M.D., Tompa, Fla.
General Practice
Henry Clay Frick, II, M.D., New York, N.Y.
Gynecology
William H. Crosby, M.D., Boston, Mass.
Internal Medicine
Thomas L. Petty, M.D., Denver, Colo.
Internal Medicine
David N. Danforth, M.D., Chicago, Ill.
Obstetrics
Jack A. Dillahunt, M.D., Albuquerque, N.M.
Ophthalmology
John J. Niebauer, M.D., San Francisco, Calif.
Orthopedic Surgery
William K. Wright, M.D., Hauston, Tex.
Otolaryngology
Omer E. Hagebusch, M.D., St. Louis, Mo.
Pathology
Chester M. Edelmann, Jr., M.D., Branx, N.Y.
Pediatrics
Howard P. Rome, M.D., Rochester, Minn.
Psychiatry
Wendell P. Stampfli, M.D., Denver, Colo.
Radiology
Joel W. Baker, M.D., Seattle, Wash.
Surgery
Edwin J. Wylie, M.D., San Francisco, Calif.
Surgery
Ralph A. Straffon, M.D., Cleveland, Ohio
Urology

Lectures, symposia, clinicopathologic conference, round-table luncheons, medical motion pictures, technical exhibits, and entertainment for visiting wives.

(All-inclusive registration fee — $35.00)

This program is acceptable for twenty-two (22) prescribed hours and nine (9) elective hours by the American Academy of General Practice.

For information concerning the Assembly meeting write Secretary, The New Orleans Graduate Medical Assembly, Room 1538, 1430 Tulane Avenue, New Orleans, Louisiono 70112.



This attractive office plaque, available from the American Medical Association, will encourage better understanding between you and your patients. Suitable for wall or desk display, the plaque measures 6" x 10½". The lettering is white on a dark brown background and the frame is durable beige plastic. The plaque is designed to blend well with any office decor. Cost of the plaque is $1.25, postpaid. To place your order, write to the Order Department, American Medical Association. Make check payable to the AMA.

AMERICAN MEDICAL ASSOCIATION
535 North Dearborn Street ● Chicago, Ill. 60610

in the treatment of

IMPOTENCE

Android®

(thyroid-androgen) TABLETS

Effectiveness confirmed by another double blind study*

1. SUMMARY

ANDROID	GOOD TO EXCELLENT 75%
PLACEBO	20%

2. Forty cases reported.
3. Cites synergism between androgen and thyroid.
4. No side effects in patients treated.
5. Alleviation of fatigue noted
6. Case histories on 4 patients.
7. Although psychotherapy still needed, role of chemotherapy cannot be disputed.

**also available with ESTROGEN*

Android-E

Each Tablet Contains:

Methyl Testosterone	2.5 mg.
Ethinyl Estradiol	0.02 mg.
Thyroid Ext. (1/6 gr.)	10 mg.
Thiamine Hydrochloride	10 mg.
Glutamic Acid	50 mg.

INDICATIONS: Advantage is taken of the anabolic action of ANDROID without its virilizing effect. Estrogen balances the androgen—only steroid effect remains. Geriatrics, post-operative and debilitating disease, osteoporosis. **DOSE:** One tablet t.i.d. Female patients should have a rest period 5 to 7 days after 21 days of medication. **SIDE EFFECTS:** In the female, excessive dosage may produce virilizing effects of most androgens: hoarseness, hirsutism, enlarged clitoris. Symptoms can be avoided by keeping the dosage below 300 mg. of testosterone per month. **CONTRAINDICATIONS:** See Android. Ethinyl estradiol is not to be used in latent malignancy of reproductive organs or mammary glands.

"Sexual impotence treatment with methyl testosterone – thyroid (ANDROID) a double blind study" – Montesano, Evangelista: Clinical Medicine, April 1966.

CONTRAINDICATIONS—Methyl testosterone is not to be used in malignancy of reproductive organs in male, coronary heart disease. Thyroid is not to be used in heart disease, hypertension unless the metabolic rate is low.

Choice of 4 strengths

Android

Each yellow tablet contains:

Methyl Testosterone	2.5 mg.
Thyroid Ext. (1/6 gr.)	10 mg.
Glutamic Acid	50 mg.
Thiamine HCL	10 mg.

Dose: 1 tablet 3 times daily.
Available: Bottles of 100, 500, 1000.

Android-HP

HIGH POTENCY

Each red tablet contains:

Methyl Testosterone	5.0 mg.
Thyroid Ext. (½ gr.)	30 mg.
Glutamic Acid	50 mg.
Thiamine HCL	10 mg.

Dose: 1 tablet 3 times daily.
Available: Bottles of 100, 500, 1000.

Android-X

EXTRA HIGH POTENCY

Each orange tablet contains:

Methyl Testosterone	12.5 mg.
Thyroid Ext. (1 gr.)	64 mg.
Glutamic Acid	50 mg.
Thiamine HCL	10 mg.

Dose: 1 or 2 tablets daily.
Available: Bottles of 60, 500.

REFER TO PDR

Android-Plus

WITH HIGH POTENCY B-COMPLEX AND VITAMIN C

Each white tablet contains:

Methyl Testosterone	2.5 mg.
Thyroid Ext. (¼ gr.)	15 mg.
Ascorbic Acid (Vit. C)	250 mg.
Thiamine HCL	25 mg.
Glutamic Acid	100 mg.
Pyridoxine HCL	5 mg.
Niacinamide	75 mg.
Calcium Pantothenate	10 mg.
Vitamin B-12	2.5 mcg.
Riboflavin	5 mg.

Dose: 2 tablet twice daily.
Available: Bottles of 60, 500.

Write for literature and samples:

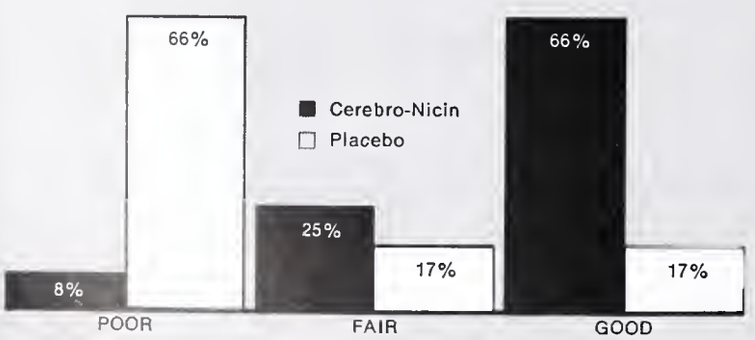
BROWN THE BROWN PHARMACEUTICAL CO.
2500 W. 6th St., Los Angeles, Calif. 90057

For the treatment of the aging patient

Cerebro-Nicin®

capsules/elixir

A Gentle Cerebral Stimulant and Vasodilator



CEREBRO-NICIN® New double-blind study* shows how effectively senility can be forestalled. Four times as many aging patients showed striking improvement.

*A Double-Blind Study of Cerebro-Nicin, Therapy for the Geriatric Patient, R. Goldberg Jrnl,. of the Amer. Ger. Soc. June, 1964

Available in a tasty wine base elixir and capsules

Each Cerebro-Nicin capsule contains:

Pentylenetetrazole	100 mg.
Nicotinic Acid	100 mg.
Ascorbic Acid	100 mg.
Thiamine HCl	25 mg.
l-Glutamic Acid	50 mg.
Niacinamide	5 mg.
Riboflavin	2 mg.
Pyridoxine	3 mg.

DOSAGE: One capsule t.i.d. or as prescribed by physician.
AVAILABLE: Bottles of 100, 500, 1000 capsules.
Also elixir 8 oz. bottles.
CONTRAINDICATIONS: There are no known contraindications to Pentylenetetrazole although caution should be exercised when treating patients with a low convulsive threshold.
Most persons experience a flushing or tingling sensation after taking a higher potency niacin-containing compound. As a secondary reaction some will complain of nausea and other sensations of discomfort. This reaction is transient and is rarely a cause of discontinuance of the drug if the patient is forewarned to expect the reaction.

REFER TO PDR

Write for literature and samples...

BROWN THE BROWN PHARMACEUTICAL CO.
2500 W. 6th St., Los Angeles, Calif. 90057
Write for Product Catalog

PHYSICIANS' DIRECTORY

Allergy

DRS. FEIN AND KAMIN
Allergy and Immunology

Bernard T. Fein, M.D., F.A.C.A.
Fellow
American Academy of Allergy
216 Medical Prof. Bldg.
CA 6-7671

Peter B. Kamin, M.D., F.A.A.P.
Diplomate
Sub-Board Pediatric Allergy
San Antonio 16, Texas
CA 7-6331

HOUSTON ALLERGY CLINIC
CLINICAL ALLERGY AND IMMUNOLOGY
RICHARD L. ETTER, M.D., F.A.C.A., F.A.A.A.
RICHARD H. JACKSON, M.D., F.A.C.A.
WARREN J. RAYMER, M.D., F.A.C.A.
RAMON GARRIDO, M.D.
(Certified American Board of Pediatrics)
Suite 156, Hermann Professional Building
6410 Fannin St., Houston, Texas 77025
JA 6-3281

V. E. FRIEDEWALD, M.D., F.A.C.P.
Diplomate American Boards of Internal Medicine and Allergy
ALLERGY

2203 West Tennessee Midland, Texas 79701
MU 2-5385

McGOVERN ALLERGY CLINIC
Diagnosis and Treatment of Allergic Diseases
John P. McGovern, M.D. Theodore J. Haywood, M.D.
Orville C. Thomas, M.D. Joseph T. Queng, M.D.
Charles D. Haunschild, M.D. James A. Murray, M.D.
*Hermann Gregory, M.D.
Certified American Boards of Pediatrics and Allergy
6655 Travis Street Houston, Texas 77025 JA 8-5591
*Military Leave of Absence

HARRIS HOSEN, M.D., F.A.A.Pd.
Clinical Allergy and Immunology
2649 Procter Street Port Arthur, Texas

ALLERGY CLINIC
Saul Grossman, M.D., F.A.C.A.
Allergy-Dermatology
W. A. Crozier, M.D., F.A.C.A.
Allergy-Immunology
TU 2-3487
2530 Morgan Corpus Christi, Texas

Cardiovascular Disease

GUS SCHREIBER, M.D., F.A.C.C.

24-Hour Reception and Interpretation of Telephone-Transmitted Electrocardiograms. Matching Electrocardiographs, Transmitters, and Tape Recorders Leased to Institutions.

1430 Medical Arts Building Dallas, Texas 75201
Telephone 214 748-3715

AS NEAR AS YOUR MAILBOX OR TELEPHONE!
TMA MEMORIAL LIBRARY
1801 North Lamar Blvd.
Austin, Texas 78701
512 477-6704

DIRECTORY RATES & DATA: Space is available to TMA members at $8.00 per column inch and must run six months. New listings are limited to those specialties recognized by the American Medical Association. A discount of 5% is allowed for six month's advance payment. Mail copy to Advertising Assistant, TEXAS MEDICINE, 1801 North Lamar Blvd., Austin, Texas 78701. Deadline is 20th of the month preceding publication month.

Clinics

THE CLINIC-HOSPITAL OF SAN ANGELO
224-234 West Beauregard Avenue
SAN ANGELO, TEXAS

R. M. Finks, M.D., Pediatrics
M. D. Knight, M.D., Surgery
W. H. Brauns, M.D., Internal Medicine
Roy E. Moon, M.D., Obstetrics and Gynecology
Chas. F. Engelking, M.D., Ear, Nose and Throat
R. A. Morse, M.D., Internal Medicine
Ralph R. Chase, M.D., Pediatrics
Tom R. Hunter, M.D., Surgery
Dale W. Hayter, M.D., Ophthalmology
O. Sterling Gillis III, M.D., Obstetrics and Gynecology
Consultant in Pathology—Lloyd R. Hershberger, M.D.
Consultants in Radiology—John E. Ballard, M.D. John G. Bolen, M.D. William T. Gordon, M.D.

Robert P. Gordon, C.P.A., Administrator

THE FORT WORTH CLINIC
1221 West Lancaster Avenue
Fort Worth, Texas

John M. Church, M.D.
T. J. Coleman, M.D.
O. M. Phillips, M.D.
Robert L. Sewell, M.D.
John H. Sewell, M.D.
C. K. Hoisapple, M.D.

Wm. L. Asper, Bus. Mgr.

FIFTH AVENUE CLINIC
650 Fifth Avenue
Fort Worth, Texas

MEDICINE
Sidney E. Stout, M.D.
Frank L. Bynum, M.D.
Ed Etier, Jr., M.D.

GENERAL PRACTICE
Donald S. Gibbs, M.D.

RADIOLOGY
Otto H. Grunow, M.D.

THOMAS-SPANN CLINIC
& THOMAS-SPANN HOSPITAL, INC.
1546 S. Brownlee Corpus Christi, Texas 78404
Telephone 884-3861

SURGERY
R. Gayle Spann, M.D., F.A.C.S.
J. Houston Thomas, M.D.

OPHTHALMOLOGY
L. David Wright, M.D., F.A.C.S.

GENERAL PRACTICE
Travis B. Phelps, M.D.
T. D. Harvey, M.D.
H. R. Rose, M.D.
C. L. Vernor, M.D.

ORTHOPEDICS
Carlos M. Yanez, M.D.

INTERNAL MEDICINE
William E. Morris, M.D.
Gerald A. Reeves, M.D.
Pruett Moore, Jr., M.D.

RADIOLOGY
Crysup Sory, M.D.

ADMINISTRATOR
B. J. Clark

DIRECTOR OF NURSES
Clinic - Pat Parker
Hospital - Mrs. Joyce Pettit

RUGELEY AND BLASINGAME CLINIC

Wharton, Texas

2100 North Fulton Street — 713 LE 2-1700

INTERNAL MEDICINE
R. D. Little, M.D.
D. W. Samuelson, M.D.

GENERAL PRACTICE
C. E. Woodson, M.D.

PEDIATRICS
F. W. Kolle, M.D.

NEUROPSYCHIATRY
R. R. Gleason, Jr., M.D.

DERMATOLOGY & SKIN CANCER
J. S. Stell, M.D.

GENERAL & THORACIC SURGERY
R. E. Goelzer, M.D.

GENERAL SURGERY
R. B. Caraway, Jr., M.D.

UROLOGY
H. Z. Fretz, M.D.
C. M. Collins, M.D.

OBSTETRICS & GYNECOLOGY
D. M. Voulgaris, M.D.
H. E. Secor, M.D.

OPHTHALMOLOGY
V. A. Black, M.D.

OTOLARYNGOLOGY
J. L. Holcomb, M.D.

DENTISTRY
C. J. Shumbera, D.D.S.
J. R. Kieler, Jr., D.D.S.

PATHOLOGY—CONSULTANT
H. M. Perches, M.D.

ANESTHESIOLOGY—CONSULTANT
C. G. Spears, M.D.

RADIOLOGY—CONSULTANT
L. D. O'Gorman, M.D.

ADMINISTRATION
C. H. "Ham" Rugeley
Malcolm D. Rugeley

THE CHESTER CLINIC & THE JOHN BUIST CHESTER HOSPITAL

3330 S. Lancaster Rd., Dallas, Texas

FR 6-5411

John B. Chester, M.D., F.A.C.S., Orthopedic Surgery
Gene W. Rogers, M.D., General Surgery
Douglas M. Hardy, M.D., Obstetrics & Gynecoiogy
Ervin R. Miller, M.D., Cardiovascular Diseases
Ralph C. Disch, M.D., F.A.C.S., D.A.B.S., General Surgery
Catherine P. Chester, M.D., Infants and Children
Doyle L. Sharp, M.D., General Surgery
R. M. Flasdick, M.D., Diagnosis and Internal Medicine
Ben E. Moore, B.S., M.D., Pediatrics
A. P. Larson, B.S., M.S., M.D., F.A.C.S., A.A.O.S.
Garrett W. Maxwell, M.D., Generai Practice
Amado E. Dominquez, M.D., Diagnosis & Internal Medicine
H. A. Mueller, M.D., Consultant in Radiology
Gerard Noteboom, M.D., Consultant in Pathoiogy
Geneva Bratton, R.N., Superintendent of Nurses
E. B. Morgan, Administrator

LANCASTER OFFICE — LANCASTER, TEXAS
Phone 227-2151

David E. Krebs, M.D., Pediatrics & Medicine
Charles W. Waidrop, M.D., General Practice
Miles W. Davis, M.D., General Practice

COUNTRY CLUB CORNERS OFFICE
7140 Baytree — CA 4-1181

R. B. Curry, M.D., General Practice
Herbert M. Hinckley, M.D., General Practice

BEELER-MANSKE CLINIC

9th Avenue N. at 5th Street N.
Texas City, Texas 77590
AC 713, WI 8-8521

Obstetrics & Gynecoiogy
G. W. Beeler, M.D.

Internal Medicine
W. T. Matlage, M.D.
C. M. Maruri, M.D.

General Surgery
B. W. Hink, M.D., F.A.C.S.

General Practice
J. H. Cochrane, M.D.
J. W. O'Bryant, M.D.
O. O. Smith, M.D.

Clinic Manager
Stan M. Sheppard

Complete X-ray, Physical Therapy and Laboratory Facilities

MALONE and HOGAN CLINIC

901 Main Street — Phone 267-6361
Big Spring, Texas 79720

Ophthalmology and Otolaryngology
P. W. Malone, M.D., F.A.C.S.
J. W. Tipton, M.D.

General Surgery
J. E. Hogan, M.D., F.A.C.S.
C. B. Marcum, Jr., M.D., F.A.C.S.

Orthopedic Surgery
P. H. Rhymes, M.D.

Internal Medicine
J. H. Burnett, Jr., M.D.
W. A. Riley, M.D.
R. S. Griffin, M.D.
R. T. Torp, M.D.

Obstetrics and Gynecology
M. A. Porter, M.D.

Pediatrics
J. M. Woodall, M.D.
M. W. Talbot, Jr., M.D., F.A.A.P.

Radiology
W. R. Cashion, M.D.

Urology
G. F. Dillon, M.D.

Consultants in Pathology
Jarrett E. Williams, M.D.
B. B. Trotter, M.D.

Business Manager
R. L. Heith

DIAGNOSTIC CLINIC OF HOUSTON

6448 Fannin, Houston, Texas 77025 — (713) 526-2051

Internal Medicine and Diagnosis

Cardiovascular Disease
Thomas J. Fatherree, M.D.
Hugh F. Arnold, M.D.
Hugh H. Hanson, M.D.
Michael B. Raine, M.D.
Michael A. Modeiski, M.D.
Sigmund W. Friedland, M.D.

Endocrinology and Metabolic Diseases
H. Leland Kaplan, M.D.
Thomas G. Vandivier, M.D.
Charles H. Gregory, M.D.
R. Frederick Gregory, M.D.

Endocrinoiogy, Metabolic Diseases and Director of Clinical Research
Raymond L. Gregory, M.D.

Geriatrics
Frederick G. Dorsey, M.D.

Gastroenteroiogy
Dolph L. Curb, M.D.
W. Tom Arnold, M.D.
Belton G. Griffin, M.D.
Frederick R. Lummis, Jr., M.D.
Dean C. Solcher, M.D.

Hematology
Edmund N. Gouldin, M.D.
George W. Conrad, Jr., M.D.

Hypertension and Renal Diseases
K. Ronald Bingman, M.D.
R. Robert Durrett, M.D.

Infectious Diseases
Lewie L. Travis, Jr., M.D.
Jack L. Reddin, M.D.

Internal Medicine
Jeffrey Zatorski, M.D.

Neurology
Donald J. Russeli, M.D.

Oncology
Lester L. Hoagiin, Jr., M.D.
Peter Sullivan, M.D.

Pathology
Jack P. Abbott, M.D.
Paul B. Radelat, M.D.

Pulmonary Disease
William M. Donohue, M.D.
Joel E. Reed, M.D.
Gene R. Lindley, M.D.

Radioiogy and Nuclear Medicine
William L. Hinds, M.D.
Charles P. Eldridge, Jr., M.D.
David D. Lawrence, M.D.
Charles A. Spain, M.D.

Rheumatology
John E. Norris, M.D.

Administration
C. G. Mercy, Administrator
Robert B. Hall, Assistant Administrator

Laboratory:
Clinical Pathoiogy
Cytology

Nuclear Medicine
Isotope uptake, Gammagram and Therapy

Roentgenology

PROCEDURES:

Bronchoscopy:
Pulmonary Functions

Cardiac Catheterization

Electrocardiography-Phonocardiography

Esophagoscopy

Gastroscopy

Proctosigmoidoscopy

CONSULTATION BY APPOINTMENT

THE LORIMER CLINIC

901 West Leuda Street
Fort Worth, Texas 76104
ED 5-4333

SURGERY
W. S. Lorimer, Jr., M.D., F.A.C.S.
R. J. Turner, III, M.D., F.A.C.S.

INTERNAL MEDICINE
W. W. Moorman, M.D., F.A.C.P.
D. W. Johnston, M.D., F.A.C.P.
Stephen Eppstein, M.D.,
A. R. Daniell, M.D.

Mrs. Evelyn Farr, Business Manager

THE AUSTIN DIAGNOSTIC CLINIC

801 West 34th Street, Austin, Texas 78705 — 452-9292

INTERNAL MEDICINE

HENRY RENFERT, JR., M.D. — Endocrinology
VIRGIL B. LAWLIS, M.D. — Gastroenterology
LEONARD J. SAYERS, M.D. — Hematology
HOMER R. GOEHRS, M.D. — Rheumatoiogy
JOHN P. VINEYARD, JR., M.D. — Puimonary and Infectious Disease
JOHN M. TYLER, M.D. — Cardiology
WALTER D. ROBERTS, M.D. — Internal Medicine
TERRY M. COLLIER, M.D. — Internal Medicine
ROBERT F. ANDERSON, M.D. — Cardiology
DENNIS E. WELCH, M.D. — Oncoiogy
CHARLES E. FELGER, M.D. — Gastroenterology
JACK W. MONCRIEF, M.D. — Nephrology

NEUROLOGY AND ELECTROENCEPHALOGRAPHY
J. DOUGLAS HUDSON, M.D. — PETER W. WERNER, M.D.

RADIOLOGY AND NUCLEAR MEDICINE
JOSEPH H. LAWSON, M.D. — BETHEA W. BRINDLEY, M.D.

ADMINISTRATION
JAMES R. JEPSON

CLINIC OF THE SOUTHWEST
6437 High Star at Hillcroft
Houston, Texas 77036 PR 4-7671

INTERNAL MEDICINE
William C. Franklin, M.D.
Arthur B. Conde, M.D.

OBSTETRICS & GYNECOLOGY
Joy L. Deere, M.D.
Loren B. Goss, M.D.

PEDIATRICS
John R. Dunn, Jr., M.D.
Blanca S. Azios, M.D.

PHYSICAL THERAPY
Richard D. Tinsley, R.P.T.

GENERAL SURGERY
Harvey B. Koch, M.D.

UROLOGY
Glen E. Lewis, M.D.

DENTISTRY
Burley G. Ingram, D.D.S.

RADIOLOGY
Neil B. Longley, M.D.
Richard E. Schuette, M.D.

BUSINESS MANAGER
C. C. Walker

Colon and Rectal Surgery

MALCOLM McNATT, M.D., F.A.C.S.
Diplomate of the American Board of Colon and Rectal Surgery
Proctology
Colon and Rectal Surgery
710 Medical Arts Bldg. RIverside 2-2858
Dallas, Texas

ALVIN BALDWIN, JR., M.D., F.A.C.S.
Practice Limited to
Diseases and Surgery of the Colon and Rectum
714 Doctors Building Dallas, Texas 3707 Gaston Avenue
Off. Tel. TA 4-2573 Res. Tel. EM 1-4500

HUGH C. WELSH, M.D.
Proctology and Abdominal Surgery
2715 Fannin Street Houston, Texas

J. WADE HARRIS, M.D., F.A.C.S.
JOHN E. COGAN, M.D., F.A.C.S.
Surgery of the Rectum and Colon
406 Hermann Professional Bldg.
Houston 25, Texas

C. D. L. CROMAR, M.D.
Surgery of the Rectum and Colon
617 South Tatar Street
Pasadena, Texas 77502

Dermatology

ROGER W. MANAR, M.D.
DERMATOLOGY
SUPERFICIAL X-RAY THERAPY
1400 Eighth Street Wichita Falls, Texas

BEDFORD SHELMIRE, M.D.
BEDFORD SHELMIRE JR., M.D.
DAVID S. SHELMIRE, M.D.
Dermatology
1410 Medical Arts Bldg. Dallas, Texas

DRS. PIPKIN, RESSMANN & RICHARDSON
J. LEWIS PIPKIN, M.D.
ARTHUR C. RESSMANN, M.D.
A. W. RICHARDSON, M.D.
DERMATOLOGY
X-Ray and Radium in The Treatment of Skin Malignancies
714 Medical Arts Bldg. San Antonio, Texas

RICHARD D. COLE, M.D.
Dermatology and Syphilology
Treatment of Skin Malignancies
107 Medical Dental Building
3610 34th Street Lubbock, Texas

EVERETT R. SEALE, M.D.
Dermatology
Treatment of Skin Malignancies
1217 Hermann Professional Bldg. Houston 25, Texas

J. GILMORE BRAU, M.D.
DERMATOLOGY—SYPHILOLOGY
X-RAY and RADIUM THERAPY
Hours 9 to 1 — 3 to 5
3817 Brown Street Dallas, Texas

J. FRANKLIN CAMPBELL, M.D.
EDMUND N. WALSH, M.D.
Dermatology and Syphilology, and Treatment of Skin Cancer
Radium and X-Ray Therapy
1410 Pruitt Street Fort Worth 4, Texas

Leslie M. Smith, M.D. H. D. Garrett, M.D.
John C. Wilkinson, M.D.
DRS. SMITH, GARRETT & WILKINSON
Dermatology and Syphilology
X-Ray and Radium in the Treatment of Skin Malignancies
Medical Center, 1501 Arizona El Paso, Texas

WALTER B. MANTOOTH, JR., M.D.
JOE M. LEHMAN, M.D.
ROBERT LEHMAN, M.D.
Dermatology, Syphilology, and Cancer of the Skin
3801 19th St., Suite 500 Lubbock, Texas

MARVIN E. CHERNOSKY, M.D.
DERMATOLOGY AND SYPHILOLOGY
703 Hermann Professional Building
Phone JA 6-3733 Houston 25, Texas

THOMAS L. SHIELDS, M.D.
Dermatology and Syphilology
X-Ray Therapy in the
Treatment of Skin Malignancies
Hours 9 to 1 — 3 to 5
800 Fifth Ave. Fort Worth, Texas

DAVID R. WEAKLEY, M. D., F. A. C. P.
Dermatology
Treatment of Skin Malignancies
8548 Northwest Plaza Drive Dallas 25, Texas
315 North Shiloh Road Garland 40, Texas

M. A. (Mac) HAIRSTON, JR., M.D.
DERMATOLOGY
HAIR TRANSPLANTATION & DERMOPLANING
Memorial City Professional Bldg., 902 Frostwood, Suite 184
(Between Memorial & Katy Fwy.)
Phone: 464-6369 Houston, Texas 77024

JOHN B. McMASTER, JR., M.D.
Dermatology
222-2147
Dermabrasion & Chemosurgery
416 M & S Tower San Antonio, Texas 78205

Eye, Ear, Nose, Throat

M. Ray Harrington, M.D. Lloyd F. Ritchey, M.D.
Jack Blum, M.D.
Ophthalmology and Otolaryngology
8215 Westchester
Suite 135
Dallas, Texas

Drs. Canon, Watkins, Anderson, Nalle and Ellsasser
Eye, Ear, Nose and Throat, Broncho-Esophagology and Allergy
R. T. Canon, M.D., F.A.C.S. — M. D. Watkins, M.D., F.A.C.S., A.I.C.S.
Wm. F. Anderson, M.D., DAB Oph., F.A.C.S. — Ernest Nalle, Jr., M.D. DAB Oto., F.A.C.S., F.I.C.S.
M. G. Ellsasser, M.D., DAB Oph.
West Texas Clinic 1312 Main Lubbock, Texas

W. HUBERT SEALE, M.D.
Eye, Ear, Nose & Throat
HUBERT JAMES SEALE, M.D.
Disease & Surgery of the Eye
OR 3-3751
1321 Hickory St. Abilene, Texas

Gastroenterology

JAMES J. GORMAN, M.D., F.A.C.P.
Gastroenterology
Diagnosis Gastroscopy
1111 El Paso National Bank Bldg.
El Paso, Texas 79901

MILFORD O. ROUSE, M.D.
announces limitation of practice to consultation in hospitals. His office is now at Dallas Chamber of Commerce in Community Health Focus program. Records of his patients are with Cecil O. Patterson, M.D., and Daniel Polter, M.D., 1414 Medical Arts Building, Dallas, RI 2-6144.

CECIL O. PATTERSON, M.D.
GASTROENTEROLOGY, GASTROSCOPY
ESOPHAGOSCOPY
1414 Medical Arts Building
Dallas, Texas
RI 2-6141

DRS. BAILEY, DOUGLAS AND FISHER
3434 Swiss Avenue, Suite 303, Dallas, Texas
Diseases of the Digestive System
Herbert A. Bailey, M.D. F. Clark Douglas, M.D.
John W. Fisher, M.D.

W. CROCKETT CHEARS, JR., M.D.
GASTROENTEROLOGY
GASTROSCOPY & ESOPHAGOSCOPY
1027 Medical Arts Building
Telephone RI 8-4975 Dallas 1, Texas

General Surgery

J. PEYTON BARNES, M.D., F.A.C.S.
Surgery
1000 St. Joseph Professional Bldg.
Houston, Texas 77002

L. GONZALEZ CIGARROA, M.D., F.A.C.S.
Diplomate American Board of Surgery
Practice limited to
SURGERY
1502 Logan Ave. Laredo, Texas

BURT B. SMITH, M.D.
SURGERY
Emphasizing Breast, Thyroid and Gastro-Intestinal Surgery
728 Hermann Professional Building
Phone 523-8323 Houston, Texas 77025

ADOLPH F. KAUFFMANN, M.D., F.A.C.S.
Diplomate American Board of Surgery
GENERAL SURGERY
707 Fifth Ave. Fort Worth, Texas
Phone ED 2-7597

BRYAN V. WILLIAMS, M.D., F.A.C.S.
Diplomate American Board of Surgery
GENERAL SURGERY
1506 St. Joseph Professional Bldg.
Houston, Texas 77002
CA 7-5505

Internal Medicine

JOHN A. WIGGINS, JR., M.D.
Diseases of the Chest
Bronchoscopy
1105 Pennsylvania Ave. Fort Worth, Texas

HENRY N. GEMOETS, M.D., F.A.C.P., F.C.C.P.
Internal Medicine and Diseases of the Chest and Heart
THOMAS H. GEMOETS, M.D.
Internal Medicine and Diagnosis
1003 Memorial Professional Building
1010 Louisiana Houston, Texas 77002 222-7224

Neurology/Psychiatry

HAUSER CLINIC

Psychiatry, Neurology, and Electroencephalography

Section of Psychiatry
*Abe Hauser, M.D.
*Robert I. Hauser, M.D.
Wayne F. Keller, M.D.
Ronald J. Hauser, M.D.
Barry M. Brown, M.D.
*Harris M. Hauser, M.D.

Section of Neurology
*Harris M. Hauser, M.D.
*Gerald Ratinov, M.D.
Robert M. Gordon, M.D.
*Abe Hauser, M.D.

Section of Social Work
Ethel Feinsilver, M.S.

Section of Psychology
Robert Langston, Ph.D.
Consultant
Joanne Borba, M.A.

Administrator
Gordon D. Keller

808 Memorial Professional Building
Houston, Texas 77002
224-5041

*Diplomate, American Board of Psychiatry and Neurology

Perry C. Talkington, M.D.
Charles L. Bloss, M.D.
Howard M. Burkett, M.D.
Jerry M. Lewis, M.D.
James K. Peden, M.D.
Ward G. Dixon, M.D.
Claude L. Jackson, M.D.
E. Clay Griffith, M.D.
Dode M. Hanke, M.D.
Doyle I. Carson, M.D.
Thomas H. Allison, M.D.
Stanley L. Seaton, M.D.
Maurice S. Green, M.D.
Joe W. King, M.D.
Keith H. Johansen, M.D.
Charles G. Markward, M.D.
practice limited to
PSYCHIATRY
4645 Samuell Blvd., Dallas, Texas
Timberlawn Sanitarium
4600 Samuell Blvd., Dallas, Texas
EV 1-7181

STEPHEN WEISZ, M.D.
Practice Limited to
NEUROLOGY and PSYCHIATRY
1637 Medical Arts Bldg. Dallas, Texas
RIverside 7-5183

ALEX K. MUNSON, M.D.
Child Psychiatry
KERBEY LANE EVALUATION
AND TREATMENT CENTER
3400 Kerbey Lane Austin, Texas 78703
Office Hours by Appointment
AC 512-454-8718

THE FORT WORTH
NEUROPSYCHIATRIC CENTER
*Bernard J. Dolenz, M.D. *Herbert G. Rush, M.D.
1066 W. Magnolia Avenue ED 6-5469
Fort Worth, Texas 76104
*Diplomates American Board of Psychiatry and Neurology

HOUSTON ASSOCIATES
IN
PSYCHIATRY AND NEUROLOGY
Houston, Texas

C. A. Iannucci, M.D.
Joe C. A. Eckhardt, Jr., M.D.
Alfred H. Vogt, M.D.
George M. Stevens, M.D.
Jules Bohnn, M.D.
Leroy Androes, M.D.
A. R. Martinez, Ph.D.
Ruth Searls, M.S.W.
Diana Sheer, M.S.W.
Dan DeShazo, M.S.W.
Beth Bowman, M.A.

Comprehensive Neuropsychiatric
Evaluation and Treatment
Electroencephalography

1021 Hermann Prof. Bldg. JA 9-5721
6812 Staffordshire RI 8-3780

CHAPMAN ISHAM, M.D.
Diplomate American Board of Psychiatry
Child Psychiatry and Marriage Counseling
Hypnotherapy for Smoking and Obesity
3701 21st Street Lubbock, Texas 79410
SWift 5-4023

MEDICAL NEUROLOGY AND
ELECTROENCEPHALOGRAPHY

205 Swiss Avenue Medical Building
3434 Swiss

Dallas, Texas 75204 827-3610

Sheff D. Olinger, M.D. Joseph S. Jenike, M.D.
Charles W. Barrier, M.D.
Hours by Appointment Only

DANIEL J. JOUBERT', M.D.
Diplomate American Board of Psychiatry and Neurology
PSYCHIATRY
1900 N. Oregon St. 915-532-4737 El Paso, Texas 79902
303 University Towers

Pasadena Neuropsychiatric Clinic Association
Robert E. Hazlewood, M.D. Richard M. Orr, M.D.
Practice Limited
to
Neurology and Psychiatry
Office Hours by Appointment
First Pasadena State Bank Building
1001 E. Southmore, Suite 1103
Pasadena, Texas 77502 Telephone 473-7646

LABORATORY OF ELECTROENCEPHALOGRAPHY
Jean M. B. Moure, M.D.
Diplomate American Board of Electroencephalography
522-1037
275 Hermann Prof. Bldg. Houston, Tex. 77025

Neurological Surgery

JAMES GREENWOOD, JR., M.D.
Neurosurgery
1117 Hermann Professional Bldg., Houston 25, Texas
Office: JA 8-5373 Residence: JA 8-4038

Morris Sanders, M.D. Jack I. Woolf, M.D.
DRS. WOOLF AND SANDERS
Diplomate American Board of Neurological Surgery
Locke Medical Building, 6011 Harry Hines Blvd.
Dallas, Texas ME 1-1500

JACK STERN, M.D.
GARY C. HUTCHISON, M.D.
Neurological Surgery
Suite 826, Locke Medical Building
6011 Harry Hines Blvd., Dallas 35, Texas
ME 1-1822

Casey E. Patterson, M.D. Tom M. Nash, M.D.
Charles W. Simpson, M.D. James E. Bland, M.D.
DRS. NASH, PATTERSON & SIMPSON, ASSN.
Neurological Surgery
ME 7-0420
Suite 557-Locke Medical Building, 6011 Harry Hines Blvd.
Dallas, Texas 75235

ALBERT D'ERRICO, M.D.
Neurological Surgery
3707 Gaston Avenue Dallas, Texas 75246
Telephone TA 4-2543

RONALD SMITH, M.D.
Neurological Surgery
901 South Lake Fort Worth, Texas
Telephone ED 6-0551

GLENN R. CHERRY, M.D., F.A.C.S.
R. GORDON LONG, M.D.
Diplomate American Board of Neurological Surgery
712 North Washington
TA 6-7060 Dallas, Texas

ROBT. C. L. ROBERTSON, M.D., F.A.C.S.
JOSEPH W. ROBERTSON, M.D.
Neurological Surgery
2210 Maroneal Houston, Texas 77025
JAckson 3-3684

WILLIAM J. NELSON, M.D.
Certified by the American Board of Neurological Surgery
Suite 300
University Towers
915-542-0643
1900 N. Oregon St. El Paso, Texas 79902

CHARLES A. BORNE, JR., M.D.
Neurological Surgery
Suite 834, Sealy-Smith Professional Building
Galveston, Texas 77550
200 University Boulevard 713-763-1688

Nuclear Medicine

HERBERT C. ALLEN, JR., M.D.
Practice Limited to
NUCLEAR MEDICINE
JAckson 6-1501
100 Hermann Professional Bldg.
Houston, Texas 77025

Ophthalmology

HOUSTON EYE ASSOCIATES
1121 Hermann Professional Building
Houston, Texas 77025
Phone 526-7261
(AC 713)
Richard S. Ruiz, M.D., F.A.C.S.
Charles E. Russo, M.D. Robert H. Stewart, M.D.
Malcolm L. Mazow, M.D. Robert B. Wilkins, M.D.

DRS. MURPHY, ALPAR, TAYLOR & HOWELL
OPHTHALMOLOGY
Weldon O. Murphy, M.D.
John J. Alpar, M.D.
Coleman Taylor, M.D.
J. Franklin Howell, Jr., M.D.
Diplomates of the American Board of Ophthalmology
2300 West 7th Avenue Amarillo, Texas

ALBERT VAISER, M.D.
WILLIAM B. SNYDER, M.D.
Diseases and Surgery of the Retina
318 Medical Arts Building
Dallas, Texas 748-0958

LIEVEN J. VAN RIET, M.D.
OPHTHALMOLOGY
Medical Surgical
CA 4-0654
Saint Joseph Professional Building
Houston, Texas 77002

BERT C. BRYAN, M.D.
Surgery and Diseases of the Eye
1314 Medical Arts Building
RI 7-7474 Dallas, Texas RI 7-2481

FEBRUARY 1970

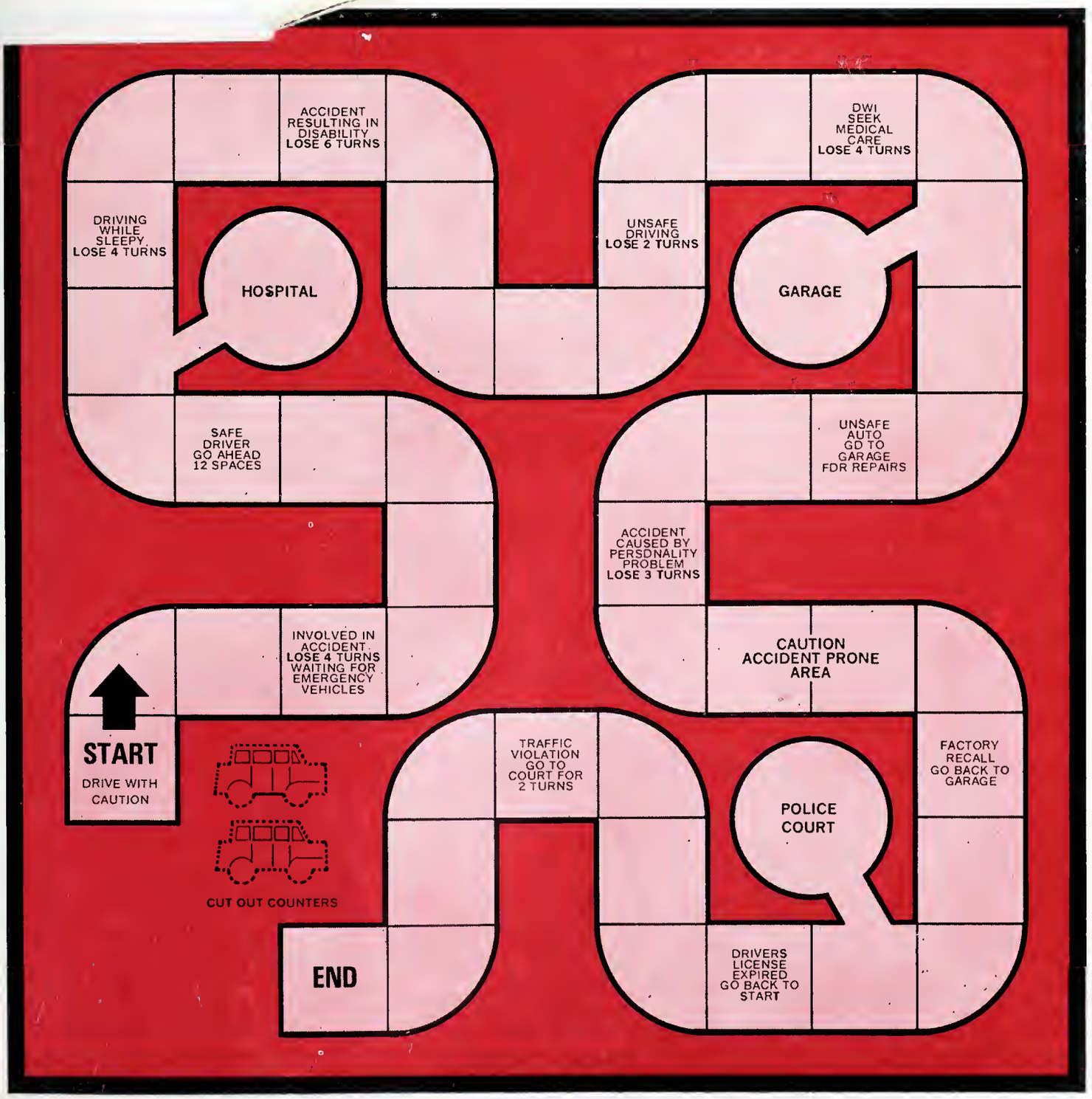
TEXAS MEDICINE

MEDICAL
MAR 16 1970

TOMATED DIAGNOSTIC TESTS

COMMON SKIN DISORDERS

'OUR SAILS, SAYS WINDJAMMER



Torbett, Hutchings, Smith Memorial Hospital
And The Torbett Clinic

306 Coleman Street
Post Office Box 60

Marlin, Texas

Telephone: WE 6-3561

GENERAL SURGERY
Howard O. Smith, M.D., F.A.C.S.
D. R. Swetland, M.D., F.A.C.S.
Howard L. Smith, M.D., F.A.C.S.

INTERNAL MEDICINE
W. F. McKinley, Jr., M.D.
James S. Bussell, M.D.
C. G. Brown, M.D.

EYE, EAR, NOSE AND THROAT
S. W. Hughes, M.D.

ALLERGY
Walter S. Smith, M.D.*

OBSTETRICS AND PEDIATRICS
M. A. Davison, M.D., F.A.C.O.G.
W. L. Reese, M.D., F.A.C.O.G.

RADIOLOGY
J. M. Brown, M.D., F.A.C.R.

PATHOLOGY
W. W. Klatt, M.D.
Ronald E. Henderson, Jr., M.D.
Kent Smith, M.D.

UROLOGY
Howard O. Smith, M.D., F.A.C.S.

DENTISTRY
B. E. Latimer, D.D.S.

NEUROPSYCHIATRY
S. B. Morrison, M.D.

DERMATOLOGY
Maurice C. Barnes, M.D., D.A.B.D.

Administrator:
J. D. Norris, Jr.

Superintendent of Nurses:
Ruby Lowrance, R.N.

Howard O. Smith, M.D., FACS, Chairman of the Board of Trustees, of Torbett, Hutchings, Smith Memorial Hospital and the Torbett Clinic which opened January, 1963. The original hospital was founded by Dr. J. W. Torbett, Sr., in 1898.

The Torbett Clinic and Memorial Hospital continues to utilize the Marlin Hot Mineral Water and other forms of physical therapy as an adjunct in the treatment of arthritis and allied rheumatic conditions.

*Expired 4-24-69.

THE DALLAS MEDICAL & SURGICAL CLINIC AND HOSPITAL

4105 Live Oak Street DALLAS, TEXAS Telephone TA 3-4151

*Geo. M. Underwood, M.D., F.A.C.P., Diagnosis & Gastroenterology, D.A.B. Internal Medicine & Gastroenterology
P. E. Luecke, Sr., M.D., F.A.A.P., Pediatrics
Diplomate American Board Pediatrics
*G. A. Davidson, B.S., M.D., Dermatology
*Wm. H. Potts, B.A., F.A.C.P., Internal Medicine
*Ozro T. Woods, M.D., Surgery, Emphasizing Tumors
Richard M. Smith, M.D., F.A.C.P., Diagnosis & Internal Medicine
J. Wilbur Bourland, Jr., M.D., Obstetrics & Gynecology
Harry M. Spence, M.D., D.A.B.U., F.A.C.S., Urology
Wells M. Wade, D.D.S., Dental Surgery
Halcuit Moore, M.D., F.A.A.P., Pediatrics
Diplomate American Board Pediatrics
John B. Bourland, M.D., Gynecology & Obstetrics
Diplomate American Board OB-GYN
Raymond W. Burford, M.D., D.A.B.R., Radiology
Henry G. Montgomery, M.D., F.A.C.S., D.A.B.S., Surgery
Edwin M. Cleveland, M.D., Internal Medicine
John B. Allen, M.D., Internal Medicine
Diplomate American Board Internal Medicine
R. M. Burnside, M.D., D.A.B.O., Ophthalmology
Adam D. Green, M.D., Surgery
Morris E. Magers, M.D., Internal Medicine
Diplomate American Board Internal Medicine
B. Celia Slaughter, M.D., F.A.A.P., Pediatrics
Diplomate American Board Pediatrics
D. W. Shuster, M.D., D.A.B.O., Otolaryngology and Otologic Surgery
P. E. Luecke, Jr., M.D., Pediatrics, F.A.A.P.,
Diplomate American Board Pediatrics
Channing Woods, M.D., Internal Medicine
William W. Hoffman, M.D., D.A.B.U., F.A.C.S., Urology
James M. Copps, M.D., D.A.B.O., Ophthalmology
Joe B. Caldwell, M.D., D.A.B.R., Radiology
Terry D. Allen, M.D., D.A.B.U., Urology
J. Boyd Hollabaugh, D.D.S., General Dentistry
George P. Fosmire, M.D., D.A.B.S., General Surgery
Richard C. Stone, M.D., Internal Medicine and Gastroenterology
Daniel L. Maddox, D.D.S., General Dentistry
William N. New, M.D., Dermatology
Donald A. Sutherland, M.D., Internal Medicine (Hematology)
John R. Woodward, M.D., Obstetrics & Gynecology,
Diplomate American Board OB-GYN
Masashi Kawasaki, M.D., D.A.B.O., Otolaryngology, Tumor and Reconstructive Surgery of the Head and Neck
Miss Billye J. Norris, R.N., Director of Nurses
C. H. Rosamond, Administrator
Arthur L. Cook, Business Manager

*Inactive status

TERRELL'S LABORATORIES

T. C. TERRELL, M.D., F.C.A.P., F.A.C.P., DIRECTOR
JOHN S. TERRELL, M.D., F.A.A.P., ASSISTANT DIRECTOR

FORT WORTH, TEXAS

211 Medical Arts Building

DEPARTMENT OF PATHOLOGY
T. C. Terrell, M.D., F.C.A.P., F.A.C.P.
May Owen, M.D., F.C.A.P., F.A.C.P.
Alexander A. Kosinski, M.D., F.C.A.P., F.A.C.P.
Joan Windmiller, M.D., F.A.A.P.

DEPARTMENT OF RADIOLOGY
H. W. Banker, M.D., D.A.B.R., M.A.C.R.
Ernest E. Holt, M.D., D.A.B.R., M.A.C.R.
James C. Moore, M.D., D.A.B.R., M.A.C.R.

DEPARTMENT OF CHEMISTRY
LaMonte A. Tucker, Ph.D.

DEPARTMENT OF BACTERIOLOGY & MYCOLOGY
Robert F. Devlin, Ph.D.

CONSULTING & ANALYTICAL SERVICES

PATHOLOGY, FORENSIC PATHOLOGY & VETERINARY PATHOLOGY: Histology, Cytology.
CLINICAL PATHOLOGY: Serology, Bacteriology & Mycology, Parasitology, Hematology.
INDUSTRIAL & CLINICAL CHEMISTRY: Radioassay, SMA-12 survey and other Automated Procedures. Hormone Chemistry, Chromatography, Electrophoresis, Immunochemistry.
TOXICOLOGY: Drugs, Water, Foods & Biological materials.
MANUFACTURING DEPARTMENT: Allergenic Extracts and Treatment Sets, Mounting Media, Specifically Prepared Reagents and Stains for Laboratory Use.

TERRELL MEDICAL GROUP

FORT WORTH, TEXAS

210 Medical Arts Building

INTERNAL MEDICINE Diagnosis, Allergy, Cardiology	T. C. Terrell, M.D., F.C.A.P., F.A.C.P. Elizabeth A. Taylor, M.D.
NEUROPSYCHIATRY Electroencephalography	Henry G. Gardiner, Jr., M.D.
PEDIATRICS Pediatric Hematology Adolescent Medicine & Pediatric Consultation	Joan Windmiller, M.D., F.A.A.P. John S. Terrell, M.D., F.A.A.P.
CLINICAL PSYCHOLOGY	Michael W. Wheeler, Ph.D.

Administrator: Arthur Fuston

TEXAS MEDICINE

VOLUME 66 NUMBER 2 FEBRUARY 1970

SCIENTIFIC ARTICLES

60 Automated Chemical Analyses in Diagnosis

Milward W. Bayliss is associate pathologist with Severance and Associates Pathology Laboratory in San Antonio. He is a diplomate of the American Board of Pathology (Pathologic Anatomy, Clinical Pathology, Forensic Pathology). His coauthor, Ralph W. Jones, is a clinical chemist at Baptist Memorial Hospital in San Antonio.

66 Organ Panels: An Innovation in Health Care Delivery

John Bernard Henry is professor of pathology and director of clinical pathology at the State University of New York's Upstate Medical Center in Syracuse, NY. He is a trustee of the American Board of Pathology and a member of several professional organizations. His coauthor, Milton J. Arras, is currently a lieutenant commander, MC, USN, and is serving as chief of pathology at the US Naval Hospital in Annapolis, Md. Formerly, he was an instructor in pathology and chief resident in clinical pathology at the Upstate Medical Center.

77 Radiological Case of the Month

These presentations are sponsored by the Texas Radiological Society. This case was prepared by George Naifeh, resident in radiology, and Melvyn Schreiber, professor of radiology, The University of Texas Medical Branch, Galveston.

79 Health Planning an Essential Element of Personal Health Care

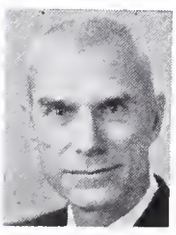
Paul Q. Peterson is deputy surgeon general, US Public Health Service, Washington, DC. He has been engaged in public health work at all levels for many years, having earned his MPH degree from the University of Michigan in 1946. Dr. Peterson is a diplomate of the American Board of Preventive Medicine, a fellow of the American Public Health Association, and a member of the AMA, American Association for the Advancement of Science, and Association of Military Surgeons.

BAYLISS

HENRY

NAIFEH

PETERSON



SHELMIRE

REES

DANIEL

88 Methotrexate Treatment of Psoriasis

Davis S. Shelmire of Dallas is a clinical instructor in dermatology at The University of Texas Southwestern Medical School. He is a diplomate of the American Board of Dermatology, and also serves as secretary of the Dallas Dermatological Society.

92 Cutaneous Drug Reactions

94 Management of Common Skin Diseases

Rees B. Rees of San Francisco is clinical professor of dermatology at the University of California School of Medicine. He is a diplomate of the American Board of Dermatology, former vice president of the American Academy of Dermatology, past president of the Pacific Dermatologic Association, and a member of the American Dermatological Association. Dr. Rees also is an honorary member of the Danish Dermatological Society.

100 Clinicopathologic Conference

Participants in this CPC from The University of Texas (Southwestern) Medical School and Parkland Memorial Hospital, Dallas, are Clifton R. Daniel, resident and fellow in pathology; James D. Bomboy, resident in internal medicine; Lee W. Bennett, resident in radiology; Eugene P. Frenkel and Jay P. Sanford, professors in internal medicine; and Bruce D. Fallis, professor in pathology. Edwin H. Eigenbrodt, associate professor in pathology, is guest editor for this series.

EDITORIALS

19 Emergency Ambulance Services
Nathan Cedars

22 Crash Data as Preventive Tools
H. A. Fenner, Jr.

23 Personality, Attitude, and Accidents
William K. Keller

33 The Shaping of Our Future
Charles Max Cole

DEPARTMENTS

4 Association and Late News

43 Highlights of Coming Meetings

49 Postgraduate Courses

109 News

115 Pamphlets

116 Corpus Christi windjammer urges fellow MDs to try their own sails

119 TMA Annual Session Housing Information

123 Medicine in Literature

123 New Books in TMA Library

125 Personals

125 Recent Deaths

ON THE COVER

Accidents happen; but they don't happen by accident, believe the authors of this month's editorials, pages 19-31. Preventive measures, they say, can be taken to alleviate the tremendous toll from automobile accidents. And, as our artist's clever game shows, unless we do try to prevent some of them, we can lose many turns and spend many hours getting nowhere on our streets and byways.

NEXT MONTH

Family medicine, physician-hospital relationships, and a condensation of Dr. W. S. Lorimer, Jr's presidential address to the Texas Surgical Society will fill the March editorial pages. Currently scheduled scientific articles are hysterosalpingography, percutaneous subclavian vein catheterization in children, radiographic evidence of sickle cell disease, ocular emergencies, and carcinoma in situ in adenomatous polyps of the vermiform appendix. Also, familial endocrine adenomatosis, mesenteric artery occlusion, regional enteritis, a case of complete transection of the duodenum as a result of blunt trauma, and recurrent ulceration following gastrectomy.

MAKE RESERVATIONS NOW

Your March issue also will contain the program for the 1970 annual session April 30-May 3 in Dallas. On pages 119-122 of the February journal, you will find time-saving forms for preregistration, ordering the tickets you will want, and reserving hotel or motel rooms.

PUBLICATION INFORMATION

Texas Medicine is published monthly by the Texas Medical Association.

Editorial and Business Offices: 1801 N. Lamar Blvd., Austin, Texas 78701; Telephone: Area Code 512 477-6704.

Second Class Postage paid at Austin, Texas, with additional entry at Fort Worth, Texas, under Act of March 3, 1879.

Subscription communications should be sent to the Business Offices, $3 per year for members; $6 for nonmembers; $8 for foreign; $3 for medical students; single copy, $1.

Contributions, previously unpublished, are welcomed for review; suggestions for preparation are available from the Editorial Offices. News and other items should be sent to the Editorial Offices by the 10th of the month preceding the month of publication. All contributions are sent at the owner's risk.

Printing Offices: c/o Stafford-Lowdon Company, 1114 West Daggett, Fort Worth 76104.

ASSOCIATION & LATE NEWS

TMA Executive Board Action at 1970 Conference on Medical Service To Result in Extra Meeting of House of Delegates at Annual Session

An extra meeting of the Texas Medical Association's House of Delegates will be scheduled for the 1970 Annual Session in May as a result of discussion before the Association's Executive Board on Jan. 18 in Austin.

Portent of an AMA committee report on planning and development will be the topic under consideration at the additional meeting, scheduled tentatively for Sunday, May 3. The delegates had previously scheduled sessions for April 30-May 2.

The Executive Board concurred with the recommendation of the Texas delegation to the AMA which asked that the President and the Speaker of the House of Delegates consider an extraordinary session of the House to discuss the significance of the AMA report to the members of the Texas Medical Association.

Known as the Himler report, named for the chairman of the committee, George Himler of New York, the report encompasses 57 recommendations which relate to medicine's present and future environment. Prior to the session of the House of Delegates, appropriate committees and councils of the Association will have opportunity to review the recommendations; and reports will be made to a special session of reference committees to be held on Saturday before the House meeting on Sunday.

The Texas delegates to the AMA also received approval of the Executive Board to submit a resolution to the American Medical Association encouraging the AMA to support its long-standing principle of not applying for federal funds. The delegates noted that the AMA in effect had approved a change of this policy during its December, 1969, meeting when it approved a joint application for federal funds with Temple University in Philadelphia to seek information and experience in caring for poor individuals in ghetto areas. The hypothesis for the change of policy was that useful information would accrue. The Executive Board, however, concurred that the AMA should not seek or accept federal funds.

In another matter pertaining to the American Medical Association, the Executive Board received a report from the Council on Medical Jurisprudence noting that the AMA is the only national level policymaking body which physicians have.

"Splinter-type organizations have tried in the past and have not been successful," noted the council's chairman, Dr. Joe T. Nelson of Weatherford. "We, as individual members of a county society on through our state societies, constitute the American Medical Association. If we are not pleased with the direction which the AMA has taken over the past 20 years, it is our fault due to our apathy and delinquency. Your Council feels very strongly that we win battles from within an organization through the strengthening of the people we send to represent us in this organization. We would strongly urge that each county society attempt to increase its AMA membership so that the Texas Medical Association would be entitled to more delegates to the AMA which would make our voice more effective."

Assistance to Students

The Board of Trustees of Texas Medical Association has voted to provide financial assistance to the four Student American Medical Association chapters at Texas medical schools.

In 1969 the Council on Medical Education and Hospitals had recommended that financial support be provided each SAMA chapter to send representatives to the organization's national convention. The Council also had recommended that funds be provided to permit SAMA chapter representatives to attend meetings of several councils at the Texas Medical Association's winter meetings.

After conferring with the students about their needs, the trustees authorized an initial appropriation of $250 for each chapter and will consider additional support when the Association's future financial resources might permit.

A special rate of $3 per year for students who wish to subscribe to *Texas Medicine* was also adopted by the trustees. Representatives of the SAMA chapters in Texas had indicated that medical students were interested in reading the journal.

Dr. Rouse Nominated

The Board of Councilors announced to the Executive Board that it had nominated Dr. Milford O. Rouse, Past President of the Texas Medical Association and of the American Medical Association, for Emeritus Membership in the Texas Medical Association. As required by the Constitution and Bylaws, this nomination must be held over for one year.

Cancer Society Work Endorsed

The Executive Board endorsed the work of the American Cancer Society and encouraged members of the Texas Medical Association to give voluntary and financial support to the annual crusade and its year-round program. The Board further noted that the Papanicolaou smear should be considered as good preventive medicine, and it encouraged the continuation of the Cancer Information System.

The Council on Public Relations and Public Service noted that the 10th anniversary of the death of Dr. Papanicolaou will be in 1972 and recommended that a commemorative stamp be issued in his honor. The Council plans to seek TMA and AMA approval of the recommendation and has called upon individual members of the Texas Medical Association to write their congressmen, senators, and the Postmaster General to seek support of the commemorative stamp.

Nurse Shortage Cited

Two items adopted by the Executive Board dealt with the shortage of nurses.

The board reindorsed the previous position of the Texas Medical Association supporting all forms of nursing education with special emphasis on the production of an adequate supply of bedside nurses.

Another resolution noted the shortage of nurses and called upon the providers of health insurance to recognize the services of licensed vocational nurses when a physician certifies that registered nurses were needed but not available when their services were called for in a hospital. The resolution noted that licensed vocational nurses are providing a vital contribution to the health of our citizens and are filling a vital need in bedside nursing in Texas hospitals.

Medicaid Reimbursement Cut Worries Texas MDs

The State Board of Public Welfare announced Feb. 9 a 20% cut in reimbursing providers of services under Medicaid. The action drew concern from officials and members of the Texas Medical Association.

To become effective April 1, the cutback was deemed necessary because of the serious financial problems which confront the Department of Public Welfare in administering the Title XIX program in Texas.

In a policy statement regarding the board's decision, Dr. Charles Max Cole, TMA President, said that it is evident that the present financial plight in Texas is due essentially to three factors. State funds appropriated for the operation of the program during the current biennium are not sufficient to fulfill anticipated budgetary requirements. The problem has been accentuated by the reduction of federal matching funds from a ratio of almost 4-1 to approximately 2-1 at present. A third contributing factor is the increase in the number of recipients on the welfare rolls from approximately 350,000 at the start of the Medicaid program in September, 1967, to more than 500,000 at this time. Utilization of benefits by those who are eligible is increasing appreciably.

Dr. Cole commended the Texas Department of Public Welfare for its efficient administration of the Medicaid program in Texas; and he cited the full cooperation of Texas physicians, hospitals, nursing homes, and other providers of services. As a result of these efforts, he said, the Medicaid program in Texas has ranked as one of the finest in the nation.

Nevertheless, Dr. Cole maintained that the basic problem at this time may be attributed to the fact that the Medicare and Medicaid programs were politically conceived and designed at the national level. He believes that the programs are being continually manipulated and hampered by new federal regulations and directives and that the federal government has promised more than it can deliver and more than the taxpayer is willing to pay for. It is not surprising, according to Dr. Cole, that the Medicaid program throughout the country is costing three times more than had been estimated. He feels that it is inappropriate and morally wrong for a government to promise medical care and then to ask the providers of services to subsidize it; and he deemed it unfair that hospitals, nursing homes, physicians, and other providers of services should be asked to assume the full burden in endeavoring to resolve the program's financial problems.

Neither the immediate nor the long-term outlooks are promising. Dr. Cole warned. He said that the 20% reduction in payments to providers of services will offer a most difficult, if not impossible, challenge in maintaining the quality of service which has been rendered to beneficiaries of the program in Texas. He also expressed the Association's concern about the reductions in reimbursement payments to hospitals and nursing homes, which will be asked to accept reimbursement for less than actual costs or perhaps to provide some services without being paid for them. Those deficits can only be passed along to other patients or be absorbed as losses by the hospitals and nursing homes, thus forcing them to close their doors, said Dr. Cole. He added that the reduction in Medicaid payments undoubtedly will contribute further to increases in the cost of health care for other Texas patients.

The cut in payments to physicians for their professional services will be the second major reduction since the Medicaid program was initiated in Texas. Fees for physicians were "frozen" by the US Department of Health, Education, and Welfare last year. As a result, payments for professional services now are less than the physician's "usual, customary, and reasonable fee." The new reduction proposed by the State Department of Public Welfare will bring payments down an additional 20 percent below present levels of reimbursement. Furthermore, these reductions have been imposed during a period of inflation when the costs of maintaining a practice are increasing at the rate of eight percent each year.

Officers and representatives of the Texas Medical Association first met with the Texas Department of Public Welfare and Texas Blue Cross-Blue Shield, fiscal intermediary for the program, on Feb. 7 and will continue to consider various aspects of the 20% reduction in Medicaid payments at future meetings. According to Dr. Cole, however, a significant redesign of the Medicaid program appears to be the lone long-term solution. It seems evident to him that benefits must be reduced to a level which taxpayers are willing to pay for a program of health care for those on the welfare rolls in Texas.

New Insurance Program Shows Enrollment Gain

New Texas Medical Association insurance programs underwritten by the Prudential Insurance Company of America continue to grow and to surpass enroll-

UNIT VALUES FOR TMA MEMBERS RETIREMENT PLAN AND TRUST

(As a service to participants in the TMA Members Retirement Plan and to physicians interested in enrolling in the program, comparative values for investment media are published regularly in *Texas Medicine*. Figures shown are the latest available at press deadline and are for comparison purposes only. Most daily newspapers list up-to-the-minute values on mutual funds.)

Investment Media	Original Price 9-30-68	Net Asset Value Per Share 12-31-69	Net Asset Value Per Share 12-31-69*
Mercantile National Bank Stock Fund	$10.25	$ 9.57	$ 9.57
Loomis-Sayles Capital Development Fund	14.20	11.41	11.79
T. Rowe Price Growth Stock Fund	25.93	26.19	27.24
Loomis-Sayles Mutual Fund	16.82	14.62	15.10
Stein Roe & Farnham Balanced Fund	23.34	21.32	22.03
Mercantile Bank Fixed Income Fund	10.00	8.98	8.98

*Adjusted to include dividends and distributions since 9-30-68.

ment figures reached under previous plans.

As of Feb. 1, 20% more physicians had enrolled in the new disability insurance plan in a four-month period than were enrolled in the old plan during the 14 years in which it was available to TMA members. The latter plan was terminated Nov. 1, 1969.

A greater than 100% increase in number of physician participants has been experienced in the personal accident plan, which became effective Feb. 1. Part of this increase may be attributed to the fact that the minimum amount of insurance under the new plan is only $10,000, compared to the $50,000 minimum under the old plan; however, the majority of physicians have continued to apply in amounts exceeding $50,000.

Although the major medical plan does not become effective until April 1, an increase of between 30 and 40% in the number of participants is predicted by that date. In fact, because of the interest in this plan, Prudential has agreed to allow an open enrollment period during February for members under age 60. All members and their dependents applying prior to March 1 will be insured regardless of their medical histories unless they were denied coverage by Lumbermens Mutual Casualty Company under the old plan. However, since many of the health conditions which resulted in previous declinations may no longer exist, Prudential is willing to reconsider the applications of those members and dependents who were formerly denied coverage, provided the reason for declination is stated on their applications.

In view of requests from some TMA members for information concerning the validity of certain claims made under the old plans which may not be active on the date of transfer to the new plan, the Committee on Association Insurance Programs has recently clarified policy under the new program pertaining to such claims; and Prudential has agreed with the policy. If a claim has been established but no regular payments are being made at the time of transfer of group insurance protection from Lumbermens to Prudential, no member or insured dependent who has applied to Prudential for continuation of insurance may suffer loss of insurance protection or monetary loss in the event that Lumbermens denies subsequent payments or protection on the basis that the terms of its policy obligations have been fulfilled or no longer exist. This agreement is another example of efforts being made to protect members during the change to Prudential.

Annual Session Speakers To Promote Enthusiasm

Physicians may look forward to receiving a booster shot of professional enthusiasm on which to begin the new decade at the 103rd Annual Session of the Texas Medical Association, April 30-May 3 in Dallas. They will hear the 35 out-of-state guest speakers secured to date present not only the latest advances in the practice of medicine, but also the forecast of medicine's role for the 1970's; and they will be able to express their own ideas and prognostications during continental breakfast round tables, curbstone consultations, scientific section programs, and research forums.

Speaker for the Association's general meeting luncheon on Friday, May 1, will be Maj. Gen. J. Bruce Medaris of Winter Park, Fla., former commanding general, US Army Ordnance Missile Command. Looking to the future, he will address his audience on "From Here to Infinity." On Saturday, May 2, American Medical Association President, Dr. Gerald D. Dorman of New York, will present the luncheon address. Both luncheon programs will be in the Statler Hilton Hotel.

Friday's general meetings' speakers and their subjects are Dr. John Adriani, director, department of anesthesia, Charity Hospital of Louisiana, New Orleans, legal implications of the package insert; Dr. William G. Reese, chairman, department of psychiatry, University of Arkansas School of Medicine, Little Rock, psychiatric aspects of the leading causes of death; Dr. Stanley E. Gitlow, associate clinical professor of medicine, The Mount Sinai School of Medicine of the City University of New York, treatment of the alcoholic in private practice; and Dr. John L. Lewis, Jr., chief, gynecology service, Memorial Hospital for Cancer and Allied Diseases, associate professor, obstetrics and gynecology, Cornell University Medical College, New York, undiagnosed gynecologic cancer masquerading as a benign condition.

An equally broad range of subjects will compose the program at general meetings on Saturday. Topics and speakers will be the specter of hepatitis in a general hospital and the community, Dr. William D. Davis, Jr., head, department of internal medicine, Ochsner Foundation Hospital, New Orleans; the differential diagnosis and management of the common wart, Dr. C. Barrett Kennedy, clinical professor of dermatology, Louisiana State University School of Medicine, New Orleans; trends in cerebral palsy treatment, Dr. J. William Hillman, professor of orthopedic surgery, Vanderbilt University School of Medicine, Nashville, Tenn.; and population problem—medicine's responsibility, Dr. Alan F. Guttmacher, president, Planned Parenthood-World Population, New York.

Participants in continental breakfast round tables will also hear speakers on a variety of topics designed to appeal to the general practitioner as well as to the specialist. Included will be Dr. Stephen M. Ayres of New York, treatment and evaluation of shock; Dr. Philip P. Ellis of Denver, ocular complications of systemic medications; Dr. Robert J. Freeark of Chicago, pitfalls in the diagnosis of the acute surgical abdomen; Dr. Jack C. Hughston of Columbus, Ga., sports medicine—orthopedic oriented; Dr. Barbara M. Korsch of Los Angeles, interviewing techniques; Dr. Francis X. Paletta of St. Louis, acute injuries of the hand; and Dr. George P. Rosemond of Philadelphia, thyroid nodule. Preceded by breakfast of coffee, juice, and rolls, the 20- to 30-minute lectures will begin at 8:45 a.m. and will be followed by open forums.

Texas physicians will serve as moderators for the curbstone consultations which will include discussions on the following subjects on the Friday evening program: therapy of peptic ulcer disease; management of cardiorespiratory arrest; office psychiatry, including psychotherapy and drug therapy; management of neck pain; how to collect workmen's compensation bills; you and the law; jogging—what should patients be told?; evaluation of joint pain; postoperative complications; and student unrest.

Subjects to be discussed at the consultations on Saturday evening include newer laboratory aids to diagnosis; pain relief; learning problems in children; the indications for arteriography; the place of cervical biopsy today; diagnostic approach and management of edema; how to handle the smoking problem, therapeutic use of oxygen; pharmacological treatment of acute psychiatric emergencies; and prevention of prematurity.

TMA since 1960 and as board chair-

The Texas Medical Association staff learned at press deadline of the death on Feb. 3, 1970, of Dr. Elliott Mendenhall, 70, of Dallas. Dr. Mendenhall had served on the Board of Trustees of TMA since 1960 and as board chairman in 1968-1969. He had been in ill health for several months and had recently retired from his medical practice.

We are on YOUR Team

The BLUE CROSS® and BLUE SHIELD®′ professional relations representative who works with the hospital administrator and the doctor — and their staffs — is a symbol of a partnership. There is no getting away from it — the hospital and the doctor, who provide the health care, and Blue Cross and Blue Shield, which provide the ready payment for that care, form a unique partnership.

And isn't it a great partnership? Isn't it the very foundation of the tremendous advancement in health care we have seen in America in the past three decades? And isn't it a great thing to see that —

"Everybody's swingin' to the Blues!"

BLUE CROSS®and BLUE SHIELD®′

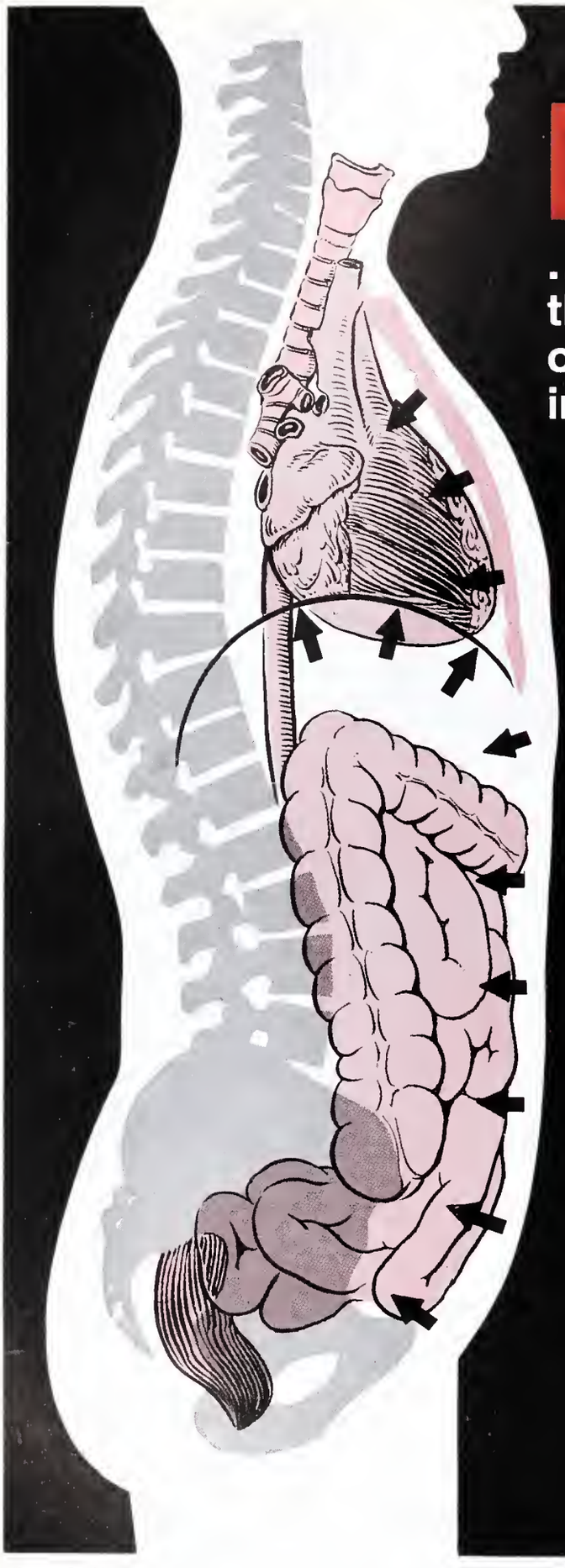
Hospital and Health Care Coverage
(GROUP HOSPITAL SERVICE, INC.)

Medical and Surgical Benefits
(GROUP LIFE & HEALTH INSURANCE COMPANY)

OF TEXAS

MAIN AT NORTH CENTRAL EXPRESSWAY ■ DALLAS, TEXAS 75222

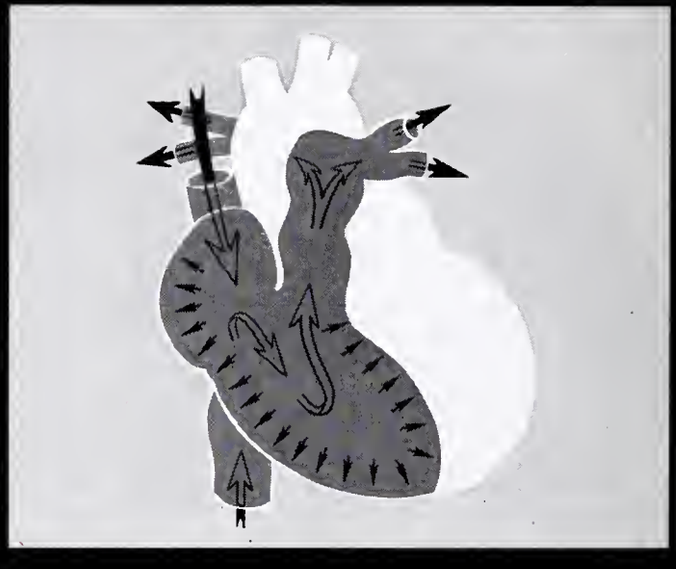
® American Hospital Association
®′ National Association of Blue Shield Plans



DOXIDAN®

...to reduce the hemodynamic "bind" of constipation in congestive heart failure

Constipation in the chronic heart failure patient carries with it the ever-present threat of acute cardiac decompensation while straining at stool. In the already weakened, distended heart, a sudden influx of blood on termination of the Valsalva maneuver is considered to be the mechanism of some of the deaths occurring in these cardiac patients during straining efforts.*



Doxidan is a gentle laxative designed to free your patient from the hemodynamic consequences of straining at stool. With a fecal softening agent to keep the stool soft and easy to evacuate, and with just enough peristaltic stimulation to urge the sluggish bowel, Doxidan reduces the hemodynamic "bind" of constipation.

Composition: Each capsule contains 50 mg. danthron N.F. and 60 mg. dioctyl calcium sulfosuccinate.

Dosage: Adults and children over 12—one or two capsules daily. Children 6 to 12—one capsule daily. Give at bedtime for two or three days or until bowel movements are normal.

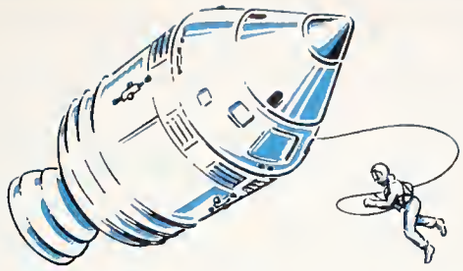
Supplied: Bottles of 30, 100 (FSN 6505-074-3169) and 1000 (FSN 6505-890-1247).

*Best, C. H. and Taylor, N. B.: *The Physiological Basis of Medical Practice*, 7th edition, Williams and Wilkins, Baltimore, 1961, p. 480.

DOXIDAN®

HOECHST
PHARMACEUTICAL CO.
Div. American Hoechst Corp.
Cincinnati, Ohio 45229 U.S.A.

C-124



Man in space, now fait accompli, re-emphasizes the importance of Uro-Phosphate therapy. Research into the effect of space travel on the astronaut reveals that weightlessness causes loss of bone calcium. As the bones are required to bear less and less of the weight of the body they lose calcium, increasing the calcium content of the urine. When physical activity is reduced, the acidity of the urine should be adjusted to keep increased calcium in solution . . . . a prophylaxis to prevent kidney or bladder calculi.

Uro-Phosphate®

NOW A SUGAR-COATED TABLET

Each tablet contains: METHENAMINE, *300 mg.;* SODIUM ACID PHOSPHATE, *500 mg.*

Uro-Phosphate gives comfort and protection when inactivity causes discomfort in the urinary function. It keeps calcium in solution, preventing calculi; it maintains clear, acid, sterile urine; it encourages complete voiding and lessens frequency when residual urine is present.

Uro-Phosphate contains sodium acid phosphate, a natural urinary acidifier. This component is fortified with methenamine which is inert until it reaches the acid urinary bladder. In this environment it releases a mild antiseptic keeping the urine sterile.

Uro-Phosphate is safe for continuous use. There are no contra-indications other than acidosis. It can be given in sufficient amount to keep the urine clear, acid and sterile. A heavy sugar coating protects its potency.

Dosage:

For protection of the inactive patient 1 or 2 tablets every 4 to 6 hours is usually sufficient to keep the urine clear, acid and sterile.

2 tablets on retiring will keep residual urine acid and sterile, contributing to comfort and rest.

A clinical supply will be sent to physicians and hospitals on request.

WILLIAM P. POYTHRESS & COMPANY, INC., RICHMOND, VIRGINIA 23217

Manufacturers of Ethical Pharmaceuticals

The AMBAR® SCRAPBOOK of

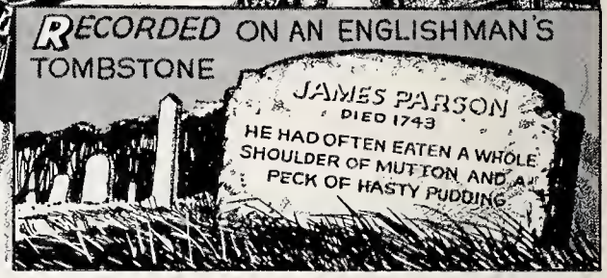
Obesity Oddities

FACT & LEGEND

OBESITY WAS A MILITARY OFFENSE!

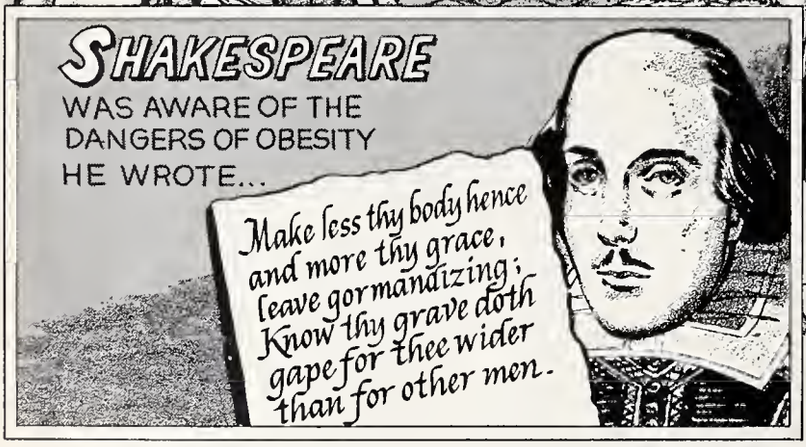
OVERWEIGHT ROMAN HORSEMEN WERE MADE TO FORFEIT THEIR MOUNTS AND BECOME FOOT SOLDIERS!

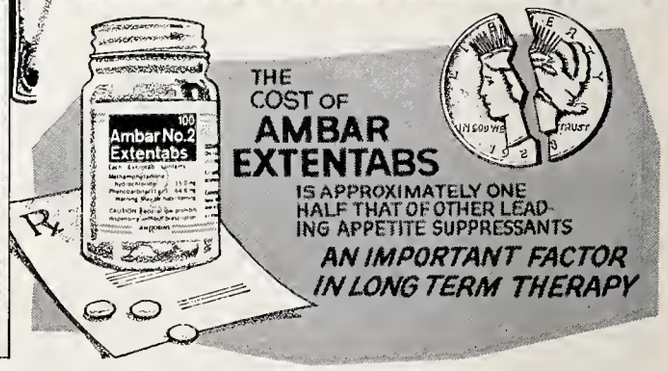
RECORDED ON AN ENGLISHMAN'S TOMBSTONE



SHAKESPEARE

WAS AWARE OF THE DANGERS OF OBESITY HE WROTE...





CONTROL FOOD AND MOOD ALL DAY LONG WITH A SINGLE MORNING DOSE

AMBAR #2 EXTENTABS®

methamphetamine HCl 15 mg., phenobarbital 64.8 mg. (1 gr.) (Warning: may be habit forming).

One Ambar Extentab before breakfast can help control most patients' appetite for up to 12 hours. Methamphetamine, the appetite suppressant, gently elevates mood and helps overcome dieting frustrations. Phenobarbital, the sedative in Ambar, controls irritability and anxiety...helps maintain a state of mental calm and equanimity. Both work together to ease the tensions that erode the willpower during periods of dieting.

Also available: Ambar #1 Extentabs®—methamphetamine hydrochloride 10 mg., phenobarbital 64.8 mg. (1 gr.) (Warning: may be habit forming).

BRIEF SUMMARY/**Indications:** Ambar suppresses appetite and helps offset emotional reactions to dieting. **Contraindications:** Hypersensitivity to barbiturates or sympathomimetics; patients with advanced renal or hepatic disease. **Precautions:** Administer with caution in the presence of cardiovascular disease or hypertension. **Side Effects:** Nervousness or excitement occasionally noted, but usually infrequent at recommended dosages. Slight drowsiness has been reported rarely. See package insert for further details.

A. H. ROBINS COMPANY, RICHMOND, VA. 23220 A·H·ROBINS

for the vitamin deficiency that diet alone doesn't satisfy...

Thera-Combex H-P®

This high-potency vitamin C and B-complex combination starts where diet stops

Kapseals®

Each Kapseal contains: ascorbic acid, 500 mg.; thiamine mononitrate, 25 mg.; riboflavin, 15 mg.; pyridoxine hydrochloride, 10 mg.; cyanocobalamin, 5 mcg.; niacinamide, 100 mg.; *dl*-panthenol, 20 mg.; Taka-Diastase® (Aspergillus oryzae enzymes), 2½ gr.

The Brown capsule with Green band is a Parke-Davis trademark.

Parke, Davis & Company, Detroit, Michigan 48232

PARKE-DAVIS

335R68

soothing relief for hair-raising cough

Benylin®
EXPECTORANT

Each fluidounce contains: 80 mg. Benadryl® (diphenhydramine hydrochloride), Parke-Davis; 12 grains ammonium chloride; 5 grains sodium citrate; 2 grains chloroform; 1/10 grain menthol; and 5% alcoh

An antitussive and expectorant for control of coughs due to colds or of allergic origin, BENYLIN EXPECTORANT *is the leading cough preparation of its kind.* BENYLIN EXPECTORANT *tends to inhibit cough reflex ...soothes irritated throat membranes. And its not-too-sweet, pleasant raspberry flavor makes* BENYLIN EXPECTORANT *easy to take.*

PRECAUTIONS: *Persons who have become drowsy on this or other antihistamine-containing drugs, or whose tolerance is not known, should not drive vehicles or engage in other activities requiring keen response while using this preparation. Hypnotics, sedatives, or tranquilizers if used with* BENYLIN EXPECTORANT *should be prescribed with caution because of possible additive effect. Diphenhydramine has an atropine-like action which should be considered when prescribing* BENYLIN EXPECTORANT.

ADVERSE REACTIONS: *Side reactions may affect the nervous, gastrointestinal, and cardiovascular systems. Drowsiness, dizziness, dryness of the mouth, nausea, nervousness, palpitation, and blurring of vision have been reported. Allergic reactions may occur.*

PACKAGING: *Bottles of 4 oz., 16 oz., and 1 gal.*

Parke, Davis & Company, Detroit, Michigan 48232

PARKE-DAVIS

50659

The new Brown Schools

. . . a plan of construction and improvement . . . in living facilities and services . . . to provide the finest care and treatment for the retarded and the disturbed.

This new dormitory . . . one of 22 new buildings now underway . . . is part of that plan. All will open in 1970 to provide a comfortable, safe, and supportive environment to complement the work of an experienced professional staff.

The **NEW** Brown Schools program encompasses each of the six separate residential centers and treatment programs. For further information on the expanding facilities and services of the **NEW** Brown Schools, write for a catalogue today.

Registrar, Dept. K-1
P.O. Box 4008
Austin, Texas 78751

THE BROWN SCHOOLS

Paul L. White, M.D.
Medical &
Psychiatric Director

Jackson R. Day, M.D.
Staff Psychiatrist

T. Charles
McCormick, M.D.
Staff Psychiatrist

Six Separate Residence Campuses
Austin and San Marcos, Texas
Established 1940

Mead Johnson–pharmaceuticals created for your specialized clinical needs

when your patients need continuous potassium supplementation...

they need the proved effectiveness and safety of

K·LYTE®

Each effervescent tablet supplies: 2.5 Gm. potassium bicarbonate (25 mEq. elemental potassium), 2.1 Gm. citric acid, cyclamic acid

Three clinical studies* confirm the effectiveness of good tasting K-Lyte as a source of supplemental potassium to increase low levels of serum potassium and to maintain normal levels. Patients were on continuous diuretic therapy and salt-restricted diets. K-Lyte dosage was one tablet b.i.d.

Serum Potassium Levels (in mEq./L)

Number of patients	Mean initial value	Mean final value
14	3.23	4.83
16	3.50	4.40
25	4.52	4.47

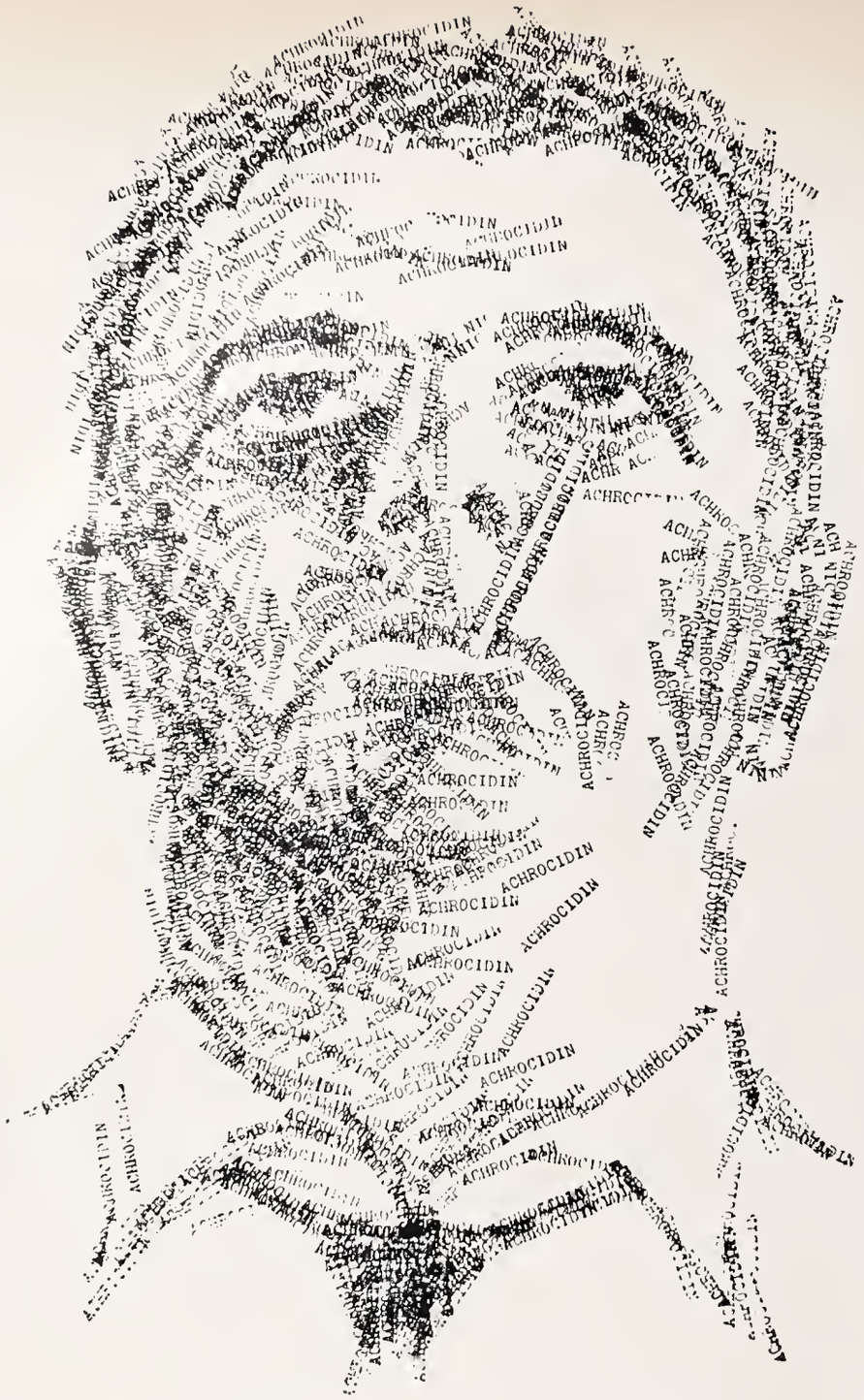
K-Lyte can offer effective potassium supplementation without the gastrointestinal complications sometimes associated with potassium chloride tablets and thiazide-potassium chloride combination therapy. Effervescent K-Lyte is taken in solution, speeding up absorption to avoid these hazards.

Composition: Each tablet contains potassium bicarbonate (2.5 Gm.), citric acid (2.1 Gm.), cyclamic acid, artificial flavor and color.
Contraindications: When renal function is impaired, or if the patient has Addison's disease, potassium supplementation should not ordinarily be instituted.
Precautions: Should not be used in patients with low urinary output unless under the supervision of a physician. In established hypokalemia, attention should be directed toward correction of frequently associated hypochloremic alkalosis and other potential electrolyte disturbances. Patients should be directed to dissolve tablet in stated amount of water to assure against gastrointestinal injury associated with the oral ingestion of concentrated potassium salt preparations.
Side Effects: While nausea has been reported in an occasional patient, K-Lyte produces no serious side effects when given in recommended doses to patients with normal renal function and urinary output. Potassium intoxication causes listlessness, mental confusion, tingling of the extremities and other symptoms associated with a high concentration of potassium in the serum.
Administration and Dosage: K-Lyte effervescent tablets must be dissolved in 3 to 4 ounces of water before taking. Adults: 1 tablet 2 to 4 times daily, depending on the requirements of the patient. Two tablets (50 mEq. of elemental potassium) supply the approximate normal adult daily requirement.
How Supplied: Effervescent tablets—boxes of 30 and 250 (orange or lime).

*Reports on file: Medical Research Department, Mead Johnson Laboratories, Evansville, Indiana 47721

©1970 MEAD JOHNSON & COMPANY • EVANSVILLE, INDIANA 47721 71770

Mead Johnson LABORATORIES



Achrocidin® Tablets and Syrup

Tetracycline HCl—Antihistamine—Analgesic Compound

Each tablet contains: ACHROMYCIN® Tetracycline HCl 125 mg.; Phenacetin 120 mg.; Caffeine 30 mg.; Salicylamide 150 mg.; Chlorothen Citrate 25 mg.

ACHROCIDIN Tetracycline HCl—Antihistamine—Analgesic Compound Tablets and Syrup are recommended for the treatment of tetracycline-sensitive bacterial infection which may complicate vasomotor rhinitis, sinusitis and other allergic diseases of the upper respiratory tract, and for the concomitant symptomatic relief of headache and nasal congestion. For children and elderly patients you may prefer caffeine-free ACHROCIDIN Syrup. Each 5 cc contains: ACHROMYCIN Tetracycline equivalent to Tetracycline HCl 125 mg.; Phenacetin 120 mg.; Salicylamide 150 mg.; Ascorbic Acid (C) 25 mg.; Pyrilamine Maleate 15 mg.

Contraindications: Hypersensitivity to any component.

Warning: In renal impairment, since liver toxicity is possible, lower doses are indicated; during prolonged therapy consider serum level determinations. Photodynamic reaction to sunlight may occur in hypersensitive persons. Photosensitive individuals should avoid exposure; discontinue treatment if skin discomfort occurs.

Precautions: Drowsiness, anorexia, slight gastric distress can occur. In excessive drowsiness, consider longer dosage intervals. Persons on full dosage should not operate vehicles. Nonsusceptible organisms may overgrow; treat superinfection appropriately. Treat beta-hemolytic streptococcal infections at least 10 days to help prevent rheumatic fever or acute glomerulonephritis. Tetracycline may form a stable calcium complex in bone-forming tissue and may cause dental staining during tooth development (last half of pregnancy, neonatal period, infancy, early childhood).

Adverse Reactions: *Gastrointestinal*—anorexia, nausea, vomiting, diarrhea, stomatitis, glossitis, enterocolitis, pruritus ani. *Skin*—maculopapular and erythematous rashes; exfoliative dermatitis; photosensitivity; onycholysis, nail discoloration. *Kidney*—dose-related rise in BUN. *Hypersensitivity reactions*—urticaria, angioneurotic edema, anaphylaxis. *Intracranial*—bulging fontanels in young infants. *Teeth*—yellow-brown staining; enamel hypoplasia. *Blood*—anemia, thrombocytopenic purpura, neutropenia, eosinophilia. *Liver*—cholestasis at high dosage.

Upon adverse reaction, stop medication and treat appropriately.

Lederle LEDERLE LABORATORIES, A Division of American Cyanamid Company, Pearl River, New York 10965

535-9

Darbid®

brand of

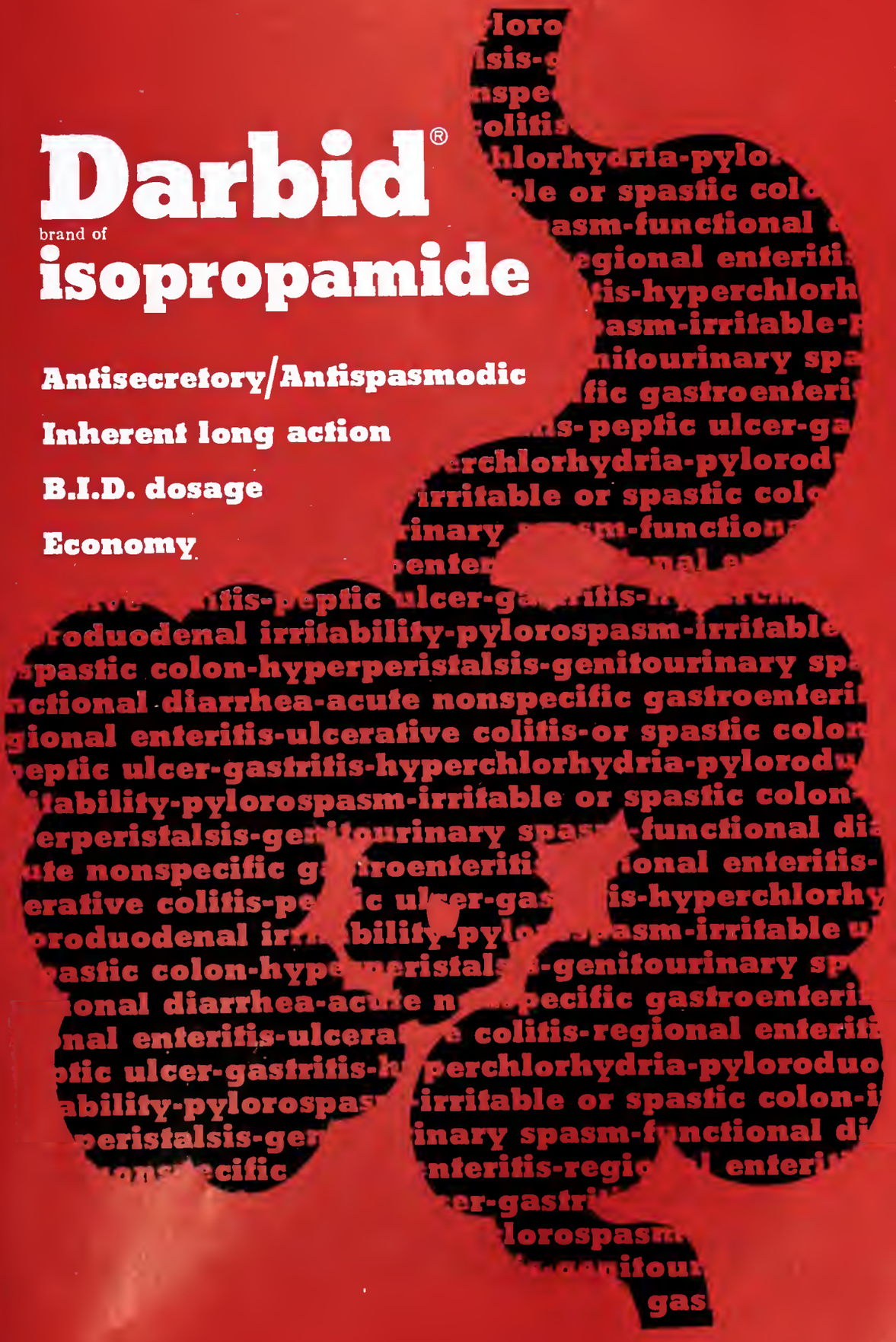
isopropamide

Antisecretory/Antispasmodic

Inherent long action

B.I.D. dosage

Economy



Before prescribing, see complete prescribing information, including symptoms and treatment of overdosage, in SK&F literature or *PDR*.

Contraindications: Patients with glaucoma, pyloric obstruction, prostatic hypertrophy, bladder neck obstruction, obstructive intestinal lesions and/or ileus.

Precautions: Use with caution in elderly patients. Discontinue one week prior to I^{131} uptake and PBI tests, as the iodine in isopropamide iodide may alter results. Iodine skin rash may occur in rare instances. Caution patients about activities requiring mental alertness (driving, hazardous occupations). Use in pregnancy, lactation, and in women of childbearing age only when necessary.

Adverse Reactions: Dry mouth, blurred vision, dilated pupils, photophobia, constipation, urinary retention and tachycardia. Seen less frequently are: palpitation, nausea, dysphagia, fever and nasal congestion.

Supplied: 5 mg. tablets, in bottles of 50.

SK&F

Smith Kline & French Laboratories
Philadelphia

The many forms of Ilosone®

Erythromycin Estolate

Lilly

Additional information available upon request.
Eli Lilly and Company
Indianapolis, Indiana 46206

TEXAS MEDICINE

VOLUME 66 NUMBER 2 FEBRUARY 1970

Devoted to the interests of the medical profession and public health in Texas

BOARD OF PUBLICATION
Charles P. Hardwicke, MD, Austin
Chairman
James A. Hallmark, MD, Fort Worth
John M. Smith, Jr., MD, San Antonio
Vice Chairman
R. Harvey Bell, MD, Palestine
N. L. Barker, MD, Paris
C. W. Yates, MD, Rosenberg
Don G. Harrel, Dallas

TMA OFFICERS
Charles Max Cole, MD, Dallas
President
C. Lincoln Williston, Austin
Executive Secretary

EDITORIAL AND BUSINESS OFFICES
1801 North Lamar Blvd., Austin
Telephone: 477-6704
Marilyn Baker, Managing Editor
Rae Valgert, Assistant Managing Editor
Nancy Arthurs, Assistant Editor
Sharon Walker, Editorial Assistant
Judy Harris, Editorial Secretary
E. Maxwell Jones, Business Manager
Jon R. Hornaday, Advertising Director
Anne Sheinutt, Advertising Assistant

PRINTING OFFICES
c/o Stafford-Lowdon Company
1114 West Daggett, Fort Worth 76104

Subscriptions: $3 per year for members; $6 for nonmembers; $8 for foreign; $3 for medical students.
Single copy: $1.

Copyright 1970 by The Texas Medical Association. Owned and issued monthly by the Association.

EMERGENCY AMBULANCE SERVICES

In 1965, 53 million accidents killed 110,000, temporarily disabled more than 12 million, and permanently impaired 500,000 Americans at a cost of about $20 billion. In 1969, motor vehicle accidents alone took more than 56,000 lives, in addition to an economic toll above $16 billion. This neglected epidemic of modern society is our most important environmental health problem. Trauma kills thousands who would otherwise live long and productive lives, whereas death from disease usually occurs late in life. Thus many more millions of productive man-years are lost to accidents than to chronic disease.

How do we find the victims? How efficient is our initial first aid? How effective is our transportation? How adequate is our emergency medical service? To answer these questions, the State Emergency Medical Services Advisory Committee, appointed by Dr. J. E. Peavy, Commissioner of Health, is surveying and evaluating the emergency medical services within the state, and plans to make recommendations for improvement.

The Texas State Department of Health has the primary responsibility for emergency medical services, and our ambulance situation is an integral part of these services.

Regarding ambulance services, criticism has been aimed at the operators for failure to have properly trained attendants and drivers, properly qualified personnel, properly equipped vehicles, and even to have properly designed vehicles with two-way voice control communications systems.

Traditionally, funeral home operators have provided ambulance service; they did not seek this role, but accepted it as a community service. The medical profession did not object, and if this service has not been up to standard we share the responsibility.

Recently, several things changed. All employees of the ambulance operators became subject to the minimum wage law, and the cost of keeping an attendant on call became prohibitive since many of the fees for service could not be collected. Thus, many funeral directors and ambulance operators withdrew from this service.

What were the alternatives? Some cities offered subsidies; others began to operate ambulances either directly or through their fire or police departments. Some have had good results; some have not.

About 77% of the ambulance services in Texas are still operated by the funeral homes, but probably the number will decrease.

To bring into focus some of the inadequacies, 2,000 servicemen were killed in combat in Vietnam in

1966; during the same period, 7,000 servicemen died in traffic accidents. Burning one's driver's license might be a lot safer (if less flamboyant) than putting a match to one's draft card! In the Mekong Delta, the injured are picked up within minutes by a helicopter and receive emergency medical treatment en route to a hospital staffed and equipped to meet every conceivable need. This is not so in the United States. Too often a life, a limb, a fine or brilliant mind is lost because emergency care is to little, too poor, or too late.

In the face of public apathy to the mounting toll from accidents and sudden illness, the Texas State Department of Health, under urging from the Federal Department of Transportation and the USPHS, has assumed the responsibility of assisting communities to gradually upgrade and expand their emergency health services.

To learn what is being done in emergency rooms and by ambulance services, our committee has compiled data on their status and quality in every city, town, and community in the state. Our objective has been to make personal interviews, evaluate every emergency room and ambulance service, and take a close look at the communications which exist between the two.

The survey is nearly completed; 525 cities were visited, and 600 hospitals and 800 ambulance firms were evaluated. Some of the things that were learned were that (1) 12 counties have no ambulance services, and (2) 30 counties have no hospitals—much less emergency room facilities. We should be concerned about these areas because, although they are sparsely settled, we travel their highways; 70% of all traffic deaths occur in the rural areas.

Evaluating the survey material is difficult. However, we do know that there are great weaknesses which need to be remedied. How shall we get communities to improve their services? This is our ultimate goal if we are to continue to function without outside control.

One method is through Community Council programs. I believe you will hear more of this in the future. Here is how this would work: Americans are ready to help when need is great; this characteristic put muscle in the March of Dimes to conquer poliomyelitis, and similar voluntary community efforts are being used to fight other illnesses. The public has not yet realized the magnitude of our accidental death problem, nor have its forces been mobilized to help solve this problem.

What is a Community Council? Who would be its members? How would it work? Its purpose would be to coordinate all components of the emergency medical service system in its geographic area, and to assure its citizens that (1) they will have the most modern first aid and emergency care possible; (2) they will have well-staffed, adequately equipped ambulances; (3) emergency communication to assure quick response when they need medical help; and (4) the personnel and equipment of emergency facilities will assure them the highest quality of medical care.

The council members would be representatives of the medical society, local health department, hospital administrators, fire department, police department, providers of ambulance services, and other local groups or agencies having responsibility or interest in upgrading emergency medical services.

The geographic boundaries of each council

could be as small as a heavily populated metropolitan city area, or as large as a sparsely populated county in West Texas. Several such councils are being set up in Texas now. Each council will evaluate its present medical facilities and its needs, make the necessary recommendations, and find means to implement them. Since this is a community effort, its chance of success will depend on the energy, efforts, and enthusiasm of those involved.

What can be achieved if we work harder in this area? Dr. John M. Howard, professor of surgery at Hahnemann Medical College, Philadelphia, has described some of the possibilities:

"A man is injured in an automobile accident. Impact activates an automatic radio signal in his car, giving a dispatch unit the general locality. Following the signal, emergency vehicles move to the scene, perhaps controlling traffic lights ahead. The ambulance, designed for transport and treatment, is manned by attendants trained and equipped to extricate the victim safely and give emergency treatment. They have two-way radio or even TV communication with their base at the emergency department. A helicopter ambulance may bring a physician, or provide safer evacuation. Clinical records begin at the scene.

"Via radio, several hospitals are contacted and the patient is taken to the one best able to provide the care he needs. He is expected. His litter and resuscitative equipment go with him into the treatment center; interchangeable equipment is replaced in the ambulance immediately.

"A physician has been called and is ready; he may even have been talking via radio or TV to the ambulance attendant.

"In the well-equipped emergency department, comprehensive diagnostic services are instantly available. There is a built-in operating room and an adjacent unit for continued intensive treatment. Its director, a full-time specialist in emergency care, may provide initial treatment for some patients. He also supervises training programs in emergency care at several levels. His department is an integral part of the medical community, designed and staffed to treat all emergency victims. It is the result of voluntary community effort, and regular meetings of the community council or its equivalent bring together people from the diverse fields involved in serving, monitoring, and developing the program in emergency care."*

This may seem to be beyond our present reach, but it is not. For example, engineers are developing a short-wave device for cars which would be activated on impact, and send out a signal to help locate the vehicle and also give further information about the nature of the accident.

We are also looking for ways in which the many trained medical corpsmen who are returning from Vietnam can be incorporated into our ambulance system.

Also, we are working on providing immediate consultation when and where it is needed. We have set up a pilot plan in association with Parkland Hospital in Dallas that would make it possible for physicians to have emergency consultation by direct phone or TV. We hope to provide consultation in any specialty or subspecialty, on a voluntary basis without any commitment to the calling physician 24 hours a day, seven days a week.

---

*Condensed from Dr. Howard's talk at the AMA Conference on Emergency Medical Services, Chicago, April 7, 1967.

Thus, through our study of our present emergency medical service, we hope eventually to evolve a system which will be a credit to our state.

Nathan Cedars, MD, Stephenville,
Chairman, State Emergency Medical
Services Advisory Committee.

CRASH DATA AS PREVENTIVE TOOLS

Automobile accident injuries can be studied more readily than any disease process. There are 263,451 accidents with 36,000 injuries each week, but only a few of these are used to obtain meaningful data as to cause of injury. A tremendous amount of information is available to the medical profession but for the taking. To be useful, the analysis of the injury must be made by a physician who is trained in a standardized method of accident investigation. A police officer is a necessary team member to analyze the vehicle and assist the physician in correlation of the injury and the causative agent.

Standardized injury severity scaling development is under way, as well as standardized vehicle analysis and reporting techniques. The development and acceptance of these will allow comparison of accidents, and evaluation of medical care and treatment regimens not only in the United States but between different countries. These teams would correlate the injury and its severity with the causative agent and vehicle damage. Several university teams have been trained in accident investigation and are performing effectively. The accidents are investigated in such detail that only a limited number can be handled. I believe that less in-depth investigation could be done by trained teams, and cause-injury relationship established on a statistically significant sample.

Engineers hesitate to change design characteristics without statistically significant clinical data for fear of causing a new, more serious injury in an attempt to prevent one less serious. As an example of utilizing accident investigative data in prevention, let us look at lower extremity injuries. Front-seat occupants sustain fewer foot, ankle, and leg injuries (22%) than rear-seat occupants (63%). If the severity of these injuries were graded, and one injury deemed more desirable than another, the pattern could be changed. If it were established that knee injuries were more desirable than foot, ankle, or leg injuries, the rear surface of the front seat could be redesigned to reduce the likelihood of foot, ankle, or leg injury to rear-seat occupants and produce a knee injury or other more desirable injury in its place. The automotive industry has made great strides in reducing injuries in a relatively short time. To appreciate the problem, one must realize that to include into the production line a new injury reduction concept requiring major design changes would take months. Advanced design engineers are now working on 1972-1976 concepts.

Recent design changes include a thicker plastic interlayer in all windshields since 1965, and a difference in bonding techniques. This has almost eliminated dangerous windshield injuries in accidents at speeds up to 30-40 mph.

The collapsible steering column introduced in 1967 resulted in a reduction from 100% dangerous and fatal injuries to 80% minor and 20% moderate injuries when striking the column at collision speeds of 40 mph.

I believe the contoured windshield header, which provides a ramp effect to any blow

from the head into the roof above the windshield, turning it into a glancing or skidding blow, will reduce neck and head injuries in frontal collisions.

One manufacturer has built a sideguard beam into the door structure to protect the passenger compartment during side-impact collisions and to deflect the impacting car away from the car being struck. This, I believe, will bring about a great reduction in injury severity in intersection collisions.

Not all cars have currently available safety devices in them now. Seat belts were not introduced until 1964, although the basic concepts have been known for 66 years. The latest registration statistics indicate the median car age to be five years. However, 19% are over 10 years old and 8.3% are over 12 years old. It will be 1974 before 82% of the automobiles on the roads will even be equipped with front-seat restraints.

At the current rate of study, adequate statistical data on the effectiveness of 1969 restraint systems in accidents will not be ready until 1970. It is then too late for current design changes, as 1970 vehicles will have been produced for months, 1971 models are "locked in" and few changes may be possible for the 1972 models. Thus, there is cause for haste in training investigative teams. I believe the medical profession should accept the responsibility of gathering reliable, statistically significant data as to *what* object in *what* type accident is causing *what* injury.

The American Medical Association has allocated funds to train accident investigative teams. This course will take two to three days to acquaint the physician and his police counterpart with an investigative technique. Forty to 50 teams will be trained at first; the goal is 200 such teams if finances can be obtained. The time donated by each team, assuming it to be one hour a week, would result in 10,000 injury-related accidents' data processed each year. The effectiveness of even minor design changes could be known immediately. Truly meaningful, clinical cause-injury relationship could be established. If there is enough response from the medical profession, volunteer teams could be trained rapidly in standard reporting and investigative techniques, the data transmitted to a central data processing unit, and this material utilized to bring about a reduction in the epidemic most likely to kill all persons in the United States from ages 1 to 34, and most likely to cause pain, suffering and accidental injury to all of those 204 million potential patients.

H. A. Fenner, Jr, MD, Hobbs, N Mex.

PERSONALITY, ATTITUDE, AND ACCIDENTS

Alcoholism, carelessness, dangerous discourtesy, inattention, suicidal and homicidal tendencies, antisocial bents, drugs, plain youthful exuberance, and other factors have all been blamed for causing automobile crashes. All sorts of studies have been made in attempts to understand the behavior patterns and attitudes that result in these accidents. Indeed, if one chose the right statistics, an excellent case could be made for drinking and driving, and so on, ad absurdum.

I am a psychiatrist, and can "understand" the people who cause crashes, but the so-called knowledge prevents too few crashes for my personal comfort.

All the efforts to understand the causes and to prevent further tragedy should be continued; research of all kinds should be encouraged and the results disseminated.

Meanwhile, what are we doctors doing about it? How good drivers are we? What is our reaction when someone passes us? Do we always insist upon the simple device of fastening our seat belts? Do we really care enough for our families to demand that they use restraining devices all the time? What about our patients—do we encourage them to wear belts? Do we display a seat belt sign only half as big as the diabetic check-up exhortation? If any other epidemic of this proportion killed and crippled so many, demands would be made upon us to stop it, or at least to use such palliative means as we had at our disposal. As with all else, we must do the best we can with what we have. So while research goes on as to the attitudes of the drivers, the causes of antisocial behavior, alcoholism, and drug abuse, some things can be done now. It is not enough to "understand" why a person (any person, not just a young one) feels aggressive, hostile, antisocial, misunderstood, put down, or what not—he has no license to kill or cripple. Somehow, killing a human being with a car never seems the same as murder. Maiming with an automobile seems in some fashion less culpable than crippling with a pistol. In some curious way, there is always built in the instant excuse of "accident." "They didn't mean to do it." This is no time for slogans, but "accidents" just don't happen. They are caused, and almost always by some individual.

As physicians, we know that certain of our patients should not drive—some of them simply because they have crashes. Merely calling them "accident prone" no more helps than calling a painful abdomen "acute appendicitis," and then doing nothing and hoping it will not rupture, or, if it does, that it will wall itself off. We have a responsibility, whether we like it or not, and whether we choose to ignore it or not.

We should support our police by actually helping them to get convictions; we should help the judiciary resist pressure to have charges changed to lesser offenses in order to clear dockets.

Before a member of our family gets killed or crippled for life, we should support legislation to make the punishment fit the crime. Most drivers' licenses are not a license at all, but simply a tax. People should be licensed to drive an automobile, so we can stop some of the killing on our streets and protect the innocent victims, some of whose only offense is to be about their business.

People who murder while suffering from delusions or false beliefs are considered technically innocent because of their illness, but they are removed from society until they no longer suffer from it. What of the person whose false belief is that he can drive a car at 80 mph under poor driving conditions, or whose delusion is that he can drive just as well after drinking? Why should he not be equally protected from committing other offenses until there is relative certainty that he is cured?

I am old enough to have lived when it was thought that persons whose diseases might kill others should be isolated from the rest of the community. We did not want anyone else to die of smallpox, typhoid, tuberculosis, or even polio, so while awaiting positive identification of the disease and its prevention

Continued on page 31

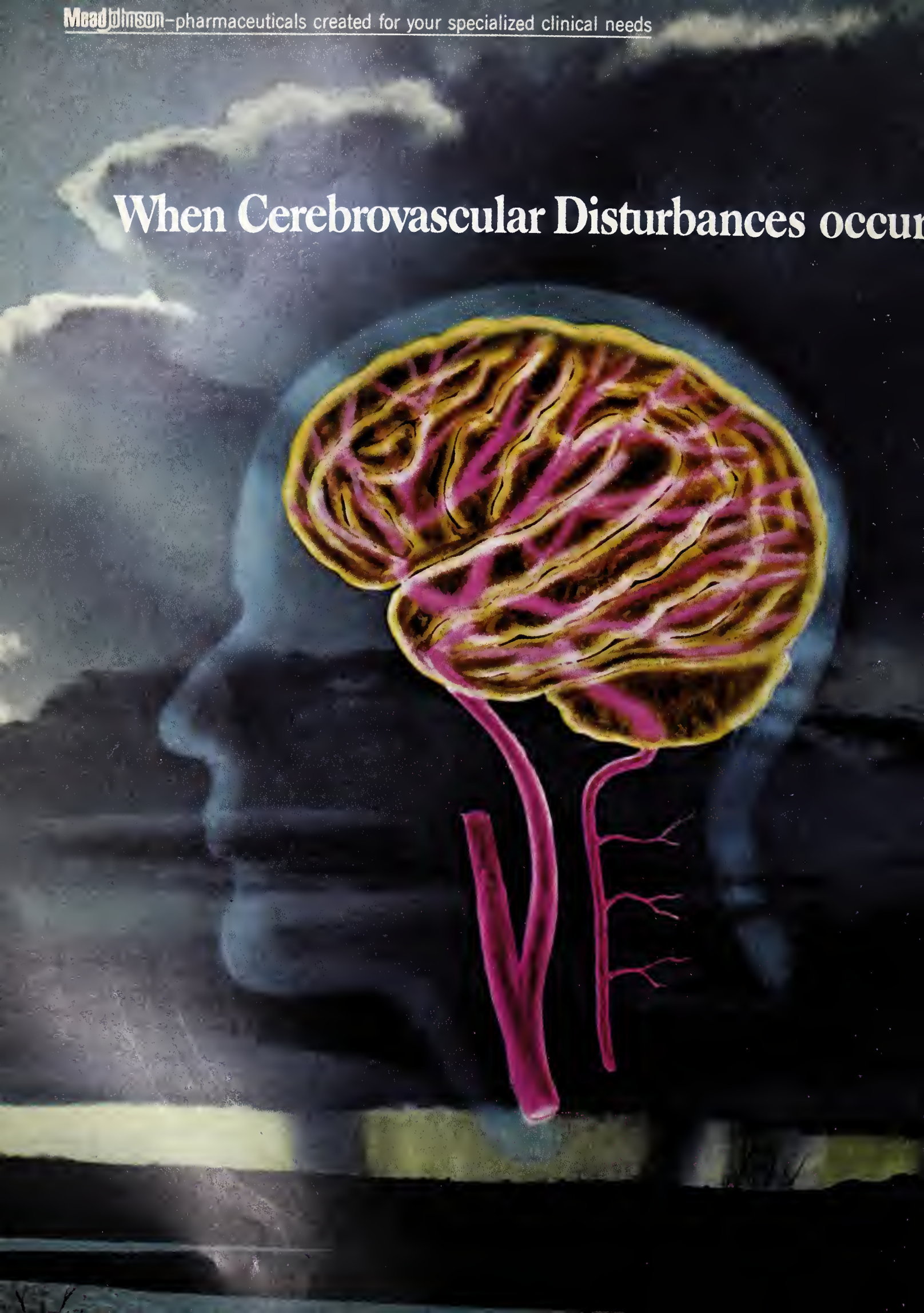
Texas Medical Association Annual Session April 30-May 3 Dallas 1970

38 guest speakers plus 90 special and 250 TMA-member speakers
13 section programs
20 curbstone consultations
7 continental breakfast round tables 2 general meetings and luncheons 175 scientific and technical exhibits 7 special symposiums complete film program 28 specialty society programs physicians' and wives art exhibition sports—golf, tennis and skeet entertainment—don't miss the fabulous "Saturday Night at the Fairmont" party

REGISTER IN ADVANCE! See your current issue of TEXAS MEDICINE for details

Mead Johnson—pharmaceuticals created for your specialized clinical needs

When Cerebrovascular Disturbances occur



...with episodes of vertigo, headache, confusion, sensory loss, slurred speech, consider

VASODILAN®

(ISOXSUPRINE HCl)

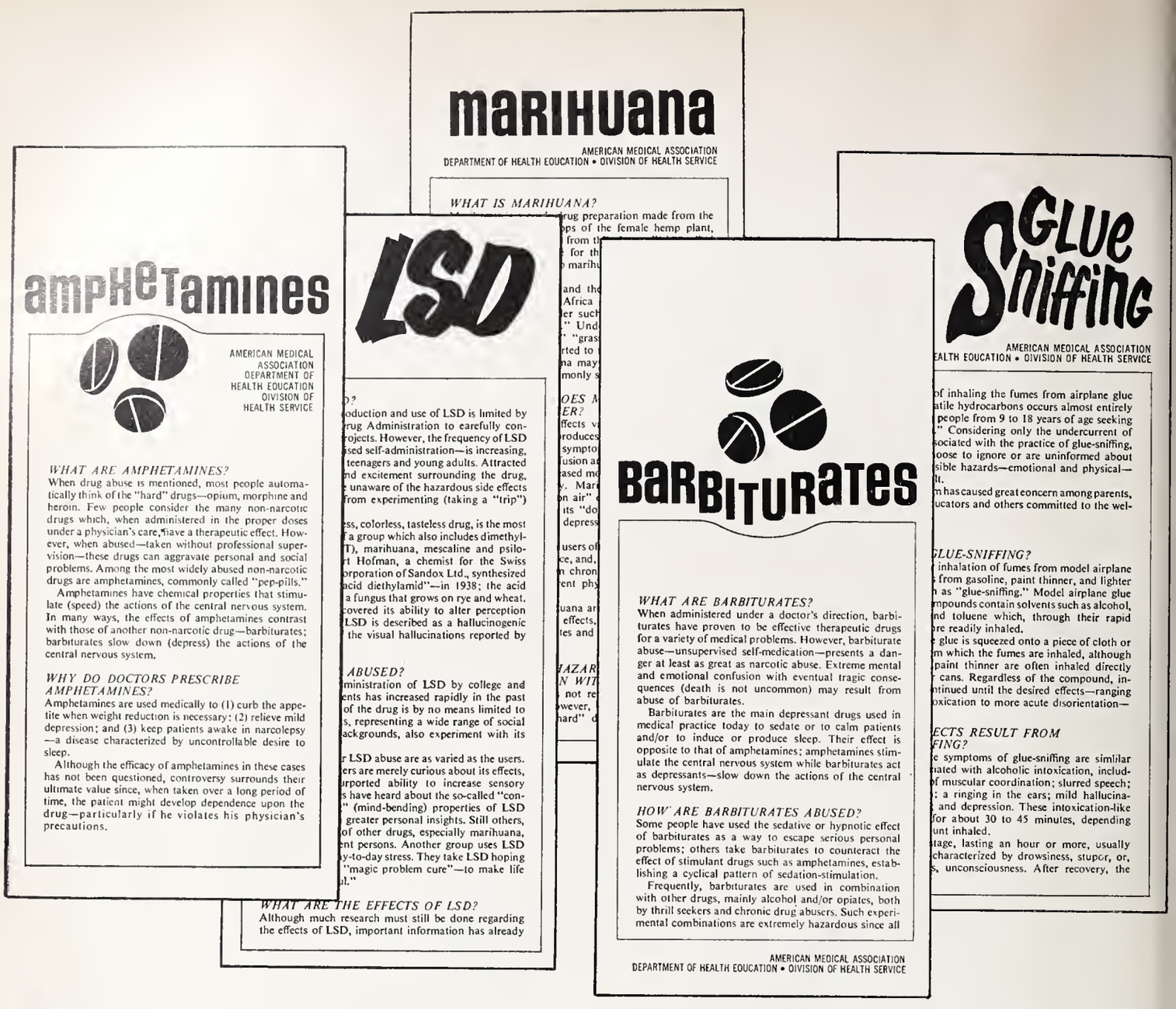
to help relieve symptoms by preventing vasospasm and increasing cerebral blood flow

Mead Johnson
LABORATORIES

Although not all clinicians agree on the value of vasodilators in vascular disease,[1] several investigators[2-5] have reported favorably on the effects of isoxsuprine on cerebral blood flow. Effects have been demonstrated both by objective measurement[2,5] and observation of clinical improvement.[2-4]
Indications: Cerebrovascular insufficiency, arteriosclerosis obliterans, diabetic vascular diseases, thromboangiitis obliterans (Buerger's disease), Raynaud's disease, postphlebitic conditions, acroparesthesia, frostbite syndrome and ulcers of the extremities (arteriosclerotic, diabetic, thrombotic). **Composition:** VASODILAN tablets, isoxsuprine hydrochloride 10 mg. **Dosage:** Oral—10 to 20 mg. (1 or 2 tablets) t.i.d. or q.i.d. **Contraindications and Cautions:** There are no known contraindications to recommended oral dosage. Do not give immediately postpartum or in the presence of arterial bleeding. **Side Effects:** Occasional palpitation and dizziness can usually be controlled by dosage reduction. As intramuscular administration of 10 mg. or more may cause brief hypotension and tachycardia, single intramuscular doses exceeding this amount are not recommended. Complete details available in product brochure from Mead Johnson Laboratories **References:** (1) Fazekas, J. F.; Alman, R. W.; Ticktin, H. E.; Ehrmantraut, W. R., and Savarese, C. J.: Angiology *15*:No. 2 (Feb.) 1964. (2) Horton, G E., and Johnson, P C., Jr.: Angiology *15*:70-74 (Feb.) 1964. (3) Clarkson, I. S., and LePere, D M · Angiology *11*:190-192 (June) 1960 (4) Dhrymiotis, A D , and Whittier, J R.: Current Therapeutic Research *4*:124-128 (April) 1962 (5) Whittier, J R.: Angiology *15*:82-87 (Feb) 1964

© 1969 MEAD JOHNSON & COMPANY • EVANSVILLE, INDIANA 47721

71169



Millions of Americans are abusing drugs

Drug abuse has emerged into sharp focus as a difficult problem of growing concern to the medical profession and the public. Of particular concern is the fact that many young people today are experimenting with marihuana and a wide array of other drugs. Although many are highly sophisticated, young people are not truly aware of the dangers posed by abuse of drugs.

Because of the severity of the problem and the confusion which exists, in many quarters, about whether certain drugs are truly dangerous, there is an urgent need for intensive public education.

The five leaflets shown above provide **facts** that will be eagerly received by the public. Order the quantity you need today. There is no charge.

ORDER THESE PAMPHLETS TODAY—FREE—FROM TMA!

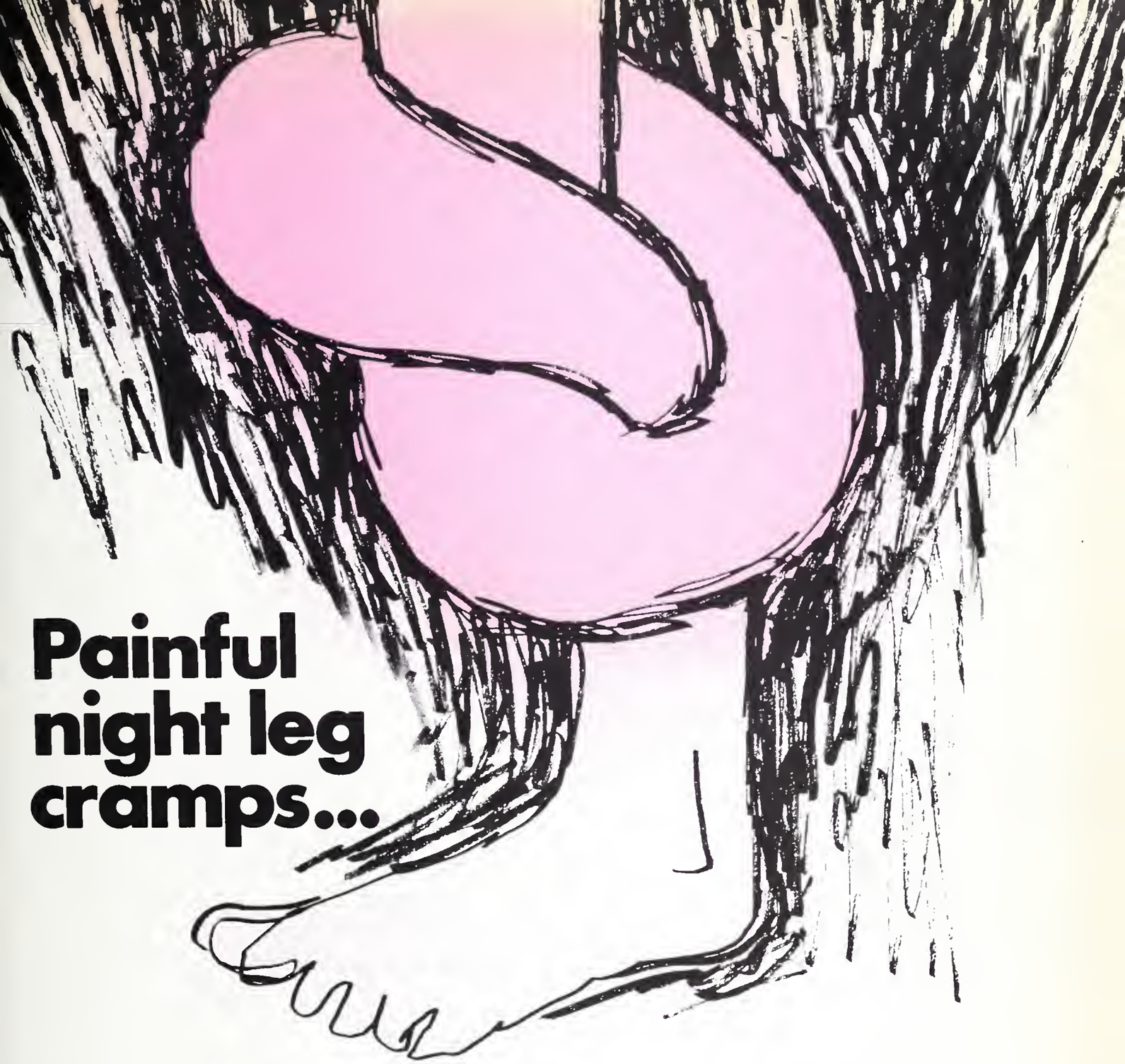
CLIP AND MAIL TO: **PUBLIC RELATIONS DIVISION**
TEXAS MEDICAL ASSOCIATION
1801 NORTH LAMAR BLVD.
AUSTIN, TEXAS 78701

QUANTITY	TITLE
_____	MARIHUANA
_____	LSD
_____	AMPHETAMINES
_____	BARBITURATES
_____	GLUE SNIFFING

Name_____

Address_____

City_____ State_____ Zip_____



Painful night leg cramps...

unwelcome bedfellow for any patient– including those with arthritis, diabetes or PVD

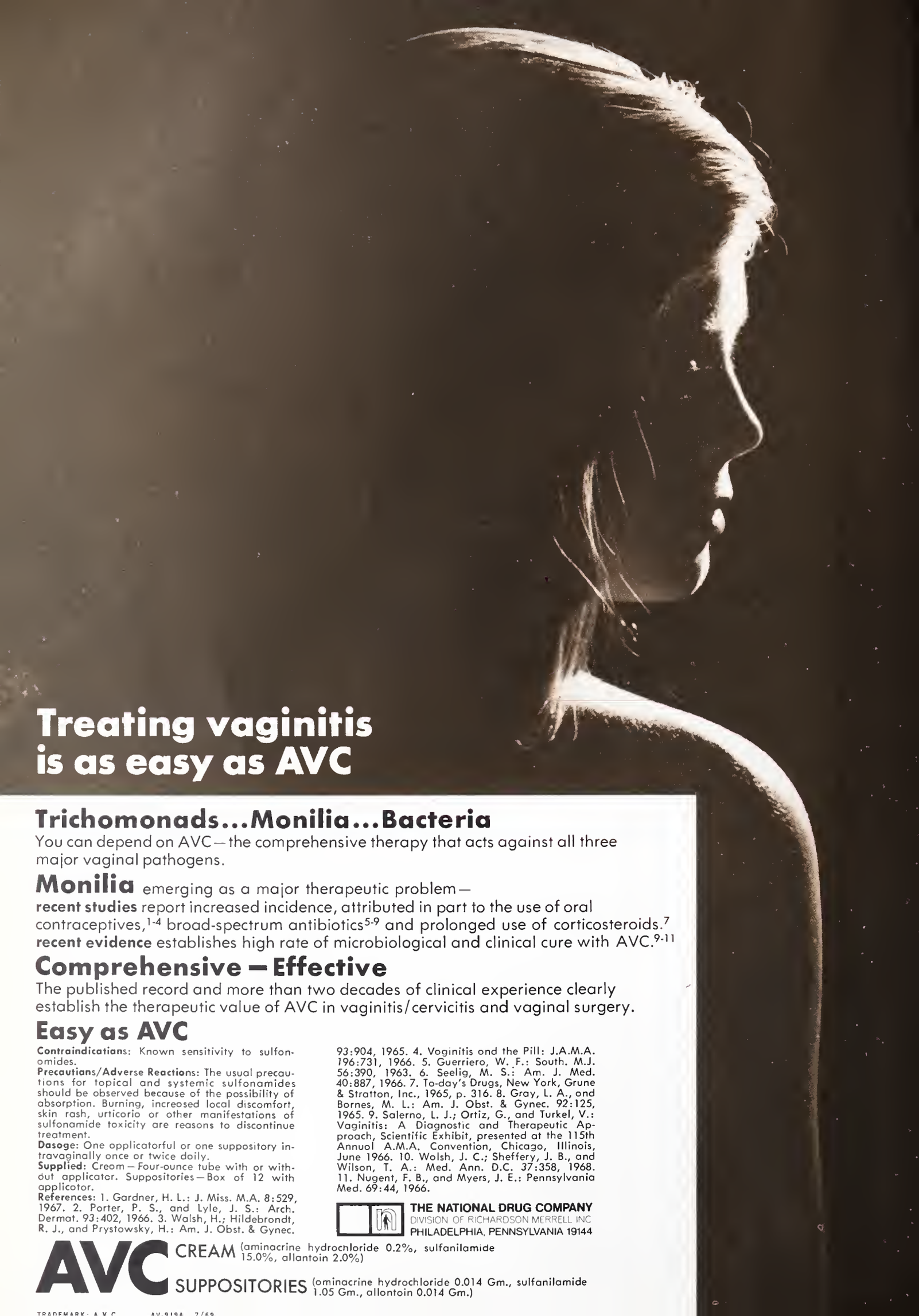
One thing patients can sleep without, particularly patients with chronic disease conditions such as arthritis, diabetes or PVD, is painful night leg cramps. Although seldom the presenting complaint, night leg cramps can tie your patients up in painful knots. Now, just one tablet of QUINAMM at bedtime can usually bring an end to shattered sleep and needless suffering. Your patients will sleep restfully—gratefully—with QUINAMM, specific therapy to prevent painful night leg cramps.

Prescribing Information—Composition: Each white, beveled, compressed tablet contains: Quinine sulfate, 260 mg., Aminophylline, 195 mg. **Indications:** For the prevention and treatment of nocturnal and recumbency leg muscle cramps, including those associated with arthritis, diabetes, varicose veins, thrombophlebitis, arteriosclerosis and static foot deformities. **Contraindications:** QUINAMM is contraindicated in pregnancy because of its quinine content. **Precautions/Adverse Reactions:** Aminophylline may produce intestinal cramps in some instances, and quinine may produce symptoms of cinchonism, such as tinnitus, dizziness, and gastrointestinal disturbance. Discontinue use if ringing in the ears, deafness, skin rash, or visual disturbances occur. **Dosage:** One tablet upon retiring. Where necessary, dosage may be increased to one tablet following the evening meal and one tablet upon retiring. **Supplied:** Bottles of 100 and 500 tablets.

THE NATIONAL DRUG COMPANY
DIVISION OF RICHARDSON-MERRELL INC.
PHILADELPHIA, PENNSYLVANIA 19144

Quinamm™
(quinine sulfate 260 mg., aminophylline 195 mg.)

Specific therapy for night leg cramps



Treating vaginitis is as easy as AVC

Trichomonads...Monilia...Bacteria

You can depend on AVC—the comprehensive therapy that acts against all three major vaginal pathogens.

Monilia emerging as a major therapeutic problem—
recent studies report increased incidence, attributed in part to the use of oral contraceptives,[1-4] broad-spectrum antibiotics[5-9] and prolonged use of corticosteroids.[7]
recent evidence establishes high rate of microbiological and clinical cure with AVC.[9-11]

Comprehensive—Effective

The published record and more than two decades of clinical experience clearly establish the therapeutic value of AVC in vaginitis/cervicitis and vaginal surgery.

Easy as AVC

Contraindications: Known sensitivity to sulfonomides.
Precautions/Adverse Reactions: The usual precautions for topical and systemic sulfonamides should be observed because of the possibility of absorption. Burning, increased local discomfort, skin rash, urticoria or other manifestations of sulfonamide toxicity are reasons to discontinue treatment.
Dosage: One applicatorful or one suppository intravaginally once or twice daily.
Supplied: Cream—Four-ounce tube with or without applicator. Suppositories—Box of 12 with applicator.

References: 1. Gardner, H. L.: J. Miss. M.A. 8:529, 1967. 2. Porter, P. S., and Lyle, J. S.: Arch. Dermat. 93:402, 1966. 3. Walsh, H.; Hildebrandt, R. J., and Prystowsky, H.: Am. J. Obst. & Gynec. 93:904, 1965. 4. Voginitis ond the Pill: J.A.M.A. 196:731, 1966. 5. Guerriero, W. F.: South. M.J. 56:390, 1963. 6. Seelig, M. S.: Am. J. Med. 40:887, 1966. 7. To-day's Drugs, New York, Grune & Stratton, Inc., 1965, p. 316. 8. Gray, L. A., ond Bornes, M. L.: Am. J. Obst. & Gynec. 92:125, 1965. 9. Salerno, L. J.; Ortiz, G., and Turkel, V.: Vaginitis: A Diagnostic and Therapeutic Approach, Scientific Exhibit, presented at the 115th Annuol A.M.A. Convention, Chicago, Illinois, June 1966. 10. Wolsh, J. C.; Sheffery, J. B., and Wilson, T. A.: Med. Ann. D.C. 37:358, 1968. 11. Nugent, F. B., and Myers, J. E.: Pennsylvania Med. 69:44, 1966.

THE NATIONAL DRUG COMPANY
DIVISION OF RICHARDSON MERRELL INC.
PHILADELPHIA, PENNSYLVANIA 19144

AVC CREAM (aminacrine hydrochloride 0.2%, sulfanilamide 15.0%, allantoin 2.0%)

SUPPOSITORIES (aminacrine hydrochloride 0.014 Gm., sulfanilamide 1.05 Gm., allontoin 0.014 Gm.)

TRADEMARK · A V C AV-9194 7/69

and cure, we isolated these sufferers. Why not isolate the killer-by-car until we know the cause and can prevent the disease from killing others? We cannot ignore any phenomenon which kills nearly 60,000 Americans annually.

And, finally, continuing pressure must be brought to bear upon the automobile manufacturers to apply their obvious safety know-how to the cars we buy. As Ralph Nader said, in essence, "Isn't it amazing that our best automotive engineers have been unable to come up with a satisfactory throttle linkage?" The fact that they have been forced to recall hundreds of thousands of cars for faulty construction is not evidence that "they" (and that's a hard fellow to find!) cannot come up with safe cars, it's just that they do not. American engineers who can project space equipment can make a safe car. Some of the current head rests are beautifully designed to guarantee a compression injury to the cervical vertebrae of the now complacent victim. The cross-shoulder harness on most new cars is extremely effective when worn in a head-on crash with no deviation to either side. Most stock bumpers will withstand a two-mile-an-hour crash. The bumper replacement bill alone in this country is over $1 billion a year, but the insurance companies are protesting. You see, this costs dollars, not people. Dr. William Haddon, former administrator of the Traffic Safety Agency of the US Department of Commerce, showed that more than one-quarter million steering posts and wheels were impacted onto human beings before the law made manufacturers install a safety device based on a principle known for more than half a century.

The simplest way to prevent wheel locking and consequent skidding is to equip the car brake with an anti-locking system. Another way is to teach all people not to make panic stops. The latter is pretty silly while the former is quite sane and safe. Does your car have an anti-locking device? On a national level, less than one-tenth the cost of one nuclear submarine is spent on safety. In addition, our protective laws are too weak. The forces who don't want the laws applied are greater than those who do. The average motorist has little voice in the big halls, whether in the city, the state, or the nation.

Social and political pressures must put this wonderful know-how of the American engineer to work to give us safe cars. We physicians must become less interested in building more hospitals to care for the injured, and more active in preventing injuries. Violence in the streets has killed 260 Americans in three years—just about the average three-day toll on the highway. We will never have enough personnel to remedy properly, so we had better expend more energy to prevent. It is our job, and, as physicians, we have not yet abdicated our position of responsibility to our fellow man.

William K. Keller, Louisville, Ky.

EXPO '70

the year to see the ORIENT!

TEXAS MEDICAL ASSOCIATION

ORIENT ADVENTURE

Two fun-filled weeks in exotic and colorful Japan and Hong Kong. Our complete Orient Adventure costs much less than round trip tourist air fare, yet includes direct 707 private jet flights, deluxe hotels, gourmet meals, all the freedom of individual travel, plus many other exclusive features. The Orient Adventure is departing from Dallas and Houston on August 24, 1970.

Space is strictly limited on this exciting adventure. To confirm reservations a $100 deposit per person is required. Join us. Send your deposit now to

Texas Medical Association
1801 North Lamar Blvd.
Austin, Texas 78701

$898.00

RETURN THIS COUPON NOW!

SEND TO: Texas Medical Association
1801 North Lamar Blvd.
Austin, Texas 78701

Enclosed is my check for $_____ ($100 per person)

NAME _____

ADDRESS _____

CITY _____ STATE _____

ZIP _____ PHONE _____

THE SHAPING OF OUR FUTURE

If there is any question in the mind of anyone as to the arena in which medicine's future will be molded, let him take a look at the 1960s. The nature of medical practice in the 1970s will be decided in the legislative halls at the federal, state, county, and local levels—and I only wish that the importance of these could be stated in reverse order. There will be no cutbacks in the Medicare and Medicaid Laws even though these programs may threaten to bankrupt the country.

There is great pressure in the current Congress for the enactment of a universal compulsory health service which would extend medical care benefits to all who are not now receiving them through some federal program. While the present administration does not favor such legislation, there is strong support for it from labor and many other political groups. Medical schools have become increasingly dependent upon federal funds in recent years, and it is not likely that many of them could continue normal operations if this source of support were removed.

I attended an AMPAC workshop in Washington last May and heard congressmen and senators alike, both Democratic and Republican, laud our political efforts in recent years and attest to their effectiveness. Through its committees and councils, the American Medical Association can provide Congress with expert testimony and recommendations on pending legislation, and it is highly respected for this effective activity. However, before congressmen and senators can be statesmen they must get elected and re-elected. They look to, and expect from, their friends the kind of support that helps them do this, and they listen to those friends' views on political issues.

There are still far too many physicians who do not support the PAC movements and who do not support or communicate with their own political representatives. Those of us who do will have to spread the word and attempt to convince our associates of the importance of this area of endeavor.

Max Cole, M.D.

Charles Max Cole, MD, President, Texas Medical Association.

Ulcer Re-lief!

Dicarbosil®
ANTACID

Your ulcer patients and others will respond favorably to it. Specify DICARBOSIL 144's—144 tablets in 12 rolls.

ARCH LABORATORIES
319 South Fourth Street, St. Louis, Missouri 63102

AUSCULTATION, PHONOCARDIOGRAPHY AND PULSE TRACINGS — A Workshop

April 7-10, 1970

Mountain Shadows Resort
Scottsdale, Arizona

This is an intensive four-day program covering in detail the field of auscultation, phonocardiography and pulse tracings. Emphasis will be placed on the values and limitations of phonocardiography and related areas as applies to the patient's diagnostic problems. The morning sessions will be devoted to didactic lectures. The afternoon sessions will be devoted exclusively to individual analysis of phonocardiograms and pulse tracings by the participants under the orientation of the local and guest faculties. This course is intended for those who wish a close and detailed exposure to the value and the limitations of auscultation and phonocardiography.

PROGRAM DIRECTOR: A. Benchimol, M.D., F.A.C.C., Director, Institute for Cardiovascular Diseases, Good Samaritan Hospital, Phoenix, Arizona.

GUEST FACULTY: Bernard Segal, M.D., F.A.C.C. & Morton Tavel, M.D., F.A.C.C.

ADVANCE REGISTRATION IS REQUIRED

FOR INFORMATION WRITE:
AMERICAN COLLEGE OF CARDIOLOGY
9650 ROCKVILLE PIKE
BETHESDA, MARYLAND 20014

T. ROWE PRICE GROWTH STOCK FUND, INC.

Est. 1950

A NO-LOAD FUND

Investing in stocks carefully selected for long term growth possibilities

Individuals & institutions are invited to request free prospectus

NO SALES CHARGE

T. Rowe Price Growth Stock Fund, Inc.
One Charles Center, Dept. F-1
Baltimore, Md. 21201 Phone (301) 539-1992

Name _____

Address _____

_____ Zip _____

WICHITA FALLS CLINIC-HOSPITAL

GENERAL SURGERY
W. E. Crump, M.D., F.A.C.S.
James T. Lee, M.D.
Charles H. Wilson, M.D., F.A.C.S.

ORTHOPEDIC SURGERY
Jack E. Maxfield, M.D., F.A.C.S.
Clyde W. Parsons, M.D.
Mark E. Huff, Jr., M.D.

ORAL SURGERY
R. A. Mitchell, D.D.S.
Larry J. Cason, D.D.S.

RADIOACTIVE ISOTOPES
Claude D. Wilson, M.D., D.A.B.R.
Joe D. Steed, M.D., D.A.B.R.
Julian H. Acker, M.D.
David D. Salmon, M.D., D.A.B.R.

PEDIATRICS
George W. Slaughter, III, M.D., F.A.A.P.
Joseph Bilder, Jr., M.D.

LABORATORIES
Claude D. Wilson, M.D., D.A.B.R., Radiology
Joe D. Steed, M.D., D.A.B.R., Radiology
David D. Salmon, M.D., D.A.B.R., Radiology

MEDICINE
W. B. Whiting, M.D., Cardiology
R. F. Knox, M.D., Endocrinology
P. K. Smith, M.D., F.A.C.P., Diagnosis & Internal Medicine
I. L. Humphrey, Jr., M.D., Diagnosis & Internal Medicine
Julian H. Acker, M.D., Diagnosis & Internal Medicine
Preston McCall, M.D., Diagnosis & Internal Medicine
Julian C. Sleeper, M.D., Cardiology
Eugene Jackson, M.D., Diagnosis & Internal Medicine

GENERAL PRACTICE
J. B. Hathorn, Jr., M.D.
Melvin Horany, M.D.
John E. Worthen, Jr., M.D.

UROLOGY
Owen C. Berg, M.D., F.A.C.S.

OBSTETRICS AND GYNECOLOGY
W. L. Parker, M.D., F.A.C.S.
Warren T. Kable, M.D.
Frank J. Lee, M.D.

ADMINISTRATIVE OFFICER
Bertha McNeill, Administrator
Jesse E. Dobbs, Jr., Asst. Administrator

When disease is ruled out and psychic tension is implicated

Valium® (diazepam) helps relax the patient and relieve his somatic symptoms

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Tension and anxiety states; somatic complaints which are concomitants of emotional factors; psychoneurotic states manifested by tension, anxiety, apprehension, fatigue, depressive symptoms or agitation; acute agitation, tremor, delirium tremens and hallucinosis due to acute alcohol withdrawal; adjunctively in skeletal muscle spasm due to reflex spasm to local pathology, spasticity caused by upper motor neuron disorders, athetosis, stiff-man syndrome, convulsive disorders (not for sole therapy).

Contraindicated: Known hypersensitivity to the drug. Children under 6 months of age. Acute narrow angle glaucoma.

Warnings: Not of value in psychotic patients. Caution against hazardous occupations requiring complete mental alertness. When used adjunctively in convulsive disorders, possibility of increase in frequency and/or severity of grand mal seizures may require increased dosage of standard anticonvulsant medication; abrupt withdrawal may be associated with temporary increase in frequency and/or severity of seizures. Advise against simultaneous ingestion of alcohol and other CNS depressants. Withdrawal symptoms have occurred following abrupt discontinuance. Keep addiction-prone individuals under careful surveillance because of their predisposition to habituation and dependence. In pregnancy, lactation or women of childbearing age, weigh potential benefit against possible hazard.

Precautions: If combined with other psychotropics or anticonvulsants, consider carefully pharmacology of agents employed. Usual precautions indicated in patients severely depressed, or with latent depression, or with suicidal tendencies. Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.

Side Effects: Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances, stimulation, have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice; periodic blood counts and liver function tests advisable during long-term therapy.

ROCHE
Roche
LABORATORIES
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

Owner Breaks Arm When Yacht Runs Agroun

Schuyler, Oct. 31. Harry Waters of Covesville incurred a fractured arm tially capsized. The fire depar had to rescue Waters by small Damage to the yacht is estima

Hasn't the skipper had enough excitement for one day?

For the patient who has been through an accident, the worry and anxiety following the mishap may actually heighten the perception of pain. This is why there's a classic ¼ grain *sedative* dose of phenobarbital in Phenaphen with Codeine—to take the nervous "edge" off, so the rest of the formula can control the pain more effectively.

A.H. Robins Company, Richmond, Va. 23220 A·H·ROBINS

Phenaphen® with Codeine

Phenaphen with Codeine Nos. 2, 3, or 4 contains: Phenobarbital (¼ gr.), 16.2 mg. (warning: may be habit forming); Aspirin (2½ gr.), 162.0 mg.; Phenacetin (3 gr.), 194.0 mg.; Hyoscyamine sulfate, 0.031 mg.; Codeine Phosphate, ¼ gr. (No. 2), ½ gr. (No. 3), or 1 gr. (No. 4) (warning: may be habit forming).

The compound analgesic that calms instead of caffeinates

Indications: Phenaphen with Codeine provides relief in severer grades of pain, on low codeine dosage, with minimal possibility of side effects. Its use frequently makes unnecessary the use of addicting narcotics. **Contraindications:** Hypersensitivity to any of the components. **Precautions:** As with all phenacetin-containing products excessive or prolonged use should be avoided. **Side effects:** Side effects are uncommon, although nausea, constipation and drowsiness may occur. **Dosage:** Phenaphen No. 2 and No. 3—1 or 2 capsules every 3 to 4 hours as needed; Phenaphen No. 4—1 capsule every 3 to 4 hours as needed. For further details see product literature.

What Texas doctors need, is a Malpractice Liability Carrier that won't fade when trouble comes.

This means the up-to-date carrier. The one that's replete with innovations and new developments in this clouded, sensitive area of liability protection. And the one that doesn't talk malpractice coverage just to get a foot in the door for every other kind of insurance. We don't write other kinds of insurance.

What Texas doctors need, is Casualty Indemnity Exchange, the carrier that pioneered the modern approach to malpractice coverage, and *the* carrier geared to STAY in the market.

Contact your local agent or
RUSSELL GRACE INSURANCE
2304 W. 7th St.
Ft. Worth, Texas 76107
(817) 332-9269

SECURITY SINCE 1912
CASUALTY INDEMNITY EXCHANGE
754 Insurance Exchange Building • Denver, Colorado 80202 • (303) 825-0161

The treatment of

impotence

in the American male is complex.
The concept of chemotherapy plus the physician's psychological support is confirmed as effective therapy.

NEW CLINICAL STUDY

The Treatment of Impotence with Methyltestosterone Thyroid (100 patients—Double Blind Study)
T. Jakobovits
Fertility and Sterility, January 1970
Official Journal of the American Fertility Society

Android®

(thyroid-androgen) tablets

Double-Blind Study and Type of Patient: 100 patients suffering from undifferentiated impotence. Examination revealed the patients were within the average range of 17-Ketosteroid excretion and protein bound iodine. Except for fatigue in some patients all were in good health. Study was for one month in duration. Each patient received one tablet 3 times daily.

Results: Of the patients receiving the active medication (Android) a favourable response was seen in 78%. This compares with 40% with those on placebo. 80% of the patients treated with the active ingredients showed relief in fatigue compared with 42% of those receiving the placebo. Although psychotherapy is indicated in patients suffering from functional impotence the concomitant role of chemotherapy (Android) cannot be disputed.

Contraindications—Methyltestosterone is not to be used in malignancy of reproductive organs in male, coronary heart disease. Thyroid is not to be used in heart disease, hypertension unless the metabolic rate is low.

References: 1. Montesano, P., and Evangelista, I. Methyltestosterone-thyroid treatment of sexual impotence. Clin Med 12:69, 1966. **2. Dublin, M. F.** Treatment of impotence with methyltestosterone-thyroid compound. West Med 5:67, 1964. **3. Titeff, A. S.** Methyltestosterone-thyroid in treating impotence. Gen Prac 25:6, 1962. 4. **Hellman, L., Bradlow, H. L., Zumoff, B., Fukushima, D. K., and Gallagher, T. F.** Thyroid-androgen interrelations and the hypocholesteremic effect of androsterone. J Clin Endocr 19:936, 1959. **5. Farris, E. J., and Colton, S. W.** Effects of L-thyroxine and liothyronine on spermatogenesis. J Urol 79:863, 1958. **6. Osol, A., and Farrar, G. E.** United States Dispensatory (ed. 25). Lippincott, Philadelphia, 1955, p. 1432. **7. Wershub, L. P.** Sexual Impotence in the Male. Thomas, Springfield, Ill., 1959, pp. 79-99.

REFER TO PDR

Choice of 4 strengths:

Android

Each yellow tablet contains:
Methyl Testosterone ..2.5 mg.
Thyroid Ext. (1/6 gr.) ..10 mg.
Glutamic Acid .....50 mg.
Thiamine HCL .....10 mg.
Dose: 1 tablet 3 times daily.
Available:
Bottles of 100, 500, 1000.

Android-HP
HIGH POTENCY

Each red tablet contains:
Methyl Testosterone ..5.0 mg.
Thyroid Ext. (½ gr.) ...30 mg.
Glutamic Acid .....50 mg.
Thiamine HCL .....10 mg.
Dose: 1 tablet 3 times daily.
Available:
Bottles of 100, 500, 1000.

Android-X
EXTRA HIGH POTENCY

Each orange tablet contains:
Methyl Testosterone .12.5 mg.
Thyroid Ext. (1 gr.) ....64 mg.
Glutamic Acid .....50 mg.
Thiamine HCL .....10 mg.
Dose: 1 or 2 tablets daily.
Available:
Bottles of 60, 500.

Android-Plus
WITH HIGH POTENCY B-COMPLEX AND VITAMIN C

Each white tablet contains:
Methyl Testosterone ..2.5 mg.
Thyroid Ext. (¼ gr.) ...15 mg.
Ascorbic Acid (Vit. C) .250 mg.
Thiamine HCL .....25 mg.
Glutamic Acid .....100 mg.
Pyridoxine HCL ..... 5 mg.
Niacinamide .....75 mg.
Calcium Pantothenate .10 mg.
Vitamin B-12 .....2.5 mcg.
Riboflavin .....5 mg.
Dose: 2 tablets daily.
Available: Bottles of 60, 500.

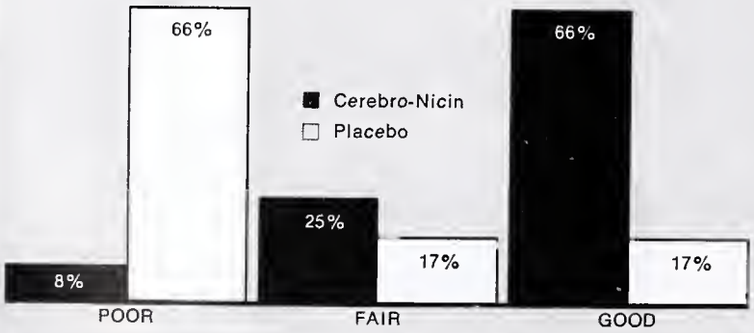
Write for literature and samples: BROWN **THE BROWN PHARMACEUTICAL CO., INC.** 2500 West 6th Street, Los Angeles, California 90057
A SUBSIDIARY OF ASSOCIATED CARE ENTERPRISES, INC.

For the treatment of the aging patient

Cerebro-Nicin®

capsules/elixir

A Gentle Cerebral Stimulant and Vasodilator



CEREBRO-NICIN® New double-blind study* shows how effectively senility can be forestalled. Four times as many aging patients showed striking improvement.

*A Double-Blind Study of Cerebro-Nicin, Therapy for the Geriatric Patient, R. Goldberg Jrnl,. of the Amer. Ger. Soc. June, 1964

Available in a tasty wine base elixir and capsules

Each Cerebro-Nicin capsule contains:

Pentylenetetrazole	100 mg.
Nicotinic Acid	100 mg.
Ascorbic Acid	100 mg.
Thiamine HCl	25 mg.
1-Glutamic Acid	50 mg.
Niacinamide	5 mg.
Riboflavin	2 mg.
Pyridoxine	3 mg.

DOSAGE: One capsule t.i.d, or as prescribed by physician.
AVAILABLE: Bottles of 100, 500, 1000 capsules.
Also elixir 8 oz. bottles.
CONTRAINDICATIONS: There are no known contraindications to Pentylenetetrazole although caution should be exercised when treating patients with a low convulsive threshold.
Most persons experience a flushing or tingling sensation after taking a higher potency niacin-containing compound. As a secondary reaction some will complain of nausea and other sensations of discomfort. This reaction is transient and is rarely a cause of discontinuance of the drug if the patient is forewarned to expect the reaction.

REFER TO PDR

Write for literature and samples...

BROWN **THE BROWN PHARMACEUTICAL CO.**
2500 W. 6th St., Los Angeles, Calif. 90057
Write for Product Catalog

A once-popular treatment for back pains was to have the seventh son of a seventh son stand or walk on the patient's back.

The pain of earache was allegedly relieved by holding a hot roasted onion to the ear.

For headache, a sovereign remedy was to wear a snakeskin round one's head.

A realistic approach to pain relief

'Empirin'®

Compound with Codeine Phosphate gr. 1/2 No. 3

Each tablet contains:
Codeine Phosphate gr. 1/2 (Warning—May be habit forming), Phenacetin gr. 2 1/2, Aspirin gr. 3 1/2, Caffeine gr. 1/2.

keeps the promise of pain relief

'B.W. & Co.' narcotic products are Class "B", and as such are available on oral prescription, where State law permits.

BURROUGHS WELLCOME & CO. (U.S.A.) INC.
Tuckahoe, N.Y.

Contraindications: Edema, danger of cardiac decompensation; history or symptoms of peptic ulcer; renal, hepatic or cardiac damage; history of drug allergy; history of blood dyscrasia. The drug should not be given when the patient is senile or when other potent drugs are given concurrently. Large doses of the alka formulation are contraindicated in glaucoma.

Warning: If coumarin-type anticoagulants are given simultaneously, watch for excessive increase in prothrombin time. Instances of severe bleeding have occurred. Persistent or severe dyspepsia may indicate peptic ulcer; perform upper gastrointestinal x-ray diagnostic tests if drug is continued. Pyrazole compounds may potentiate the pharmacologic action of sulfonylurea, sulfonamide-type agents and insulin. Carefully observe patients receiving such therapy. Use with caution in the first trimester of pregnancy and in patients with thyroid disease.

Precautions: Before prescribing, carefully select patients, avoiding those responsive to routine measures as well as contraindicated patients. Obtain a detailed history and a complete physical and laboratory examination, including a blood count. Patients should not exceed recommended dosage, should be closely supervised and should be warned to discontinue the drug and report immediately if fever, sore throat, or mouth lesions (symptoms of blood dyscrasia); sudden weight gain (water retention); skin reactions; black or tarry stools or other evidence of intestinal hemorrhage occur. Make complete blood counts at weekly intervals during early therapy and at 2-week intervals thereafter. Discontinue the drug immediately and institute countermeasures if the white count changes significantly, granulocytes decrease, or immature forms appear. Use greater care in the elderly and in hypertensives.

Adverse Reactions: The more common are nausea and edema. Swelling of the ankles or face may be minimized by withholding dietary salt, reduction in dosage or use of diuretics. In elderly patients and in those with hypertension the drug should be discontinued with the appearance of edema. The drug has been associated with peptic ulcer and may reactivate a latent peptic ulcer. The patient should be instructed to take doses immediately before or after meals or with milk to minimize gastric upset. Drug rash occasionally occurs. If it does, promptly discontinue the drug. Agranulocytosis, exfoliative derma-

Sandy sails again!
After an arthritic flare-up.

His rheumatoid arthritis flared out of aspirin control.
It meant weeks of pain, stiffness,
swelling and tenderness...and a lot of sun and wind that
somebody else took advantage of.

Next time, after aspirin, consider Butazolidin alka:
prompt anti-inflammatory effectiveness
short trial period
low maintenance dosage
usual dosage: 1 capsule q.i.d. initially, then 1 or 2 daily

Butazolidin® alka

100 mg. phenylbutazone
100 mg. dried aluminum hydroxide gel
150 mg. magnesium trisilicate

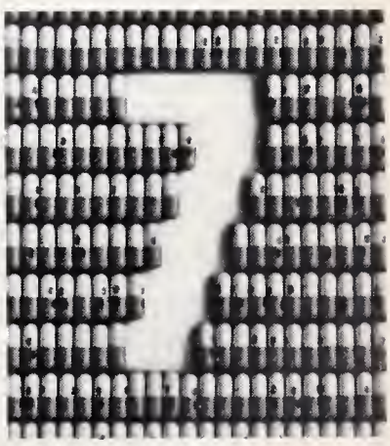
Serious side effects can occur. Select patients carefully (particularly the elderly) and follow them closely in line with the drug's precautions, warnings and contraindications. Read the prescribing information. It's summarized below.

titis, Stevens-Johnson syndrome, Lyell's syndrome (toxic necrotizing epidermolysis), or a generalized allergic reaction similar to serum sickness may occur and require permanent withdrawal of medication. Agranulocytosis can occur suddenly in spite of regular, repeated normal white counts. Stomatitis and, rarely, salivary gland enlargement may require cessation of treatment. Such patients should not receive subsequent courses of the drug. Vomiting, vertigo and languor may occur. Leukemia and leukemoid reactions have been reported. While not definitely attributable to the drug, a causal relationship cannot be excluded. Thrombocytopenic purpura and aplastic anemia may occur. Confusional states, agitation, headache, blurred vision, optic neuritis and transient hearing loss have been reported, as have hyperglycemia, hepatitis, jaundice, hypersensitivity angiitis, pericarditis and several cases of anuria, glomerulonephritis and hematuria. With long-term use, reversible thyroid hyperplasia may occur infrequently. Moderate lowering of the red cell count due to hemodilution may occur.

Dosage in Rheumatoid Arthritis: Initial: 3 to 6 capsules daily in 3 or 4 equal doses. Trial period: 1 week. Maintenance dosage should not exceed 4 capsules daily; response is often achieved with 1 or 2 capsules daily. In selecting the appropriate dosage in any specific case, consideration should be given to the patient's weight, general health, age and any other factors influencing drug response. (B)46-070-C

For complete details, please see full prescribing information.

Geigy Pharmaceuticals
Division of
Geigy Chemical Corporation
Ardsley, NewYork 10502



If it doesn't work in a week, forget it.

symptoms of mixed anxiety-depression are rarely clear-cut.
but they are often a clear indication for

Mellaril®
(thioridazine)
25 mg. t.i.d.

effective in mixed anxiety-depression and in moderate to severe anxiety

Before prescribing or administering, see Sandoz literature for full product information, including adverse reactions reported with phenothiazines. The following is a brief precautionary statement.

Contraindications: Severe central nervous system depression, comatose states from any cause, hypertensive or hypotensive heart disease of extreme degree.

Warnings: Administer cautiously to patients who have previously exhibited a hypersensitivity reaction (e.g., blood dyscrasias, jaundice) to phenothiazines. Phenothiazines are capable of potentiating central nervous system depressants (e.g., anesthetics, opiates, alcohol, etc.) as well as atropine and phosphorus insecticides. During pregnancy, administer only when necessary.

Precautions: There have been infrequent reports of leukopenia and/or agranulocytosis and convulsive seizures. In epileptic patients, anticonvulsant medication should also be maintained. Pigmentary retinopathy may be avoided by remaining within the recommended limits of dosage. Administer cautiously to patients participating in activities requiring complete mental alertness (e.g., driving). Orthostatic hypotension is more common in females than in males. Do not use epinephrine in treating drug-induced hypotension. Daily doses in excess of 300 mg. should be used only in severe neuropsychiatric conditions.

Adverse Reactions: *Central Nervous System*—Drowsiness, especially with large doses, early in treatment; infrequently, pseudoparkinsonism and other extrapyramidal symptoms; nocturnal confusion, hyperactivity, lethargy, psychotic reactions, restlessness, and headache. *Autonomic Nervous System*—Dryness of mouth, blurred vision, constipation, nausea, vomiting, diarrhea, nasal stuffiness, and pallor. *Endocrine System*—Galactorrhea, breast engorgement, amenorrhea, inhibition of ejaculation, and peripheral edema. *Skin*—Dermatitis and skin eruptions of the urticarial type, photosensitivity. *Cardiovascular System*—Changes in the terminal portion of the electrocardiogram have been observed in some patients receiving the phenothiazine tranquilizers, including Mellaril (thioridazine). While there is no evidence at present that these changes are in any way precursors of any significant disturbance of cardiac rhythm, several sudden and unexpected deaths apparently due to cardiac arrest have occurred in patients previously showing electrocardiographic changes. The use of periodic electrocardiograms has been proposed but would appear to be of questionable value as a predictive device. *Other*—A single case described as parotid swelling.

SANDOZ PHARMACEUTICALS, HANOVER, N.J. SANDOZ 69-384

1970 ACCREDITATION INSTITUTE

Texas Medical Association and Texas Hospital Association will join forces Saturday, Feb. 28, to sponsor the 1970 Accreditation Institute at the Terrace Motor Hotel in Austin. Presiding over the day's program will be John L. Morgan, chairman, THA Council on Professional Service, and administrator, Texas Scottish Rite Hospital for Crippled Children, Dallas. Special guest speaker will be Dr. George W. Graham, immediate past president of American Hospital Association; commissioner, Joint Commission on Accreditation of Hospitals; member, Standards Revision Committee of JCAH; and director, Ellis Hospital, Schenectady, N.Y. He will discuss "Joint Commission—Present and Future."

Other subjects scheduled for presentation and their speakers are "An Administrator Looks at Accreditation," Arthur L. McElmurry, FACHA, president, THA, and administrator, Wadley Hospital, Texarkana; "A Physician Looks at Accreditation," Dr. Walter Walthall, President-elect, TMA, and chairman of the board, Robert B. Green Memorial Hospital, San Antonio; "The Medical Staff and Accreditation," Dr. Drue O. D. Ware, chief, director of general practice, Harris Hospital, Fort Worth; "Dry Run Survey—A Valuable Tool in Meeting Accreditation Standards," Dr. William F. Ross, general practitioner, San Benito, and member, TMA Committee on Hospital Accreditation; and "A Legal Look at Accreditation," C. Dean Davis, THA Legal Counsel, Austin. A panel composed of all of the speakers will answer questions from the audience.

Registration for the institute is $10, including luncheon. Contact Bob English, THA, 6225 US Hwy. 290 E., Austin.

DALLAS SOUTHERN CLINICAL SOCIETY

The 39th Annual Spring Clinical Conference of the Dallas Southern Clinical Society will feature general assemblies, scientific exhibits, panel discussions, round table luncheons, technical exhibits, a dinner dance, postgraduate lectures, and informal breakfast discussions. To be held March 16-18 at the Statler Hilton Hotel in Dallas, the conference will be accepted for 19 elective hours of credit by the American Academy of General Practice. Twenty guest speakers from across the nation will speak on subjects of interest to the general practitioner as well as to the specialist and will cover cardiology, medicine, neurology, obstetrics-gynecology, orthopedic surgery, otolaryngology, pathology, pediatrics, proctology, psychiatry, radiology, surgery, thoracic surgery, and urology.

Registration fee for the meeting is $30. Contact: Millard J. Heath, 433 Medical Arts Bldg., Dallas 75201, executive officer.

TEXAS PUBLIC HEALTH ASSOCIATION

Those attending the first general assembly of the 45th annual meeting of the Texas Public Health Association Feb. 22-25 at the Commodore Perry and Stephen F. Austin hotels in Austin will hear presentations by Dr. J. E. Peavy, commissioner, Texas State Department of Health; Dr. Charles Max Cole, President, Texas Medical Association, and Ardis D. Gaither, TPHA president. Guest speakers at the general assemblies will discuss prospective legislation in the health field in 1970, comprehensive health planning, public health implications of the Texas nutrition survey, dental health needs in Texas, progress of the rubella vaccination program, reduction of the incidence of measles in Texas, and drug addiction control.

Contact: Joseph N. Murphy, Jr., Box 5192, Austin 78703, executive officer.

HIGHLIGHTS OF COMING MEETINGS

CURRENT MEETINGS IN TEXAS

HOUSTON GROUP PSYCHOTHERAPY SOCIETY's Annual Institute is scheduled for March 21-22 in Houston. Dr. Emanuel K. Schwartz, coauthor of *Psychoanalysis in Groups*, will be the principal speaker. Two-hour sessions in groups of from eight to ten participants to be led by two experienced group psychotherapists will follow Dr. Schwartz's lectures each day. A luncheon meeting is planned for Sunday, March 22. Contact: Dr. James C. Heald, 6436 Fannin, Houston 77025, president.

HOUSTON SOCIETY OF CLINICAL PATHOLOGISTS will hold its 10th Annual Pathology-Radiology Seminar March 28 at the Texas Children's Hospital Auditorium. To be conducted by Dr. Averill A. Liebow, professor of pathology, University of California at San Diego, and Richard Greenspan, professor of radiology, University of California Medical School at San Francisco, the seminar will cover "Pulmonary and Mediastinal Lesions." Slide sets, protocols, and prints of x-rays are available at $12.50 per set. Contact: Dr. Don B. Singer, Department of Pathology, Texas Children's Hospital, Houston 77025, chairman.

NINTH DISTRICT MEDICAL SOCIETY will hold its March 5 meeting at the NASA Manned Space Craft Center in Houston. Talks by physicians connected with the Manned Space Craft Center will highlight the meeting, which will include a luncheon at King's Inn near the center. Contact: Dr. William H. Bridges, 1105 Decker Drive, Baytown 77520, secretary.

RADIATION RESEARCH SOCIETY OF AMERICA will convene at the Statler Hilton Hotel in Dallas March 1-5 for its 1970 annual meeting. The general session will feature a program on environmental pollutants; and symposia, refresher courses, and special lectures are scheduled throughout the five-day meeting. Contact: Dr. Mary E. Gaulden (PhD), associate professor of radiology, The University of Texas Southwestern Medical School, 5323 Harry Hines Blvd., Dallas 75235, chairman.

SCOTT AND WHITE CONFERENCE IN MEDICINE AND SURGERY will take place Feb. 27-28 at the Veterans Administration Hospital Auditorium in Temple. Program for the 18th annual meeting will include sessions on laboratory aids to clinical diagnosis, 40-minute scientific demonstrations, and speakers on adverse drug reactions. A luncheon is also planned. Contact Scott and White Memorial Hospital, 2401 S. 31st St., Temple, for further information.

SOUTH CENTRAL ASSOCIATION OF BLOOD BANKS will meet at the Rice Hotel in Houston March 12-14 for its 12th annual convention. A preconvention session on March 12 will include an administrative workshop with moderator and panelists and an afternoon seminar on

"Hemolytic Disease," at which case histories will be presented. Speakers from throughout the United States will address general audiences on Friday and Saturday, March 13 and March 14; and a luncheon is planned on Friday. Contact: Mrs. Elsie Howard, 2109 Commerce St., Dallas 75201, executive secretary.

TEXAS UROLOGICAL SOCIETY will meet Feb. 27-28 at the Holiday Inn Emerald Beach Hotel in Corpus Christi. Program will include scientific papers by Dr. James F. Glenn, professor and chairman of the department of urology, Duke University, and Dr. Raymond Bunge, associate professor of urology, University of Iowa. A panel composed of the urology department heads of Texas' four medical schools will discuss management of prostatic carcinoma, and Dr. Harry M. Spence of Dallas will moderate a pyelogram conference. Urologists from Arkansas, Oklahoma, New Mexico, and Louisiana will be invited, and a variety of entertainment is planned. Contact Dr. James I. Tyree, Professional Building, 1209 Santa Fe, Corpus Christi, secretary-treasurer.

CURRENT REGIONAL MEETING

NEW ORLEANS GRADUATE MEDICAL ASSEMBLY will convene for its 33rd annual meeting March 2-5 at the Roosevelt Hotel in New Orleans. Nineteen guest speakers will participate in the program, which will include 50 discussions on topics of current medical interest in addition to a clinicopathologic conference, symposia, medical motion pictures, round table luncheons, and technical exhibits. The program is acceptable for 22 prescribed hours and nine elective hours of credit by the American Academy of General Practice. A one-day pre-assembly symposium on March 1 on "The Price of Medical Progress" is acceptable for six prescribed hours of credit by the AAGP. Also scheduled is interesting entertainment for participants' wives. Contact: Mrs. Irma B. Sherwood, 1430 Tulane Ave., New Orleans 70112, executive secretary.

CURRENT NATIONAL MEETINGS

AMERICAN ASSOCIATION OF ANATOMISTS will conduct its 83rd annual meeting March 31-April 3 in Chicago in conjunction with Northwestern University Medical School. Demonstrations, scientific papers, and commercial exhibits will be presented; and two symposia on topics of general interest are planned. A keynote address will be delivered by an outstanding scientist at the general session, and a smoker and an annual banquet are scheduled. Special activities, including a gallery talk and luncheon at the Art Institute of Chicago, have been planned for the wives. Contact: Dr. Russell T. Woodburne (PhD), Department of Anatomy, The University of Michigan, 4643 Medical Sciences Bldg., Ann Arbor, Mich. 48104, secretary-treasurer.

AMERICAN COLLEGE OF ALLERGISTS's Pre-Congress Seminar and 26th Annual Congress will take place March 16-20 at the Americana Hotel in Bal Harbour, Fla. Psychosomatic allergy, neurologic allergy, aerobiology, pediatric allergy, technology, dermatologic allergy, and bronchopulmonary sections have planned programs including speakers, panel discussions, and presentations of papers. Featured guest speaker will be Dr. Gerald D. Dorman, President of the American Medical Association. His topic will be "The American Medical Association and the Specialty Societies," and he will speak at the Past President's Luncheon. A President's reception and social hour and a banquet will also be held. Physicians will be able to choose from a variety of round table discussion luncheon sessions. Special entertainment is planned for wives by the Women's Auxiliary. There is no registration charge for members, physicians in the armed forces, or residents and interns. Fee for nonmembers is $10. Contact: Dr. John D. Gillaspie, 2141 14th St., Boulder, Colo. 80302, executive secretary and treasurer.

AMERICAN COLLEGE OF CARDIOLOGY will sponsor its 19th annual Scientific Session Feb. 25-March 1 at the Rivergate Center in New Orleans, La. Major scientific symposia will include such topics as surgery for complications of myocardial infarctions and cardiac valve substitution and pulmonary circulation. A core curriculum in clinical cardiology and a self-assessment classroom will be new features at this year's meeting. Special panel discussions called Controversies in Cardiology will feature discussions by authorities on opposing sides of current issues, including prevention of atherosclerosis, homografts v. prosthetic heart valves, alcoholic heart disease, and surgery for coronary disease. Participants at the session will be able to attend a choice of 20 evening Fireside Conferences, 21 luncheon panels, clinical conversations with master teachers, and a round of clinics and demonstrations arranged with hospitals and medical schools in the New Orleans area. Write to William D. Nelligan, Executive Director, 9650 Rockville Pike, Bethesda, Md. 20014, for further information.

AMERICAN COLLEGE OF SURGEONS has scheduled its annual combined meeting for surgeons and nurses March 16-18 at the Sheraton Park Hotel in Washington, D.C. The session will include panel discussions, "how-to-do-it" clinics, and symposia on newer ways of handling surgical problems. Scientific papers and selected films will also be presented. In addition to general surgery sessions, there will be programs in seven specialties, gynecology-obstetrics, neurosurgery, ophthalmology, otolaryngology, plastic surgery, and urology. General surgery topics include complications of gastrointestinal surgery, surgery of the esophagus, advances in chemotherapy, and renal transplantation. Specialty subjects include management of neurogenic bladder, the child with middle ear effusion, tumors of the larynx, glaucoma—when and how to operate, infertility in the female, amniotic fluid studies, microinvasive carcinoma, management of combat facial wounds, treatment of the arthritic hand, modern concepts in the treatment of osteomyelitis, and long-term results of cervical disc surgery. Contact: Dr. C. Rollins Hanlon, 55 E. Erie St., Chicago 60611, director.

AMERICAN FERTILITY SOCIETY announces its annual scientific meeting and third postgraduate course to be held March 18-20, 1970, at the Washington-Hilton Hotel, Washington, D.C. Seminars on the physiology and treatment of ovulatory defects, surgical approach to infertility problems, how to evaluate the infertile couple, the male factor, the role of the brain and nervous system in human reproduction, advances in basic reproductive physiology, chromosomal abnormalities and genetic counseling in infertility problems, and family planning and problems of contraception will be included, as well as round table discussions. Registration fee will be $75 for the postgraduate course, including meals, and $20 for the meeting. Contact: Dr. Herbert H. Thomas, 944 S. 18th St., Birmingham, Ala. 35205, secretary.

MORE HIGHLIGHTS OF COMING MEETINGS

■ Denotes Texas meetings.

ALSO IN FEBRUARY

AMERICAN BOARD OF FAMILY PRACTICE, INC., examination for certification, Feb. 28-March 1, 1970. Dr. Nicholas J. Pisacano, American Board of Family Practice, Inc., University of Kentucky Medical Center, Annex #2, Room 229, Lexington 40506, Sec.

AMERICAN SOCIETY OF CLINICAL HYPNOSIS, New Orleans, Feb. 20-22, 1970. F. D. Nowlin, 800 Washington Ave., S.E. Minneapolis, Minn., 55414, Exec. Sec.

■ AMERICAN SOCIETY OF CLINICAL PATHOLOGISTS and COLLEGE OF AMERICAN PATHOLOGISTS, Houston, Feb. 23-28, 1970. Albert G. Boeck, 710 S. Wolcott, Chicago, Exec. Dir.

ALSO IN MARCH

■ AMERICAN COLLEGE OF RADIOLOGY, Dallas, March 3-4, 1970. William C. Stronach, 20 N. Wacker Dr., Chicago 60606, Exec. Dir.

AMERICAN DERMATOLOGICAL ASSOCIATION, Boca Raton, Fla., March 19-24, 1970. Dr. Charles Barrett Kennedy, 1542 Tulane Ave., New Orleans 70115, Exec. Sec.

■ BLUE CROSS-BLUE SHIELD SYMPOSIUM, Dallas, March 24, 1970; Fort Worth, March 25, 1970. Tom L. Beauchamp, Jr., Blue Cross Bldg., Main at N. Central Expwy., Dallas 75222, Pres.

SOUTHWESTERN SOCIETY OF NUCLEAR MEDICINE, Oklahoma City, March 13-15, 1970. Dr. Herbert C. Allen, Jr., 100 Hermann Professional Bldg., Houston 77025, Sec.

■ TEXAS ASSOCIATION OF OBSTETRICIANS & GYNECOLOGISTS, Houston, March 6-7, 1970. Dr. J. L. Jinkins, Jr., 200 University Blvd., Suite 921, Galveston 77550, Sec.

US-MEXICO BORDER PUBLIC HEALTH ASSOCIATION, Mexicali, Baja Calif., March 16-20, 1970. Dr. Jorge Jimenez-Gandica, Sec.

APRIL

AEROSPACE MEDICAL ASSOCIATION, St. Louis, Mo., April 27-30, 1970. Dr. Merrill H. Goodman, Washington National Airport, Washington, D.C., Exec. Vice Pres. and Sec.

AMERICAN ACADEMY OF NEUROLOGY, Miami Beach, Fla., April 27-May 2, 1970. Stanley A. Nelson, 4005 W. 65th St., Minneapolis 55435, Exec. Officer.

AMERICAN ACADEMY OF PEDIATRICS, Washington, D.C., April 13-16, 1970. Dr. Robert G. Frazier, 1801 Hinman Ave., Evanston, Ill. 60204, Exec. Dir.

AMERICAN ASSOCIATION FOR THORACIC SURGERY, Washington, D.C., April 6-8, 1970. Miss Ada Hanvey, 7710 Carondelet Ave., St. Louis, Mo. 63105, Exec. Officer.

■ AMERICAN COLLEGE OF ALLERGISTS, seminar on allergy and immunology, Children's Medical Center, Dallas, April 10-12, 1970. Dr. John D. Gillaspie, The American College of Allergists, 2141 14th St., Boulder, Colo. 80302, Exec. Sec. and Treas.

AMERICAN COLLEGE OF OBSTETRICIANS AND GYNECOLOGISTS, New York City, April 12-18, 1970. Dr. Michael Newton, 79 W. Monroe St., Chicago 60603, Exec. Officer.

AMERICAN COUNCIL OF OTOLARYNGOLOGY, Hollywood Beach, Fla., April 19, 1970. Executive Officer, 100 17th St., N.W., Washington, D.C.

AMERICAN MEDICAL ASSOCIATION, 23rd National Conference on Rural Health, Milwaukee, Wis., April 9-10, 1970. Dr. Bond L. Bible (PhD), Council on Rural Health, American Medical Association, 535 N. Dearborn St., Chicago 60610, Sec.

AMERICAN PEDIATRIC SOCIETY, Atlantic City, N.J., April 29-May 2, 1970. Dr. Charles D. Cook, 333 Cedar St., New Haven, Conn. 06510, Exec. Sec.

■ AMERICAN PHYSICAL THERAPY ASSOCIATION: TEXAS CHAPTER, Corpus Christi, April 24-26, 1970; Hilda McKethan, 4162 Monaco Dr., Corpus Christi 78411, Chm.

AMERICAN PROCTOLOGIC SOCIETY, Hollywood, Fla., April 12-16, 1970. Dr. John E. Ray, 320 W. Lafayette, Detroit, Mich., Sec.

ASSOCIATION OF AMERICAN PHYSICIANS AND SURGEONS, INC., House of Delegates, Chicago, April 3-4, 1970. Frank K. Woolley, 230 N. Michigan Ave., Chicago 60601, Exec. Dir.

■ EIGHTH DISTRICT MEDICAL SOCIETY, Lake Jackson, Tex., April, 1970. Dr. Clinton E. Woodson, 2100 N. Fulton St., Wharton, Tex. 77488, Sec.

FIRST INTERNATIONAL CONGRESS ON GROUP MEDICINE, Winnipeg, Manitoba, Canada, April 26-30, 1970. Mrs. D. Sorell, 425 St. Mary Ave., Winnipeg 1, Manitoba, Canada, Exec. Sec.

■ FORT WORTH CLINICAL SYMPOSIUM, Fort Worth, April 17-19, 1970. Dr. John S. Alexander, 1217 W. Cannon, Fort Worth 76104, Sec.

INDUSTRIAL MEDICAL ASSOCIATION and AMERICAN ASSOCIATION OF INDUSTRIAL NURSES, American Industrial Health Conference, Chicago, April 13-16, 1970. Howard N. Schulz, 55 E. Washington St., Chicago 60602, Exec. Dir.

INTERNATIONAL COLLEGE OF SURGEONS, Paris, France, April 20-24, 1970. Dr. Aldo Parentela, 1516 N. Lake Shore, Chicago 60610, International Exec. Officer.

■ SANTA ROSA MEDICAL CENTER, THE CHILDREN'S HOSPITAL, Eighth Annual Teaching Conference, San Antonio, April 4-5, 1970. Chairman, Department of Pediatrics, The Children's Hospital, Santa Rosa Medical Center, San Antonio 78207.

■ SOUTHWESTERN SURGICAL CONGRESS, Dallas, April 20-23, 1970. Dr. Jack A. Barney, 301 Pasteur Bldg., Oklahoma City 73103, Sec.-Treas.

■ TEXAS ACADEMY OF GENERAL PRACTICE, Valley Chapter, Third Annual Medical-Surgical Conference, Harlingen, April 3-5, 1970. Dr. Rudolph C. Hecht, Box 838, La Feria, Tex. 78559.

■ TEXAS DENTAL ASSOCIATION, Fort Wortb, April 26-29, 1970. Bill B. Howard, 3707 Gaston Ave., Dallas 75246, Exec. Sec.

■ TEXAS INDUSTRIAL MEDICAL ASSOCIATION, Dallas, April, 1970. Dr. Carolyn K. Veatch, 4837 Merrimac, Corpus Christi 78415, Sec.

■ TEXAS MEDICAL ASSOCIATION, Annual Session, Dallas, April 30-May 3, 1970. C. Lincoln Williston, 1801 N. Lamar Blvd., Austin 78701, Exec. Sec.

■ TEXAS PROCTOLOGIC SOCIETY, Dallas, April, 1970. Dr. James M. Hampton, 448 Hermann Professional Bldg., Houston 77025, Sec.-Treas.

■ TEXAS SOCIETY OF CHILD PSYCHIATRY, Brownsville, Tex., April 17-18, 1970. Dr. Alberto C. Serrano, 2135 Babcock Rd., San Antonio, Sec.

■ TEXAS STATE BOARD OF EXAMINERS IN THE BASIC SCIENCES, examination, Dallas, Galveston, Houston, and San Antonio, April 10-11, 1970. Dr. Paul C. Witt (PhD), 1012 State Office Bldg., Austin 78701, Pres.

■ TEXAS SURGICAL SOCIETY, Austin, April 5-7, 1970. Dr. Jesse E. Thompson, 3434 Swiss Ave., Dallas 75204, Sec.

■ TEXAS TUBERCULOSIS AND RESPIRATORY DISEASE ASSOCIATION, Lubbock, April 2-4, 1970. Mrs. Pauline K. Matthis, 2402 Manor Rd., Austin, Exec. Officer.

■ 13TH DISTRICT MEDICAL SOCIETY, Wichita Falls, Tex., April 11, 1970. Dr. William H. Neil, 800 Fifth Ave., Fort Worth 76104, Sec.

UNITED STATES PHARMACOPEIAL CONVENTION, INC., Washington, D.C., April 8-10, 1970. Dr. Arthur C. DeGraff, 4630 Montgomery Ave., Bethesda, Md. 20014, Pres.

MAY

■ AMERICAN ACADEMY OF PEDIATRICS, TEXAS CHAPTER, Dallas, May 1, 1970. Dr. William S. Conkling, 500 E. Washington, Navasota 77868, Sec.

AMERICAN ACADEMY OF PSYCHOANALYSIS, San Francisco, May 8-10, 1970. Dr. Sidney S. Goldensohn, 40 Gramercy Park No., New York 10010, Sec.

AMERICAN CANCER SOCIETY, Ninth Annual Seminar on Cancer of the Breast, Denver, May 14-16, 1970. Dr. Wendell P. Stampfli, Director of Radiology, St. Luke's Hospital, Denver, Chrm.

■ AMERICAN COLLEGE OF SURGEONS, NORTH TEXAS CHAPTER, May 16, 1970. Dr. Ernest Poulos, 6140 Sherry Lane, Dallas 75225, Sec.-Treas.

AMERICAN PSYCHIATRIC ASSOCIATION, San Francisco, May 11-15, 1970. Dr. Walter E. Barton, 1700 18th St. NW, Washington, D.C. 20009, Exec. Officer.

■ AMERICAN PSYCHIATRIC ASSOCIATION, TEXAS DISTRICT BRANCH, Dallas, May, 1970. Mrs. Iris Wenzel, 1801 N. Lamar Blvd., Austin 78701, Exec. Sec.

AMERICAN THORACIC SOCIETY, Cleveland, May 24, 1970. Robert G. Weymueller, 1790 Broadway, New York 10019, Exec. Officer.

AMERICAN UROLOGICAL ASSOCIATION, Philadelphia, May 11-14, 1970. Richard J. Hannigan, 1120 N. Charles St., Baltimore, Exec. Officer.

■ CONFERENCE OF CITY AND COUNTY HEALTH OFFICERS, Dallas, May, 1970. Dr. J. E. Peavy, 1100 W. 49th St., Austin 78756, Texas State Commissioner of Health.

INTERNATIONAL ACADEMY OF PROCTOLOGY, Spain, May 13-22, 1970. Executive Office, 147-41 Sanford Ave., Flushing, N.Y. 11355.

■ INTERNATIONAL CANCER CONGRESS, Houston, May 22-29, 1970. Dr. Murray M. Copeland, Office of the Secretariat, Tenth International Cancer Congress, P.O. Box 20465, Astrodome Station, Houston 77025, Sec. General.

MEDICAL LIBRARY ASSOCIATION, New Orleans, May 17-22, 1970. Mrs. Helen Brown Schmid, 919 N. Mich. Ave., Chicago 60611, Exec. Officer.

NATIONAL TUBERCULOSIS AND RESPIRATORY DISEASE ASSOCIATION, Cleveland, Ohio, May 24, 1970. Dr. James E. Perkins, NTRDA, 1740 Broadway, New York 10019, Exec. Officer.

■ NATIONAL LEAGUE FOR NURSING, Dallas, May 10-14, 1970. Mrs. Margaret E. Walsh, 10 Columbus Circle, New York 10019, Sec.

NEW MEXICO REGIONAL MEDICAL PROGRAM and AMERICAN HEART ASSOCIATION, NEW MEXICO CHAPTER, Symposium on Stroke, Albuquerque, N.M., May 22-23, 1970. Mrs. Elizabeth M. Barnett, Continuing Education, The University of New Mexico School of Medicine, Albuquerque 87106, Coordinator.

■ ST. LUKE'S EPISCOPAL SYMPOSIUM, Houston, May 14-16, 1970. Dr. Donald T. Lazarz, 1817 Dryden, Houston 77025, Pres.

STUDENT AMERICAN MEDICAL ASSOCIATION, Philadelphia, May 5-9, 1970. Russell F. Staudacher, 2635 Flossmoor Rd., Flossmoor, Ill. 60422, Exec. Dir.

■ TEXAS AIR-MEDICS ASSOCIATION, Dallas, May 2, 1970. Dr. C. F. Miller, Box 1338, Waco 76703, Sec.

■ TEXAS DERMATOLOGICAL SOCIETY, Dallas, May 2-3, 1970. Dr. Coleman G. Jacobson, 3707 Gaston, Dallas, 75246, Sec.

■ TEXAS HOSPITAL ASSOCIATION, Houston, May 17-20, 1970. O. Ray Hurst, P. O. Box 4553, Austin 78751, Exec. Vice Pres.

■ TEXAS MEDICAL ASSISTANTS ASSOCIATION, Baytown, May 21-24, 1970. Faye Gibson, 5401 41st St., Lubbock, Sec.

■ TEXAS OPHTHALMOLOGICAL ASSOCIATION, Dallas, May 1, 1970. Dr. John C. Kuppinger, 1515 Ed Carey Dr., Harlingen 78550, Sec.

■ TEXAS ORTHOPAEDIC ASSOCIATION, Dallas, May 2, 1970. Dr. John J. Hinchey, 1A Medical Professional Bldg., San Antonio 78212, Exec. Officer.

■ TEXAS OTOLARYNGOLOGICAL ASSOCIATION, Dallas, May, 1970. Dr. James L. Baldwin, 712 N. Washington, Dallas 75246, Sec.

■ TEXAS SOCIETY OF ATHLETIC TEAM PHYSICIANS, Dallas, May 1, 1970. Dr. John B. Gunn, 2618 Welborn St., Dallas 75219.

■ TEXAS SOCIETY OF PLASTIC SURGEONS, Dallas, May 2, 1970. Dr. E. Frank Dunton, 3434 Swiss Ave., Suite 104, Dallas 75204, Sec.

■ TEXAS STATE DEPARTMENT OF HEALTH, 20th Annual Southwestern Conference on Diseases in Nature Transmissible to Man, Austin, May 7-8, 1970. Dr. J. V. Irons (ScD), Director of Laboratories, Texas State Department of Health, 1100 W. 49th St., Austin 78756.

■ THE UNIVERSITY OF TEXAS NURSING SCHOOL, Dynamics of the Interviewing Process, Austin, May 18-20, 1970; Principles of Management in Nursing Care, McAllen, May 26-27, 1970. Dorothy Blume, Continuing Education, The University of Texas Nursing School, Austin 78712, Dir.

JUNE

AMERICAN MEDICAL SOCIETY ON ALCOHOLISM, Chicago, June 23-24, 1970. Dr. Frank A. Seixas, National Council on Alcoholism, 2 Park Ave., New York 10016, Sec.

AMERICAN RHEUMATISM ASSOCIATION SECTION OF THE ARTHRITIS FOUNDATION, Detroit, Mich., June 18-19, 1970. Margaret M. Walsh, 1212 Ave. of the Americas, New York, Exec. Sec.

■ TEXAS ACADEMY OF GENERAL PRACTICE, Fort Worth, June 7-10, 1970. Donald C. Jackson, 1905 Lamar, Austin, Exec. Officer.

■ TEXAS STATE BOARD OF MEDICAL EXAMINERS, Fort Worth, June 15-17, 1970. Dr. M. H. Crabb, 1612 Summit Ave., Suite 303, Fort Worth, 76102, Sec.

■ THE UNIVERSITY OF TEXAS NURSING SCHOOL, Dynamics of the Interviewing Process, Amarillo, June 1-3, 1970; Galveston, June 8-10, 1970. Dorothy Blume, Continuing Education, The University of Texas Nursing School, Austin 78712, Dir.

JULY

■ POSTGRADUATE MEDICAL ASSEMBLY OF SOUTH TEXAS, Houston, July 27-29, 1970. Mrs. Betty Dahme, 209 Jesse H. Jones Library Building, Houston 77025, Exec. Sec.

ROCKY MOUNTAIN CANCER CONFERENCE, Denver, July 17-18, 1970. F. C. Schmidt, 1764 Gilpin St., Denver 80218, Exec. Officer.

SOCIETY OF NUCLEAR MEDICINE, Washington, D.C., July 6-12, 1970. Margaret Gloss, 211 E. 43rd St., New York 10017, Exec. Officer.

■ TEXAS PHARMACEUTICAL ASSOCIATION, Dallas, July 26-29, 1970. Luther R. Parker, 404 Austin Savings Bldg., Austin, Exec. Officer.

■ THE UNIVERSITY OF TEXAS NURSING SCHOOL, The Changing Role in Mental Health Nursing—A New Dimension: Family Systems and Therapy, San Antonio, July 9-10, 1970. Dorothy Blume, Continuing Education, The University of Texas Nursing School, Austin 78712, Dir.

AUGUST

AMERICAN COLLEGE OF CHEST PHYSICIANS, 11th International Congress, Lausanne, Switzerland, Aug. 3-7, 1970. Alfred Soffer, 112 E. Chestnut St., Chicago, Exec. Dir.

AMERICAN CONGRESS OF REHABILITATION MEDICINE, New York, Aug. 16-21, 1970. Creston C. Herold, 30 N. Michigan Ave., Chicago 60602, Exec. Dir.

THE UNIVERSITY OF WISCONSIN, Ninth National Conference on Therapies for Advanced Cancers, Madison, Wis., Aug. 20-22, 1970. Dr. Robert J. Samp, Assistant Professor of Surgery and Clinical Oncology, University Hospitals, Madison, Wis. 53706, Program Coordinator.

SEPTEMBER

AMERICAN ACADEMY OF GENERAL PRACTICE, San Francisco, Sept. 25-Oct. 1, 1970. Mac F. Cahal, Volker Blvd. at Brookside, Kansas City, Mo., Exec. Dir.

■ AMERICAN HEART ASSOCIATION, TEXAS AFFILIATE, INC., Dallas, Sept. 15-20, 1970. Dudley H. Hafner, Box 9928, 8600 Hwy. 183 N., Austin 78757, Exec. Officer.

■ AMERICAN HOSPITAL ASSOCIATION, Houston, Sept. 14-17, 1970. James E. Hague, 840 N. Lake Shore Drive, Chicago, Sec.

AMERICAN MEDICAL WRITERS ASSOCIATION, New York, Sept. 24-27, 1970. W. Wayne Curtis, 420 Lexington Ave., New York 10017, Exec. Officer.

ASSOCIATION OF LIFE INSURANCE MEDICAL DIRECTORS OF AMERICA, Boston, Sept. 28-30, 1970. Dr. Arthur E. Brown, c/o ALIMDA, P.O. Box 594, Newark, N.J.

■ TEXAS PEDIATRIC SOCIETY, Fort Worth, Sept. 24-26, 1970. Dr. Pat A. Cato, 1015 E. 32nd St., Austin 78705, Sec.

OCTOBER

AMERICAN ACADEMY OF CLINICAL TOXICOLOGY, San Francisco, Oct. 24-26, 1970. Dr. Eric G. Comstock, P. O. Box 2565, Houston 77001, Exec. Dir.

AMERICAN ACADEMY OF OPHTHALMOLOGY AND OTOLARYNGOLOGY, Las Vegas, Nev., Oct. 5-9, 1970. Dr. C. M. Kos, 15 2nd St., S.W., Rochester, Minn. 55901, Exec. Sec.-Treas.

AMERICAN ASSOCIATION OF BLOOD BANKS, San Francisco, Oct. 25-29, 1970. Lois J. James, 30 N. Mich. Ave., Chicago, Central Office Mgr.

AMERICAN ASSOCIATION OF MEDICAL ASSISTANTS, Des Moines, Iowa, October, 1970. Pauline M. Hunter, 5652 N. 10th St., Phoenix, Ariz., Sec.

AMERICAN COLLEGE OF CHEST PHYSICIANS, Annual Meeting, Los Angeles, Oct. 25-30, 1970. Alfred Soffer, 112 E. Chestnut St., Chicago, Exec. Dir.

AMERICAN COLLEGE OF GASTROENTEROLOGY, New York, Oct. 25-31, 1970. Daniel Weiss, 299 Broadway, New York 10007, Exec. Officer.

AMERICAN COLLEGE OF SURGEONS, Chicago, Oct. 12-16, 1970. Dr. C. Rollins Hanlon, 55 E. Erie St., Chicago 60611, Dir.

AMERICAN DIETETIC ASSOCIATION, Cleveland, Ohio, Oct. 5-9, 1970. Ruth M. Yakel, 620 N. Michigan Ave., Chicago 60611, Exec. Dir.

■ AMERICAN PUBLIC HEALTH ASSOCIATION, Houston, Oct. 26-30, 1970. Berwyn F. Mattison, 1790 Broadway, New York 10019, Exec. Dir.

AMERICAN SOCIETY OF ANESTHESIOLOGISTS, New York, Oct. 17-21, 1970. John W. Andes, 515 Busse Hwy., Park Ridge, Ill., Exec. Sec.

ASSOCIATION OF AMERICAN PHYSICIANS AND SURGEONS, INC., Richmond, Va., Oct. 1-3, 1970. Frank K. Woolley, 230 N. Michigan Ave., Chicago 60601, Exec. Dir.

■ EASTER SEAL SOCIETY FOR CRIPPLED CHILDREN & ADULTS OF TEXAS, INC., San Antonio, Oct. 8-10, 1970. William E. Russell 4429 N. Central Expwy., Dallas, Exec. Dir.

OKLAHOMA CITY CLINICAL SOCIETY, Oklahoma City, Oct. 26-28, 1970. Mrs. Alma O'Donnell, 601 NW Expwy., Oklahoma City 73118.

SOUTHERN PSYCHIATRIC ASSOCIATION, West Palm Beach, Fla., Oct. 4-6, 1970. Mrs. Annette S. Boutwell, P.O. Box 10387, Raleigh, N. C. 27605, Exec. Sec.

Senior Consultants
Perry C. Talkington, M.D.
Charles L. Bloss, M.D.

Psychiatrist-in-Chief
Howard M. Burkett, M.D.

Medical Director
James K. Peden, M.D.

Associate Psychiatrists
Jerry M. Lewis, M.D.
Claude L. Jackson, M.D.
Dode Mae Hanke, M.D.
Thomas H. Allison, M.D.
Maurice S. Green, M.D.
Doyle I. Carson, M.D.
Stanley L. Seaton, M.D.
Keith H. Johansen, M.D.
Charles G. Markward, M.D.
Joe W. King, M.D.
Claude R. Nichols, M.D.
Larry E. Tripp, M.D.
Aretta J. Rathmell, M.D.
Donald N. Offutt, M.D.

Clinical Psychology
David H. Lipsher, Ph.D.
John T. Gossett, Ph.D.
Dale R. Turner, Ph.D.
Robert W. Hagebak, Ph.D.

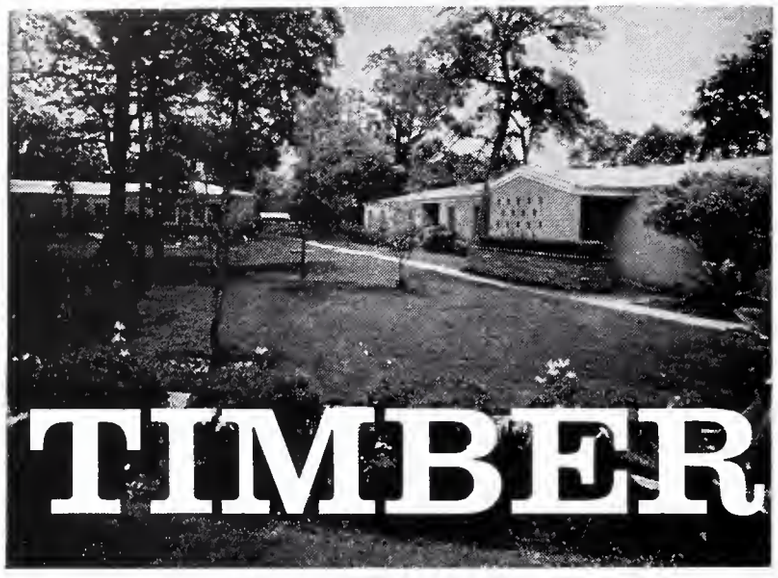
Social Work
Sally Stansfield, M.S.W.
Robert O'Connor, M.S.S.W.
Kathleen Wood, M.S.W.
Margie W. Buell, M.S.S.W.
Robert P. Stewart, M.S.S.W.
Cecilia Coffelt, M.S.S.W.

Occupational Therapy
Geraldine Skinner, B.S., O.T.R., Director

Recreational Therapy
Lois Timmins, Ed.D., Director

Director of Nurses
Mae Belle James, R.N.

Business Manager
Ralph M. Barnette, B.B.A.



PSYCHIATRIC HOSPITAL

DAY HOSPITAL

DEPARTMENT OF OUT PATIENT PSYCHIATRY

DEPARTMENT OF ADOLESCENT PSYCHIATRY

Narcotic Cases Not Admitted

TIMBERLAWN
PSYCHIATRIC HOSPITAL

381-7181 Dallas, Texas 75223 P. O. Box 11288

KELSEY-SEYBOLD CLINIC

6624 FANNIN STREET HOUSTON, TEXAS 77025

526-2671

INTERNAL MEDICINE

Endocrine and Metabolic Diseases
Mavis P. Kelsey, M.D., F.A.C.P.
Alfred E. Leiser, M.D., F.A.C.P.
E. Peter Pequegnat, M.D., F.R.C.P.(C)

Pulmonary Diseases
H. Irving Schweppe, Jr., M.D., F.A.C.P.
Stanton P. Fischer, M.D., F.A.C.P.

Gastrointestinal Diseases, Gastroscopy
John R. Kelsey, M.D., F.A.C.P.
Philip S. Bentlif, M.D., F.A.C.P.
Ralph D. Eichhorn, M.D., F.A.C.P.
F. Scott O'Neil, M.D. F.A.C.P.
James W. McBee, M.D., F.A.C.P.

Heart Disease and Cardiac Catheterization
Earl F. Beard, M.D., F.A.C.P.
Efrain Garcia, M.D., F.A.C.P.
Wayne E. Dear, M.D.

Arthritis and Rheumatic Diseases
James W. Kemper, M.D., F.A.C.P.

Hypertension and Peripheral Vascular Diseases
Gene E. Burke, M.D.

Cancer Chemotherapy
Carlos F. Taboada, M.D.

Nephrology
Francis X. Schloeder, M.D., F.A.C.P.

Hematology
Jerome B. Bart, M.D.

Infectious Diseases
Stuart Riggs, M.D., F.A.C.P.

Occupational Health Services
Paul E. Wright, M.D., M.P.H., F.A.C.P.
Maurice B. Johnston, M.D., F.A.C.Pr.M.
Richard M. Fenno, M.D., M.P.H., F.A.C.P.
Cannon A. Owen, M.D., F.A.C.S.
Edward A. Anderson, M.D., F.A.C.Pr.M.
William E. Froemming, M.D., F.A.C.P., F.A.C.Pr.M.

GENERAL & THORACIC SURGERY
William D. Seybold, M.D., F.A.C.S.
James D. McMurrey, M.D., F.A.C.S.
Jerry L. Doggett, M.D.

OBSTETRICS & GYNECOLOGY
Melville L. Cody, M.D., F.A.C.S.
William A. Johnson, III, M.D.

PSYCHIATRY
Chester G. Cochran, M.D.
*Ricardo Daichman, M.D.
William H. Boylston, M.D.

PEDIATRICS
Rheumatology
Earl J. Brewer, Jr., M.D., F.A.A.P.

Allergy
Charles W. Ewing, M.D., F.A.A.P.

OTO-LARYNGOLOGY
J. Charles Dickson, M.D., F.A.C.S.
James L. Smith, M.D., F.A.C.S.
Joseph S. Weycer, M.D.

NEUROLOGY
Robert R. Pierce, M.D.

DERMATOLOGY
Wilson M. Fraser, M.D., F.A.A.P.
Donald W. Owens, M.D.

UROLOGY
Don W. Pranke, M.D., F.A.C.S.
J. David Wright, M.D.

ORTHOPEDIC SURGERY
W. Malcolm Granberry, M.D.
Jesse H. Dickson, M.D.

OPHTHALMOLOGY
Henry E. Wahlen, M.D., D.A.B.O.

RADIOLOGY
David M. Rulfs, M.D.
John D. Brooks, M.D.

PATHOLOGY
Robert A. Jordan, M.D.

DENTISTRY
Eugene W. Gray, D.D.S.

PSYCHOLOGY
Mrs. Ruth Blackman, M.A.
Robert de von Flindt, Ph.D.
Cheryl McBride, M.A.

SPEECH PATHOLOGY AND AUDIOLOGY
Donna R. Fox, Ph.D.
Carolyn C. Garcia, M.S.

CONSULTANTS
Maxillo Facial Surgery
Edward C. Hinds, M.D., D.D.S., F.A.C.S.
Psychiatry
Albert Owers, M.D.
Ophthalmology
W. Eugene Alford, M.D.
Infectious Diseases
Fred F. Barrett, M.D., F.A.A.P.
Gastrointestinal Diseases, Gastroscopy
Theodore Hersh, M.D.
Occupational Medicine
Valliant C. Baird, M.D., F.A.C.Pr.M.

SPECIAL FACILITIES
Radioisotope Laboratory
Registered Dietitian
Electroencephalography
Electrocardiography
Vectorcardiography
Registered Physiotherapist
Pulmonary Function Laboratory
Regional Immunization Center
FAA Examinations
Complete Endoscopy
Audiology Laboratory
Electrolysis

ADMINISTRATOR
James A. Bakken

*Military Service

POST GRADUATE COURSES

Psychiatry: A ninth colloquium for postgraduate teaching of psychiatry will take place March 13-15, 1970, at the Sheraton Motor Inn in Portland, Ore. Sponsored by the American Psychiatric Association, the course will provide clinical exercise via small groups of participating psychiatrists, primary physicians, and other professionals. The groups will be presented with the task of formulating a program of psychiatric education to meet the needs of the staff of a particular hospital. Materials and information that will be given to participants will be based upon the situation prevailing in an actual hospital; thus, the colloquium should expose members of the groups to a program of psychiatric orientation and information that will be useful to them in everyday medical practice for years to come.

Registration fee for the course is $50 for physicians and $30 for wives, who will be able to participate in a group dynamics seminar or visit places of interest in the Portland vicinity as well as attend social hours and a dinner. Other registration information is available from American Psychiatric Association, 1700 18th St., N.W., Washington, D.C. 20009.

Occupational and Environmental Medicine: The New York University Post-Graduate Medical School will offer a full time three-week course March 9-27, 1970, for physicians in occupational and environmental medicine. The first week of the course will be devoted to general and administrative aspects of occupational medicine, including history and philosophy, organization, occupational diseases, workmen's compensation, and other legal and insurance subjects. This period will also be concerned with the relations of the industrial physician with other health professionals, management, workers, unions, and the community. The second and third weeks will cover basic scientific and clinical aspects, including toxicology, industrial hygiene, radiobiology, related community pollution problems, epidemiology, and biostatistics. It is possible to enroll for just the second and third weeks if desired.

Tuition for the full three-week course is $375 and is $250 for the two-week segment. Applications and requests for further information may be sent to the Office of the Recorder, New York University Post-Graduate Medical School, 550 First Ave., New York 10016.

Nutrition: A seminar for dietitians on "Results of White House Conference Dec. 2-4 on Food and Nutrition in Relation to Health" and "The Role of Dietitians in Education with Respect to Nutrition" will be held March 6-7 in Dallas. Sponsored by The University of Texas Southwestern Medical School at Dallas, the seminar will include various topics in nutrition research presented by the faculty of Southwestern. Dr. George M. Briggs (PhD), professor and chairman of the department of nutritional sciences at the University of California at Berkeley, will be the guest speaker.

Questions concerning registration for the seminar may be addressed to Dr. John S. Chapman, Assistant Dean for Postgraduate Education, The University of Texas Southwestern Medical School, 5323 Harry Hines Blvd., Dallas 75235. Cost of the seminar is $15, and the session is limited to 200 registrants.

Various Subjects: The American College of Physicians will sponsor a series of postgraduate courses on the following subjects: gastroenterology for teachers, Feb. 23-27, Ann Arbor, Mich.; clinical concepts in infectious diseases: manifestations and management, March 2-4, Gainesville, Fla.; cardiology and renal disease: pathophysiology and pharmacology, March 9-13, Chicago; clinical problems in internal medicine, March 16-20, Cleveland, Ohio; neurology and the internist, March 23-26, Rochester, Minn.; and rheumatic diseases: pathogenesis, diagnosis, and treatment, March 30-April 3, Ann Arbor, Mich. Lectures, demonstrations, panel discussions, and question and answer periods will be included.

Tuition is $60 for members and $100 for nonmembers for each of the courses. Write Dr. Edward C. Rosenow, Jr., Executive Director, American College of Physicians, 4200 Pine St., Philadelphia 19104, for additional information and registration forms.

Laboratory Workshops: A series of laboratory workshops for the benefit of public health, hospital, clinical, and other medical laboratories is under way. Scheduled for March 16-20 is an advanced course on public health and medical bacteriology designed for laboratory personnel currently engaged in bacteriology. The workshop will deal with specific tests used in the identification of several microorganisms of public health importance. Public health and medical parasitology will be covered at a March 25-27 workshop designed to give the laboratory worker an opportunity to learn firsthand how to recognize the common intestinal protozoan parasites. Some other intestinal, blood, and tissue parasites, including *Toxoplasma,* will also be considered. Daily starting and closing times for each workshop will be 9 a.m. and 5 p.m.

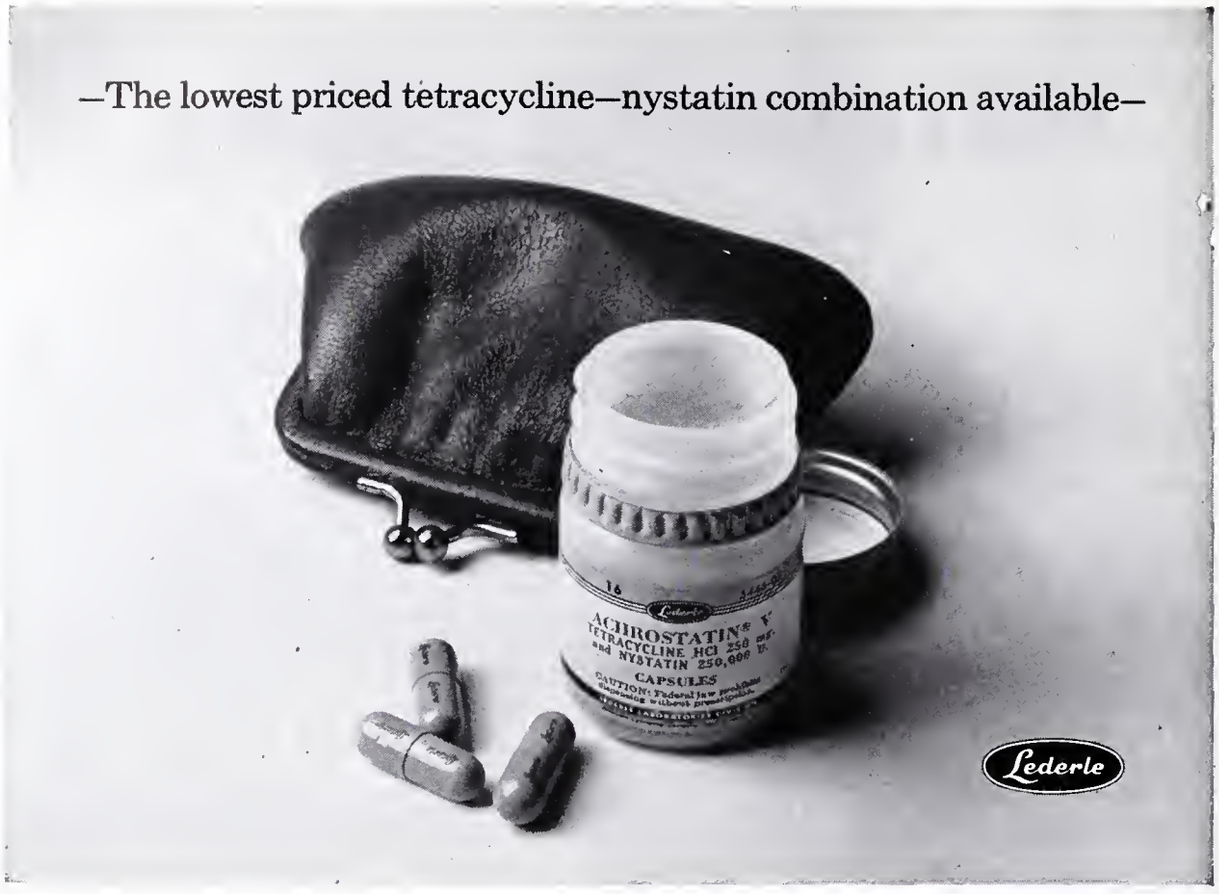
There is no registration fee for the workshops, and admittance is by prior registration only. Applications may be sent to Dr. J. V. Irons (ScD), Director of Laboratories, Texas State Department of Health, 1100 W. 49th St., Austin 78756.

Laryngology and Bronchoesophagology: A postgraduate course in laryngology and bronchoesophagology will be conducted from April 6-17 by the department of otolaryngology of the Eye and Ear Infirmary of the University of Illinois Research and Educational Hospitals and the University of Illinois College of Medicine. Limited to 15 physicians and under the direction of Dr. Paul H. Holinger, the course will include visits to a number of Chicago hospitals. Instruction will be provided by means of animal demonstrations and practice in bronchoscopy and esophagoscopy and diagnostic and surgical clinics, as well as didactic lectures.

Registration materials and further information are available from the Department of Otolaryngology, College of Medicine, University of Illinois at the Medical Center, P. O. Box 6998, Chicago 60680.

Laboratory Training: A series of laboratory training courses are being presented by the Laboratory Division of the National Communicable Disease Center in Atlanta, Ga. "Laboratory Methods in Medical Parasitology—Blood Parasites" and "Clinical Chemistry Instrumentation" will be offered May 11-22. Registration for both courses closes March 16. "Management of Scientific Services for Public Health Laboratories" will be offered May 18-22, and registration for this course will end March 23.

Information and application forms may be obtained from the Training Office, Laboratory Division, National Communicable Disease Center, Atlanta 30333.



HIGHLAND HOSPITAL

ASHEVILLE, NORTH CAROLINA

Founded 1904

A DIVISION OF THE DEPARTMENT OF PSYCHIATRY OF DUKE UNIVERSITY

Accredited by the Joint Commission on Accreditation and Certified for Medicare

Complete facilities for evaluation and intensive treatment of psychiatric patients, including individual psychotherapy, group therapy, psychodrama, electro-convulsive therapy, Indoklon convulsive therapy, drugs, social service work with families, family therapy, and an extensive and well organized activities program, including occupational therapy, art therapy, music therapy, athletic activities and games, recreational activities and outings. The treatment program of each patient is carefully supervised in order that the therapeutic needs of each patient may be realized.

High school facilities for a limited number of appropriate patients are now available on grounds. The School Program is fully integrated into the hospital treatment program and is accredited through the Asheville School System.

Complete modern facilities with 85 acres of landscaped and wooded grounds in the City of Asheville.

Brochures and information on financial arrangements available

Contact: (1) Mrs. Elizabeth Harkins, ACSW, Coordinator of Admissions

or

(2) Samuel N. Workman, M.D.
Chief of Clinical Services

(3) Charles W. Neville, Jr., M.D.
Assistant Professor of Psychiatry and Medical Director

Area Code 704 - 254-3201

Lutrexin®

HW&D BRAND OF LUTUTRIN

3000 UNIT TABLETS

IN THE TREATMENT OF FUNCTIONAL DYSMENORRHEA AND SELECTED CASES OF PREMATURE LABOR AND 2ND AND 3RD TRIMESTER THREATENED ABORTION

- LUTREXIN, the non-steroid "uterine relaxing factor" has been found to be useful by many clinicians in controlling abnormal uterine activity.
- Literature on indications and dosage available on request.
- No side effects have been reported, even when massive doses (25 tablets per day) were administered.
- Supplied in bottles of twenty-five 3,000 unit tablets.

(In vivo measurement of Lutrexin on contracting uterine muscle of the guinea pig.)

HYNSON, WESTCOTT & DUNNING, INC. HWD BALTIMORE, MARYLAND 21201

(LTR23)

FRANCIS HOSPITELS INCORPORATED

FRANCIS CONVALESCENT CENTERS
DIVISION OF FRANCIS HOSPITELS, INC.

C. B. FRANCIS
Past First Vice President
American Nursing Home Association
Past President
Texas Nursing Home Association

FRANCIS HOSPITELS, INC., has developed some of the finest convalescent centers in the nation.

Recently they developed the "hospitel"—a new concept in intermediate hospital and convalescent care.

Now Francis Hospitels is moving into a new associated field. They are entering into the construction and management of general hospitals.

What are your community needs?
If it is one of the above, write to us today.

FRANCIS HOSPITALS, INC., 7129 Hwy. 290 East, Austin, 512 454-2725

FRANCIS HOSPITELS—WACO: Francis Hospitel, 2501 Maple Avenue, Ph. 752-0311 **FRANCIS CONVALESCENT CENTERS**—AUSTIN: Retirement Inc., 6909 Burnet Road, Ph. 452-5719; FORT WORTH: Francis Convalescent Center, 1000 6th Avenue, Ph. 335-1903; CORPUS CHRISTI: Francis Convalescent Center, 3050 Sunnybrook, Ph. 853-9981; LONGVIEW: Highland Pines, 1100 N. 4th Street, Ph. 753-7661; SAN ANTONIO: San Pedro Manor, 616 West Russell, Ph. 732-5181 **FRANCIS MANAGEMENT**—PORT ARTHUR: The Golden Triangle Convalescent Center, 3900 Highway 365, Ph. 727-1651.

for the debilitated geriatric patient

Berocca®

TABLETS
high potency B-complex and C
for nutritional support

AVAILABLE ONLY ON Rx

contains water-soluble vitamins only

b.i.d. dosage

good patient acceptance

no odor, and virtually no aftertaste

Each Berocca Tablet contains:

Thiamine mononitrate	15 mg
Riboflavin	15 mg
Pyridoxine HCl	5 mg
Niacinamide	100 mg
Calcium pantothenate	20 mg
Cyanocobalamin	5 mcg
Folic acid	0.5 mg
Ascorbic acid	500 mg

Usual dosage is one tablet b.i.d.

Indications: Nutritional supplementation in conditions in which water-soluble vitamins are required prophylactically or therapeutically.

Warning: Not intended for treatment of pernicious anemia or other primary or secondary anemias. Neurologic involvement may develop or progress, despite temporary remission of anemia, in patients with pernicious anemia who receive more than 0.1 mg of folic acid per day and who are inadequately treated with vitamin B_{12}.

Dosage: 1 or 2 tablets daily, as indicated by clinical need.

Available: In bottles of 100.

ROCHE

Roche
LABORATORIES

Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

Mead Johnson–pharmaceuticals created for your specialized clinical needs

new solution...
to help your patients open mucus-clogged airways

new 10% solution...
particularly convenient for home use

MUCOMYST®-10
(ACETYLCYSTEINE)

liquefies thick, viscid mucus in chronic bronchitis and emphysema

Mucomyst, as 20% acetylcysteine, has been used with safety and effectiveness in hospitals for over five years.

Now a new 10% solution, Mucomyst-10, offers you the choice of prescribing a lesser concentration whenever you feel this is desirable. It provides added convenience and simplicity, particularly for your patients using nebulizing units at home.

By including Mucomyst-10 in the home management regimen, you can provide full mucolytic benefits for many of your patients with chronic bronchitis and emphysema complicated by tenacious secretions.

Indications: Mucomyst has been demonstrated to be clinically effective as adjuvant therapy in a wide range of conditions in which thick, viscous mucus is a problem, including: postoperative atelectasis and pneumonia; chronic bronchopulmonary disease (emphysema, chronic bronchitis, asthma, and bronchiectasis); acute bronchopulmonary disease (pneumonia, bronchitis, and tracheobronchitis); tracheostomy care; facilitation of bronchial studies; maintenance of an open airway during anesthesia; and to help control pulmonary complications of cystic fibrosis. **Contraindications:** Mucomyst is contraindicated in those patients who are sensitive or who have developed a sensitivity to it. **Warnings: After proper administration of acetylcysteine, an increased volume of liquefied bronchial secretions may occur. When cough is inadequate, the open airway must be maintained by mechanical suction if necessary. When there is a large mechanical block due to foreign body or local accumulation, the airway should be cleared by endotracheal aspiration, with or without bronchoscopy. Asthmatics under treatment with Mucomyst should be watched carefully. If bronchospasm progresses, this medication should be immediately discontinued. Adverse Effects:** Adverse effects have included stomatitis, nausea and rhinorrhea. Sensitivity and sensitization to Mucomyst have been reported very rarely. A few susceptible patients, particularly asthmatics (see **Warnings**), may experience varying degrees of bronchospasm associated with the administration of nebulized acetylcysteine. Most patients with bronchospasm are quickly relieved by the use of a bronchodilator given by nebulization. **Administration & Dosage:** Mucomyst may be administered by nebulization into a tent, Croupette, face mask, or mouthpiece; or by direct instillation. **Mucomyst should not be placed directly into the chamber of a heated (hot-pot) nebulizer.** Complete details on dosage, administration, and compatibility are included in the package insert. Additional information may be obtained from Mead Johnson Laboratories. **Supplied: Mucomyst-10 (acetylcysteine)**, a sterile 10% solution, in vials of 10 ml. and 30 ml.; **Mucomyst (acetylcysteine)**, a sterile 20% solution, in vials of 10 ml. and 30 ml.

Mead Johnson
LABORATORIES

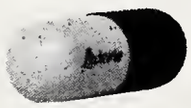
969 MEAD JOHNSON & COMPANY • EVANSVILLE, INDIANA 47721 70469

Doctor, after all we've been through together...

abscess
acne
amebiasis
anthrax
bacillary dysentery
bartonellosis
bronchitis
bronchopulmonary infection
brucellosis
chancroid
diphtheria
endocarditis
genitourinary infections
gonorrhea
granuloma inguinale
listeriosis
lymphogranuloma
mixed bacterial infection
osteomyelitis
otitis
pertussis
pharyngitis
pneumonia
psittacosis
pyelonephritis
Rocky Mountain spotted fever
scarlet fever
septicemias
sinusitis
soft tissue infection
tonsillitis
tularemia
typhus fever
urethritis

...don't you think it's time we were on a first-name basis?

call me "Achro® V"



Every pharmacist knows ACHRO® V stands for ACHROMYCIN® V

Contraindications: Hypersensitivity to tetracycline.
Warning: In renal impairment, since liver toxicity is possible, lower doses are indicated; during prolonged therapy consider serum level determinations. Photodynamic reaction to sunlight may occur in hypersensitive persons. Photosensitive individuals should avoid exposure; discontinue treatment if skin discomfort occurs.
Precautions: Nonsusceptible organisms may overgrow; treat superinfection appropriately. Tetracycline may form a stable calcium complex in bone-forming tissue and may cause dental staining during tooth development (last half of pregnancy, neonatal period, infancy, early childhood).
Adverse Reactions: *Gastrointestinal*—anorexia, nausea, vomiting, diarrhea, stomatitis, glossitis, enterocolitis, pruritus ani. *Skin*—maculopapular and erythematous rashes; exfoliative dermatitis; photosensitivity; onycholysis, nail discoloration. *Kidney*—dose-related rise in BUN. *Hypersensitivity reactions*—urticaria, angioneurotic edema, anaphylaxis. *Intracranial*—bulging fontanels in young infants. *Teeth*—yellow-brown staining; enamel hypoplasia. *Blood*—anemia, thrombocytopenic purpura, neutropenia, eosinophilia. *Liver*—cholestasis at high dosage. Upon adverse reaction, stop medication and treat appropriately.

Achromycin® V
Tetracycline

Lederle LEDERLE LABORATORIES • A Division of American Cyanamid Company, Pearl River, New York 10965

484-9

when relief
means so much
in keeping
your G.U.
patient comfortable

URISED®

CONAL PHARMACEUTICALS INC

Clinically effective for G.U. Therapy[1-5]

There are not many drug combinations in use today which can claim to have served the medical profession for more than 50 years. Such a record reflects the continued confidence of physicians in URISED. This is not a dramatic "wonder drug"—but a *useful* one.

It fills a need in urologic and general practice—a need for a mild but reliable agent with a very low order of toxicity. It can be used alone to treat mild and uncomplicated urinary infections. It can be used as "interim therapy" while awaiting the results of urine culture. It can be used as an adjunct (to relieve pain and spasm) with almost any other form of antibacterial therapy.

The characteristic blue/green urine tells the patient that something is happening. The patient generally tells you that symptomatic relief follows the first dose.

REFERENCES: (1) Sands, R.X.: New York St. J. Med. 61:2598-2602, 1961; (2) Renner, M.J., et al.: Hosp. Topics 39:71-73, 1961; (3) Haas, Jr., J., and Kay, L. L.: Southwest Med. 42:30-32,1961; (4) Marshall, W.: Clin. Med. 7:499-502, 1960; (5) Strauss B.: Clin. Med. 4:307-310, 1957.

URISED®

Each Blue-Coated Tablet contains Active:

Atropine Sulfate	0.03 mg.	Methylene Blue . .	5.4 mg.
Hyoscyamine . .	0.03 mg.	Phenyl Salicylate	18.1 mg.
Methenamine . .	40.8 mg.	Benzoic Acid . . .	4.5 mg.

PRECAUTIONS: Administer with caution to persons with atropine idiosyncrasy or cardiac disease.

SIDE EFFECTS: Neither irritation nor untoward reactions have been reported; however, if pronounced dryness of the mouth, flushing, or difficulty in initiating micturition occur, decrease dosage. If rapid pulse, dizziness or blurring of vision occur, discontinue use immediately. Acute urinary retention may be precipitated in prostatic hypertrophy.

CONTRAINDICATIONS: Glaucoma, urinary bladder neck or pyloric obstruction, duodenal obstruction and cardiospasm. Hypersensitivity to any of the ingredients.

DOSAGE: Adults—Two tablets, orally, four times per day followed by liberal fluid intake. Acute cases—initially two tablets every hour for three doses followed by the recommended daily administration. Children—One-half the adult dose.

(Stocked Nationally Through All Service Wholesale Druggists)

CONAL
PHARMACEUTICALS, INC
CHICAGO, ILLINOIS 60640

MANUFACTURERS OF URICEUTICAL® SPECIALTIES

ANESTACON® • CYSTOSPAZ® • MANDACON™ • URISED®
URISEDAMINE® • ŪTRASUL® Tablets and Suspension

Printed in U.S.A.

MAR. 1968

Vasomist

(ANTIHISTAMINIC)

VASOCONSTRICTOR, NASAL DECONGESTANT AND LOCAL ANTIHISTAMINIC

Active Ingredients:
Phenylephrine Hcl 0.25%
Phenylpropanolamine Hcl .. 0.50%
Chlorobutanol 0.15%
Tripelennamine Hel 0.50%
In Isotonic Solution

Vasomist

(PLAIN)

VASOCONSTRICTOR AND NASAL DECONGESTANT

Active Ingredients:
Phenylephrine Hcl 0.25%
Phenylpropanolamine Hcl ...0.50%
Chlorobutanol 0.15%
In Isotonic Solution

USE: Temporary relief of nasal congestion due to colds and hay fever.

DIRECTIONS: Adults and Children: Instill two or three drops into each nostril, using no more than needed to provide relief. Repeat every three to four hours as needed but not oftener.

AVAILABILITY

In plastic squeeze bottles containing ¾ fluid oz. and in dropper bottles containing 1 fluid oz.

HUMCO LABORATORY
TEXARKANA, ARK.-TEX.

HUMCO LABORATORY
TEXARKANA, ARK.-TEX.
Our Integrity is Your Guarantee

Serving Texas Physicians for Over Forty Years

Precision-engineered, functionally-built equipment

SMR keeps you and your patients' comfort and satisfaction in mind . . . a room that reflects professional good taste.

SMR has manufactured medical and Dental equipment for over forty years on a direct to user basis.

NEW CATALOG NOW AVAILABLE

SURGICAL MECHANICAL RESEARCH, INC.

Post Office Box 1185 • (714) 646-4405

960 W. 16th St., Newport Beach, Calif. 92663

STAINLESS STEEL POLISH

SMR Stainless Steel Polish cleans, and preserves with superior results —ends fingerprints, watermarks and surface stains. **22 oz. economy** $2.75 F.O.B. Plant

Established Over 40 Years

Factory Direct Sales

See us at Booth No. 100 TMA April 30-May 3, 1970

Automated Chemical Analyses in Diagnosis

MILWARD W. BAYLISS, MD
RALPH W. JONES, MS

Results of 12 chemical analyses performed both by routine manual methods and by an automated instrument are compared. Specimens were from healthy adult blood donors. Component analyses included calcium, phosphorus, glucose, urea, uric acid, cholesterol, total protein, albumin, total bilirubin, alkaline phosphatase, lactic dehydrogenase, and glutamic oxalacetic transaminase. The article shows how graphic chemistry profiles are valuable in detecting and assessing gout, diabetes mellitus, myocardial infarction, pernicious anemia, liver disorders, renal insufficiency, and other diseases.

AUTOMATED EQUIPMENT is changing the clinical chemistry laboratory. Manual methods are gradually giving way to semi-automated and completely automated chemical analysis systems. The practicing physician needs to know how this equipment affects the laboratory results which he is using in diagnosis. What is the relative accuracy of the new methods in which a large series of chemical analyses are supplied in a profile form by a single instrument or a series of machines? To answer this question the serum of a group of healthy blood donors has been simultaneously analyzed both by a single automated apparatus, Technicon Corporation SMA 12/60, capable of performing 12 different chemical analyses on the same small sample of serum, and the same analyses performed by the usual manual procedures in the clinical laboratory.[1]

Blood specimens from 98 healthy blood donors, predominantly males between the ages of 18 and 59 years, were allowed to clot at room temperature. An additional 168 healthy plasmapheresis donor specimens were also studied. The serum was separated as quickly as possible by centrifugation. The serum from each donor was divided into two portions which were then refrigerated at 2-5° C until the analyses could be started. This was usually performed on the same day. In some instances the serum was analyzed on the following day. As long as the serum was promptly separated from the clot and was refrigerated properly, there was minimal or no alteration in the chemistry values studied even after several days' refrigeration. We have used a survey model which analyzes for 12 serum components and records them quantitatively on a moving chart. This instrument operates as a continuous flow analysis. In operation, each serum specimen is placed in a small plastic cup. The analyzer aspirates 2 ml of serum, and splits each sample into 12 streams which flow through nonwetting plastic tubing to be mixed with various reagents. Between samples, air and water are aspirated to clear the system before the next specimen. It passes some of these mixtures over a semipermeable membrane to dialyze diffusible substances. It then pumps specimens to mixing coils or heating baths for reactions to take place and colors to develop. The 12 colored solutions flow through a highly sensitive colorimeter which measures the light absorbed. The electrical signal from the colorimeter drives a pen across the recorder chart, recording in sequence each of the 12 determinations on a single sample of serum. The normal range for each chemical component is shaded in gray on the chart. The resulting graph presents a "profile" of the patient's blood chem-

COMPONENT	METHOD
Calcium	Flame photometer[2]
Phosphorus	Direct phosphorus reagent[3]
Glucose	Somogyi[4]
Urea	Modified Karr with urease[5]
Uric acid	Caraway carbonate procedure[6]
Cholesterol	Modified Lieberman-Burchard reagent[7]
Total protein	Modified biuret-Weichselbaum[8]
Albumin	Electrophoresis, cellulose acetate[9]
Total bilirubin	Malloy and Evelyn, diazo coupling[10]
Alkaline phosphatase	Babson (Bodansky units)[11]
Lactic dehydrogenase	Cabaud and Wroblewski[12]
Glutamic oxalacetic transaminase	Babson, et al[13]

Table 1. Manual methods of analysis.

istry which is forwarded to the physician. The entire operation is carefully supervised and checked by skilled operators watching the various procedures and checking on them at critical points through visual observations and an oscilloscope monitor.

At the same time that the analyses were being performed by the multiple channel analyzer, the same serum was also analyzed by traditional manual methods listed in Table 1.

The mean, range, and coefficient of variation on analyses for calcium, phosphorus, glucose, urea, uric acid, cholesterol, total protein, albumin, total bilirubin, alkaline phosphatase, lactic dehydrogenase (LDH), and serum glutamic oxalacetic transaminase (SGOT) for both the manual and the automated methods on the 98 healthy blood donors are presented in Table 2.[14] The data on 168 plasmapheresis donors were essentially similar.

The results by the two methods are close, with minor exceptions. Phosphorus, glucose, urea, and uric acid gave results approximately 10% higher with the automated instrument over the same tests performed manually. The results with the enzyme tests were similar except that the unit of measurement with the automated tests is in milli-International Units per milliliter (mU/ml).[15] This unit is based on the amount of enzyme which will catalyze the transformation of one-thousandth of one micromole of substrate per minute under specified conditions. Biochemists and the medical profession will probably accept this unit of measurement in preference to the arbitrary units developed by a particular author.

The range of normal values listed in Table 2 is calculated as the mean plus and minus two standard deviations except where an asterisk marks the lowest value actually determined. Theoretically, this includues 95% of the values derived from normal individuals. Basically, therefore, 5% of normal individuals will have values outside of this normal range. When 12 independent tests are performed simultaneously, the laws of probability dictate that 34% of the individuals tested will have a single test value outside of the normal range, 10% will have two test values outside normal limits, and 1% will have three test values abnormal. Only 54% could be expected to have all values within normal range. Best and others, in a study of blood donors and hospital personnel utilizing an earlier model of this same instrument (SMA 12/30), found that actual results approximated the theoretical abnormalities predicted.[16] In a study of hospital admissions, the number of abnormal chemistry results may be increased depending upon the type of patients admitted.

Examination of the profile of the 12 chemical components produced by the SMA 12/60 quickly shows the physician which tests are abnormal so that he can determine whether the results fit a specific disease pattern.[17] Some diseases may have only a single abnormality in the series of chemical analyses.

Use in Diagnosis: In gout, a typical pattern may show only a significant rise in the uric acid determination (Fig 1).[18] Values up to 8 mg/100 ml must be considered in the normal range. Only when the uric acid level is above 9 mg/100 ml is it definitely significant. The zone from 8 to 9 mg/100 ml is a borderline area. However, in considering the uric acid level it must be kept in mind that females do

COMPONENT	METHOD	MEAN	RANGE (Mean ± 2SD)	COEFFICIENT VARIATION
CALCIUM	Automated	9.6	8.9-10.3	.04
	Manual	9.8	8.9-10.7	.05
PHOSPHORUS	Automated	3.9	2.4-5.4	.19
	Manual	3.4	1.8*-5.2	.26
GLUCOSE	Automated	95	53-137	.22
	Manual	84	44-124	.24
UREA	Automated	14.2	8*-21	.24
	Manual	12.7	7*-20	.27
URIC ACID	Automated	6.2	3.8-8.6	.19
	Manual	5.5	3.3-7.7	.19
CHOLESTEROL	Automated	211	135*-291	.19
	Manual	202	120-284	.20
TOTAL PROTEIN	Automated	7.2	6.3-8.1	.06
	Manual	6.8	5.9-7.7	.07
	Refraction	6.8	5.9-7.7	.06
ALBUMIN	Automated	4.2	3.3-5.1	.10
	Manual	4.4	3.7-5.1	.08
TOTAL BILIRUBIN	Automated	.52	0.2*-1.0	.46
	Manual	.59	0.1*-1.27	.57
ALKALINE PHOSPHATASE	Automated	53	29*-87	.34
	Manual	3.9	3.0-5.8	.24
LDH	Automated	120	68-172	.22
	Manual	248	120-376	.26
SGOT	Automated	33	20*-57	.36
	Manual	32	14*-58	.40

*Corrected for skewed distribution.

Table 2.

run a level about 1 mg/100 ml below males. In addition there are a wide variety of conditions which can elevate the uric acid level including starvation, renal failure, any disease with excessive destruction of cells such as lymphoma, leukemia, or a hemolytic anemia, and even the use of medications such as thiazide diuretics and salicylates.

In diabetes mellitus (Fig 2) we see a significant rise in the glucose level. Although our normal levels range up to 124 mg/100 ml with the manual method and up to 137 mg/100 ml with the automated method, we recognize that although these individuals are supposed to have been fasting, they may not have been. In considering at what level further study should be made, fasting glucose values up to 120 mg/100 ml and two-hour postprandial values up to 140 mg probably are within normal range. If the levels are higher, further evaluation, such as a glucose tolerance test, is needed. The increase in cholesterol level is frequently found in older diabetic patients.

The individual with a myocardial infarct shows an elevation first of the SGOT followed by the LDH. Fig 3 shows a blood chemistry profile of a patient with an infarct 24 hours old. After a few days, the SGOT level will return to normal to be followed still later by the LDH.

Pernicious anemia, untreated, causes high LDH levels, often with a minimal rise in the total bilirubin.[19] These changes are due to the large amount of LDH in the marrow megaloblasts coupled with the greater ease of hemolysis of the red cells. Fig 4 illustrates findings in a case prior to treatment. Administration of vitamin B_{12} brings the LDH level down in a few days. Various types of hemolytic anemias will also produce elevated LDH levels.

Chemistry profiles provide seven tests that relate in some way to the liver. These include the cholesterol, total protein, albumin, total bilirubin, alkaline phosphatase, LDH, and SGOT. Patients with metastatic carcinoma involving the liver frequently show an elevation of the levels for each of the enzymes including the alkaline phosphatase, LDH, and SGOT, as illustrated in Fig 5. The bilirubin level in cases of metastatic lesions to the liver usually remains normal unless the larger biliary tracts are obstructed. Infectious hepatitis produces not only an increase in the SGOT, LDH, and alkaline phosphatase values, but also of the bilirubin (Fig 6). Also, the albumin level may be decreased.

In diseases of the kidney, this series of tests is useful in evaluating the patient's condition. In chronic renal disease such as glomerulonephritis (Fig 7) there is, in addition to the

Fig 1. Gout.

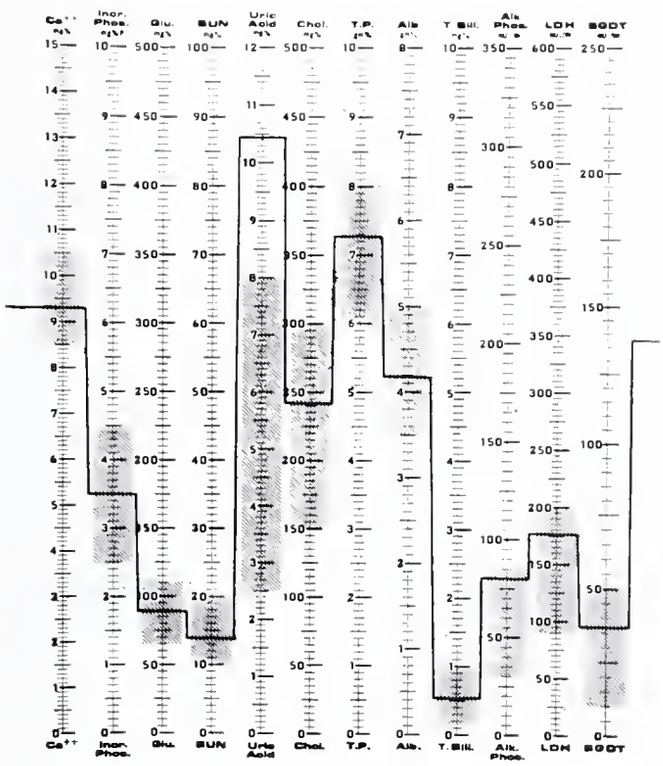
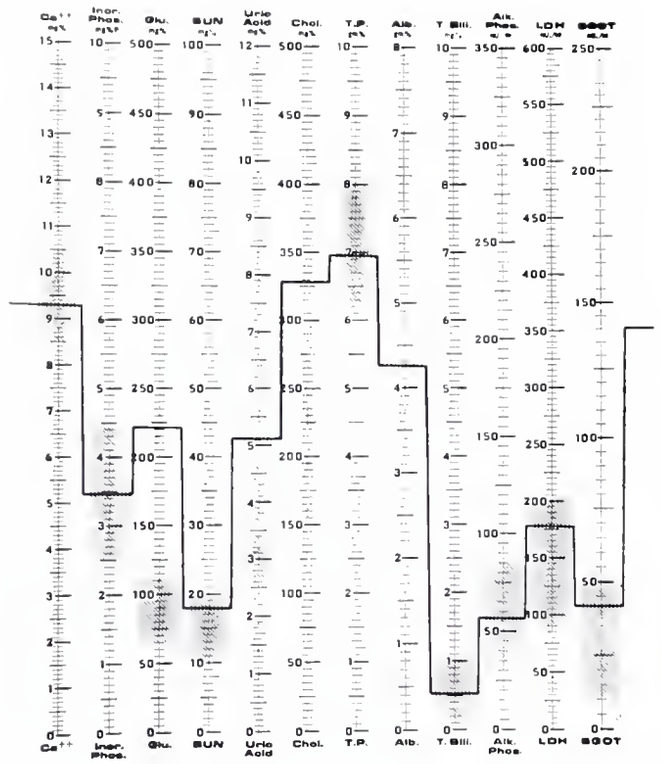


Fig 2. Diabetes mellitus.



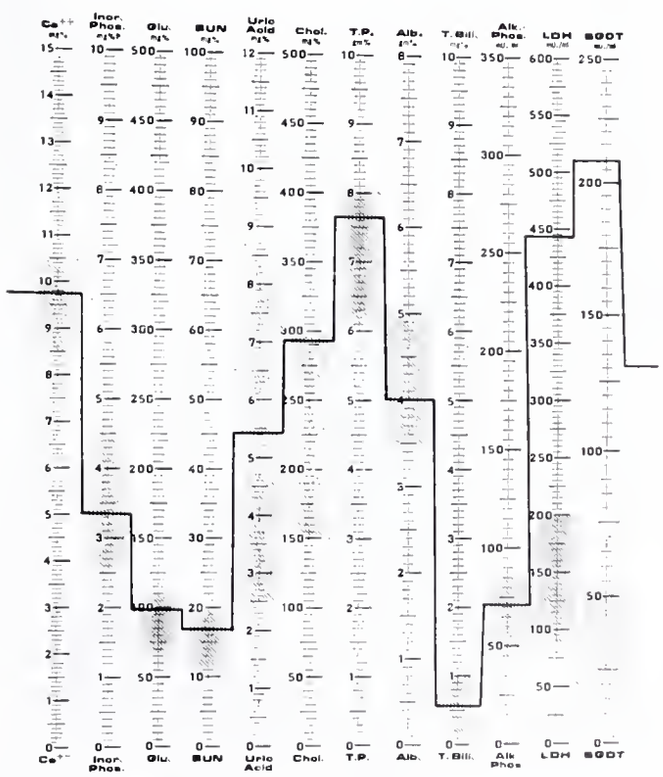


Fig 3. Acute myocardial infarction.

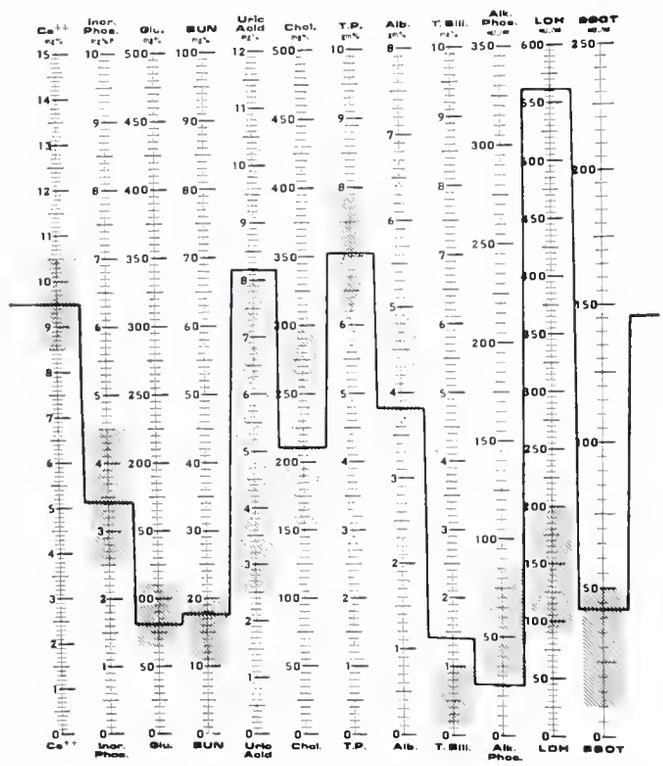


Fig 4. Pernicious anemia.

Fig 5. Liver metastases.

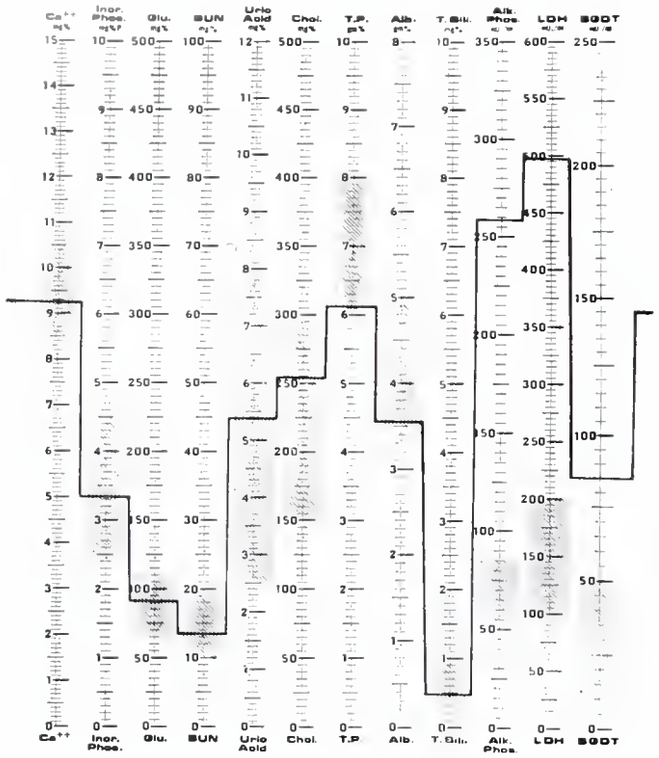
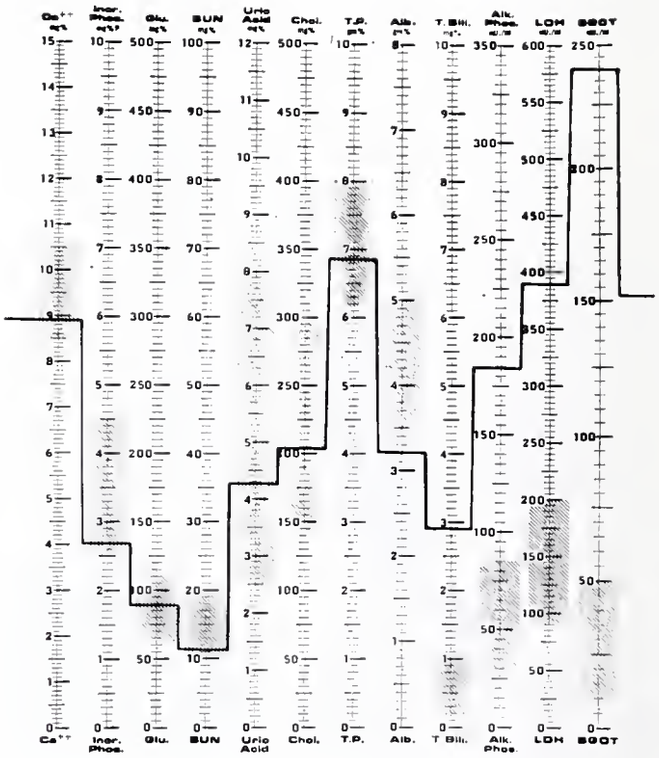


Fig 6. Hepatitis.



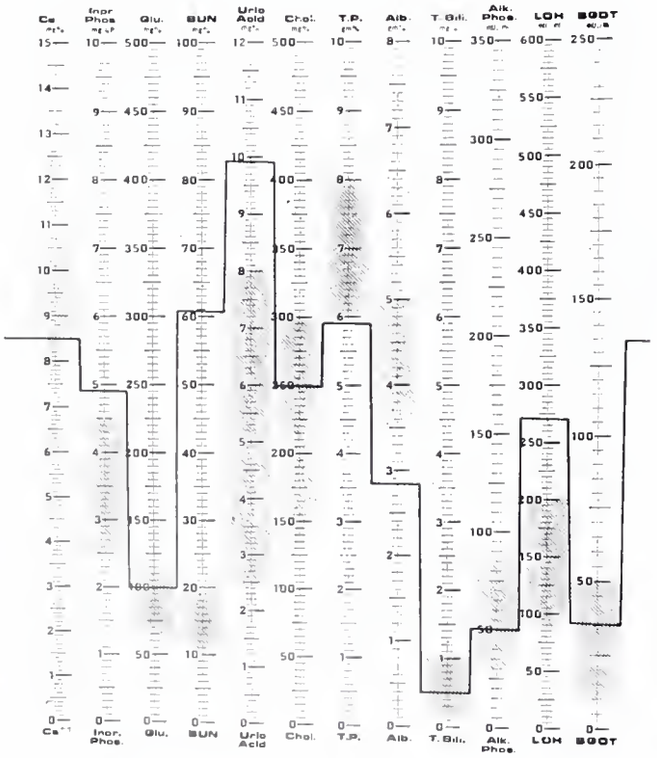


Fig 7. Chronic glomerulonephritis.

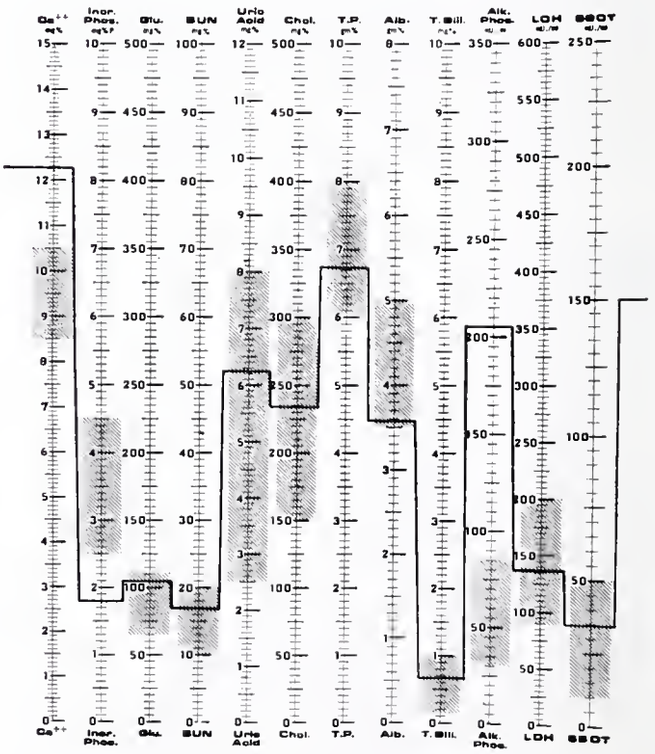


Fig 8. Parathyroid adenoma.

elevated urea, an increase in the uric acid and frequently a decrease in the albumin and an increase in the phosphorus and LDH values. A correlation of these tests is helpful in determining the extent of kidney damage.

Hypercalcemia can be recognized from the calcium level of the profile, and several of the additional tests are useful in determining the etiology.[20] Hyperparathyroidism due to adenoma or carcinoma (Fig 8) produces in addition to the elevated calcium level, a decrease in the phosphorus and an increase in the alkaline phosphatase. If the physician wishes to determine the ionized calcium, he can do so using the following formula:[16]

$$\text{Ionized calcium} = (6.5 \times \frac{\text{total calcium} + 0.7)}{\text{total protein} + 6.6)} - 0.65$$

When the total protein decreases, the calcium level normally drops. A patient who has a calcium of 10.4 mg/100 ml and a total protein of 5 gm/100 ml may be hypercalcemic. A high total protein level in relation to an increased calcium value may correlate with multiple myeloma, sarcoid, or lymphoma.

Precautions: These and numerous other disorders may produce recognizable profile patterns. There are, however, several precautions that must be emphasized in order to interpret some of the values. Fasting specimens are preferred since the glucose levels rise following meals and, if the patient has lipemia following a meal, the resulting turbidity interferes with colorimetric readings and may give some false results. Hemolysis must be avoided as it will raise the LDH and SGOT values. It must be kept in mind that the normal values shaded on the graphs are for adults. For children, several of these levels will vary with the age of the child. In all cases the blood should be allowed to clot and the serum removed as soon as possible. The specimens should then be refrigerated if they are to be kept for more than a few hours. In sera exposed to light, the bilirubin values slowly decline. In the actual performance of the tests, it is most important to have adequate standards and controls throughout each run, and to plot data on quality control charts daily.

REFERENCES

1. SMA 12/60 Preliminary Instruction Manual, Ardsley, NY, Technicon Corporation, 1968.

2. Teloh, H A: Flame Photometric Method for Serum Calcium and Magnesium, in Sunderman, F W, and Sunderman, F W, Jr, Eds: Evaluation of Thyroid and Parathyroid Function, Philadelphia, J B Lippincott, 1963.

3. Fiske, C H, and Subbarow, Y: The Colorimetric Determination of Phosphorus, J Biol Chem 66:375 (Dec) 1925.

4. Somogyi, M: Determination of Blood Sugar, J Biol Chem 160:69 (Sept) 1945.

5. Karr, W G: Method for Determination of Blood Urea Nitrogen, Lab Clin Med 9:329 (Feb) 1924.

6. Caraway, W T: Microchemical Methods for Blood Analysis, Springfield, Ill, Charles C Thomas, 1960.

7. Abell, L L, et al: Cholesterol in Serum, in Seligson, D, Ed: Standard Methods of Clinical Chemistry, vol 2, New York, Academic Press, 1958.

8. Henry, R J: Clinical Chemistry: Principles and Technics, New York, Hoeber Medical Division, Harper and Row, 1964.

9. Cawley, L P: Workshop Manual on Electrophoresis and Immunoelectrophoresis, Chicago, American Society of Clinical Pathologists, 1966.

10. Malloy, H T, and Evelyn, K A: The Determination of Bilirubin with The Photoelectric Colorimeter, J Biol Chem 119:481 (July) 1937.

11. Babson, A L, et al: Phenolphthalein Monophosphate as a Substrate for Serum Alkaline Phosphatase, Clin Chem 12:482 (Aug) 1966.

12. Cabaud, P G, and Wróblewski, F: Colorimetric Measurement of Lactic Dehydrogenase Activity of Body Fluids, Amer J Clin Path 30:234 (Sept) 1958.

13. Babson, A L, et al: Use of a Diazonium Salt for the Determination of Glutamic-oxalacetic Transaminase in Serum, Clin Chim Acta, 7:199 (March) 1962.

14. Barnett, R N: Medical Significance of Laboratory Results, Amer J Clin Path 50:671 (Dec) 1968.

15. King, J: Letter to the Editor; International Enzyme Units, Clin Chem 12:824 (Nov) 1966.

16. Best, W R, et al: Automated Twelve-Channel Serum Screening, Med Clin N Amer 53:175 (Jan) 1969.

17. Reece, R L: An Analysis of 4,000 Chemistry Graphs, Comments on Disease Patterns, Minnesota Med 51:351 (March) 1968.

18. Benedek, T G: Correlations of Serum Uric Acid and Lipid Concentrations in Normal, Gouty, and Atherosclerotic Men, Ann Intern Med 66:851 (May) 1967.

19. Emerson, P M, and Wilkinson, J H: Lactic Dehydrogenase in the Diagnosis and Assessment of Response to Treatment of Megaloblastic Anaemia, Brit J Haemat 12:678 (Nov) 1966.

20. Boonstra, C E, and Jackson, C E: Hyperparathyroidism Detected by Routine Serum Calcium Analysis, Ann Intern Med 63:468 (Sept) 1965.

The authors, Baptist Memorial Hospital, 111 Dallas, San Antonio, Tex 78205.

This investigation was supported by a research grant from the Morrison Trust of San Antonio, Tex.

ORGAN PANELS

An Innovation In Health Care Delivery

JOHN BERNARD HENRY, MD

LT CDR MILTON J. ARRAS, MC, USN

An organ panel is a group of laboratory tests and measurements which provide comprehensive data about the organ or system implicated in disease. Panels are based on the logic of a physician's evaluation of his patient rather than the more general approach which is often used in automation. Details of this innovation in health care delivery are presented in this article.

FOR MANY YEARS, PHYSICIANS have selected and evaluated clinical laboratory data in order to confirm a clinical impression, rule out a possible diagnosis or disease, obtain guidelines for prognosis or therapy or both, and as a means of detection (screening) of disease.

In general, the guiding philosophy has been to request only such laboratory data as are essential or clearly needed.

In terms of chemical pathology, a blood urea nitrogen (BUN) or serum creatinine determination may be used to confirm a clinical impression of uremia and renal failure. To rule out cirrhosis of the liver in a patient with upper gastrointestinal bleeding, a bromsulphalein (BSP) and one or more of several other hepatic function tests may be requested. The magnitude of the serum glutamic oxalacetic transaminase (SGOT) elevation 24-48 hours after the onset of a myocardial infarction may provide valuable prognostic information in terms of extent or massiveness of cardiac necrosis. As a guide to therapy, periodic blood glucose measurements are valuable in adjusting the therapeutic regimen of a patient with diabetes mellitus. Finally, a number of chemical pathologic measurements are valuable in the detection of disease.

Recently, the philosophy of ordering only what is absolutely necessary or specifically indicated has been changed. Since medicine is an art as well as a science, scientific medicine revolves around collection of scientific data relevant to the patient's illness. Furthermore, in the interest of better patient care through comprehensive health screening and preventive medicine techniques, a number and variety of clinical laboratory measurements and examinations should be generated for each patient, regardless of his illness, and even periodically in apparently healthy individuals. Detection of disease prior to onset of clinical manifestations, as well as delineation of the individual's normal values, would then be achieved.

Normal values for clinical laboratory data generally reflect a much wider range than an individual's normal values. If detection of disease requires a deviation from "normal" chemical values, then the much narrower individual normal range provides a more sensitive base line for such detection. We have identified individual normal ranges that are approximately one-third those of the population normal range for several measurements.

Finally, instrumentation now makes the generation of a number and variety of clinical laboratory measurements more readily available and economical. With an increase in volume, unit value and cost decrease. For the patient, this means that more automated laboratory data costs the same or less than when selected, limited (low-volume) laboratory studies are performed manually.

In view of these trends and changing philosophy, we need to reappraise delivery of health care service through clinical pathology or laboratory medicine.

Fig 1. Clinical pathology, organ panel A.

CARDIAC INJURY	
Creatine Phosphokinase (CPK) Int. Units	0–34
SGO Transaminase Karmen Units	10–40
Lactic Dehydrogenase Total Units	80–120
Lactic Dehydrogenase Heat Stable %	20–40

CARDIAC EVALUATION	
Cholesterol mg/100 ml	Age 20–30 130–230
Triglyceride mg/100 ml	10–160
T_4 by Column mcg/100 ml	3.4–6.4
Glucose 2 hr. pc. mg/100 ml	65–115

HYPERTENSION	
Creatinine mg/100 ml	0.6–1.2
Creatinine Clearance ml/min.	80–120
Cortisol, Plasma ug/100 ml	6–25
(Vanillylmandelic Acid) VMA 24 hr urinary	Less than 7 mg.
Chloride mEq/L	98–109
CO_2 Content mM/L	24–30
Sodium mEq/L	135–145
Potassium mEq/L	4.0–4.8
Blood pH units	Art. 7.38–7.44 Ven. 7.36–7.41
Blood PCO_2 mmHg	Art. 35–40 Ven. 40–45
Glucose 2 hr pc mg/100 ml	65–115
Cholesterol mg/100 ml.	Age 20–30 130–230
Triglyceride mg/100 ml	10–160
Lactic Dehydrogenase Total Units	80–120
Lactic Dehydrogenase Heat Stable %	20–40
Total Proteins gm/100 ml	6.7–8.3
ELECTROPHORESIS	
Albumin gm/100 ml	Age 15–35 3.44–5.64 Age 35–55 3.22–5.10
Alpha$_1$ globulins gm/100 ml	0.23–0.35
Alpha$_2$ globulins gm/100 ml	0.55–0.95
Beta globulins gm/100 ml	0.71–1.15
Gamma globulins gm/100 ml	0.79–1.51

CEREBROVASCULAR ACCIDENT (CVA)		
Blood pH Units	Art. 7.38–7.44 Ven. 7.36–7.41	
CO_2 Contents mM/L	24–30	
Sodium mEq/L	135-145	
Potassium mEq/L	4.0–4.8	
Chloride mEq/L	98–109	
Glucose 2 hr. pc mg/100 ml	65–115	
Urea Nitrogen (BUN) mg/100 ml	8–18	
Cholesterol mg/100 ml	Age 20–30 130–230	
Triglycerides mg/100 ml	10-160	
Creatinine mg/100 ml	0.6–1.2	
Prothrombin time (Quick) Seconds	Patient	Control time ± 3.0
	Control	
Partial Thromboplastin (PTT) time (kaolin) Seconds	Patient	35–45
	Control	35–45
Thrombin time Seconds	Patient	< 1.3 x control value
	Control	
Cerebrospinal Fluid LDH (Lactic Dehydrogenase) Wacker Units	10–20	

RENAL	
Urea Nitrogen (BUN) mg/100 ml	8–18
Creatinine mg/100 ml	0.6–1.2
Creatinine Clearance ml/min.	80-120
Total Osmolality Serum mOsm/Kg	285–295
Osmolality Urine mOsm/Kg	300-1000
Total Proteins gm/100 ml	6.7–8.3
ELECTROPHORESIS	
Albumin gm/100 ml	Age 15–35 3.44–5.64 Age 35–55 3.22–5.10
Alpha$_1$ globulins gm/100 ml	0.23–0.35
Alpha$_2$ globulins gm/100 ml	0.55–0.95
Beta globulins gm/100 ml	0.71–1.15
Gamma globulins gm/100 ml	.79–1.51
Urinary Culture and Colony Count	See Bacteriology Report Sheet
Urinalysis	See Microscopy Report Sheet

LEGEND

A. Laboratory Accident
B. Confirmed
C. Clotted
D. Moderate
E. Recollect Specimen
F. Unit Not Fed
G. Specimen not received
H. Hemolysis
J. Xanthochromic
K. Marked (Over 100/hpf)
L. Lactescence
M. Minimum (Less than 0-1/hpf)
N. Not done — see schedule
P. Patient not available
Q. Quantity not sufficient
R. Patient uncooperative
T. Improperly labeled
U. Test cancelled by physician
W. Improper specimen
X. Report to follow
Y. Obscured by dye

M.D.
Clinical Pathologist

Organ Panels

Evolution of Organ Panels: While a history and physical examination delineate the patient's problem and give the attending physician a clinical impression, additional data including radiologic, pathologic, and laboratory studies and consultation with other medical specialists may be needed for accurate diagnosis and appropriate therapy.

For many years, a battery or panel of liver function tests has been used in the study of patients with liver disease. Likewise, the hemogram or complete blood cell count (CBC) has served in the evaluation of patients with anemia. A natural extension of these familiar batteries in the form of "organ panels" to encompass other organs, systems, or pathophysiologic reflections of the sequence in disease, seemed logical.

Organ panels reflect a critical, comprehensive, and current selection of clinical pathologic measurements and examinations focusing on the patient's problem, organ, or system. They also developed partly in response to the increased use of general screening procedures in health centers, clinics, and hospitals throughout the United States. These screening procedures, which usually consist of 12 chemical measurements with a low unit cost, have the following limitations: (1) Low detection rate of unrecognized disease. (2) Many of the tests are unrelated ("shotgun" approach). (3) Many of the tests would not be ordered for a specific patient. (4) The choice of measurements is riveted to a single instrument rather than to appropriate instrumentation and methods that will provide optimum sensitivity, specificity, and precision for disease identification or pathophysiologic reflection of sequence in disease.

Advantages of Organ Panels: Members of our medical staff have been quite receptive to the philosophy of organ panels. From the patient's history and physical findings, a physician usually suspects disorders involving one or more organs, and orders appropriate diagnostic laboratory tests. Thus, the organ panel follows the logic of a physician's evaluation of his patient.

When a medical problem is not within the physician's field, the organ panels will provide him with the data most germane to the ailment. In addition to its educational value, it assures the physician that the most appropriate laboratory data have been requested.

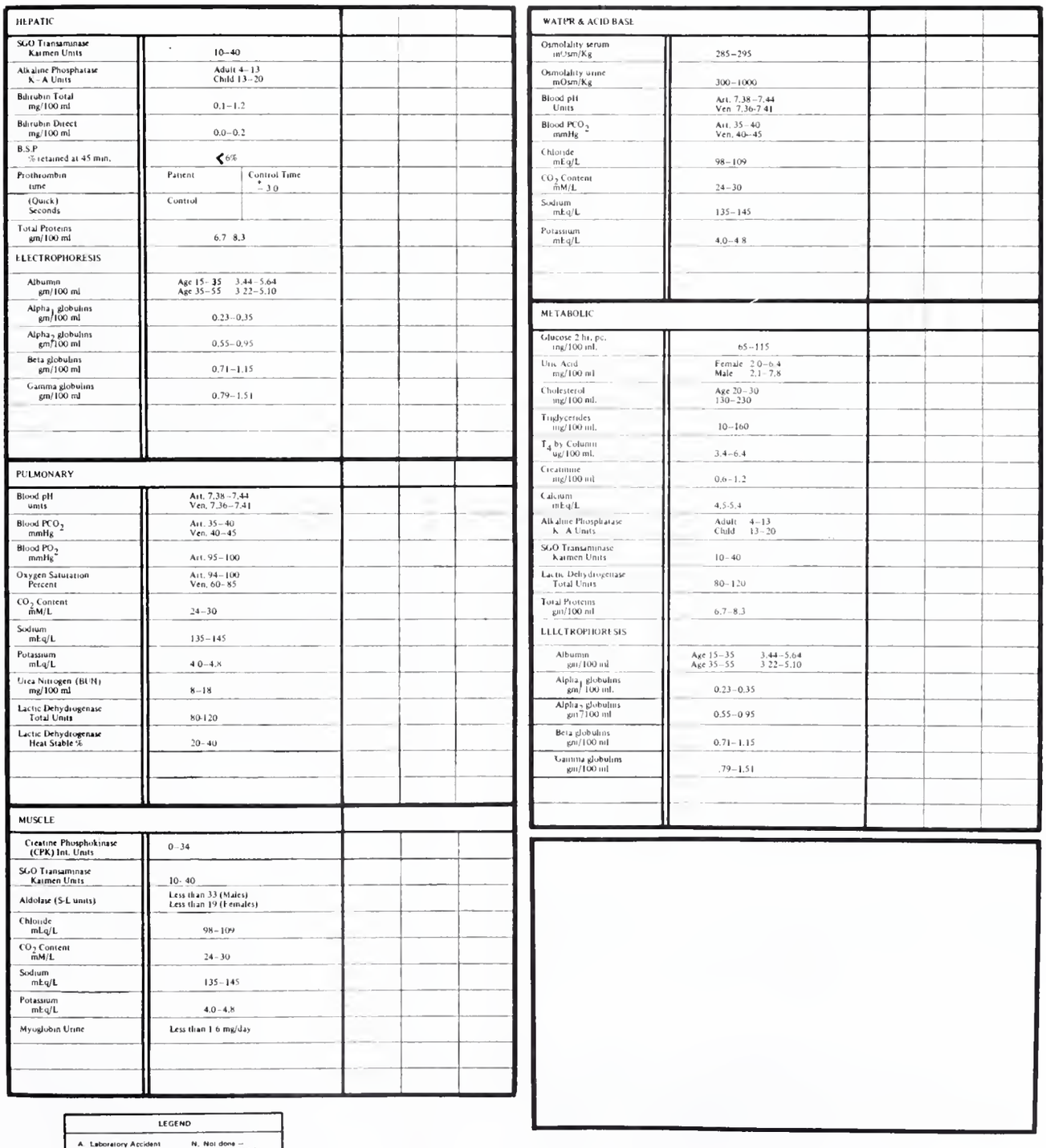
Screening tests for the different panels were selected in consultation with specialists and by employing basic science information generated and translated into patient care. Our panels are constantly subject to revision in order to keep abreast of new developments.

Our preliminary data indicate that organ panels will help shorten the patient's hospital stay; they also are helpful in providing more specific and comprehensive care for ambulatory patients. These factors result in economy in overall delivery of health care services. When the initial selection of laboratory tests is limited, the results sometimes dictate that additional data are needed. This requires reordering, new specimen collection, and additional time to accumulate all the diagnostic data. Use of the comprehensive organ panels eliminates such delays.

The unit charge for a test within a panel is approximately one-half of what the same test would cost if ordered singly. Greater economy should be forthcoming with increased volume and reduction of unit costs. Furthermore, the panels obviate a certain amount of repetition and overlapping of determinations, and this also lowers the patient's laboratory expenses.

From the standpoint of clinical pathology, automation has enabled us to make better allocation of our existing resources, and to organize our technical and clerical staff to provide more efficient and effective service. One pleasant surprise has been an increased interest and response from our professional and technical

Fig 2. Clinical pathology, organ panel B.



HEPATIC	
SGO Transaminase Karmen Units	10–40
Alkaline Phosphatase K–A Units	Adult 4–13 Child 13–20
Bilirubin Total mg/100 ml	0.1–1.2
Bilirubin Direct mg/100 ml	0.0–0.2
B.S.P % retained at 45 min.	<6%
Prothrombin time	Patient | Control Time + – 3.0
(Quick) Seconds	Control
Total Proteins gm/100 ml	6.7 8.3
ELECTROPHORESIS	
Albumin gm/100 ml	Age 15–35 3.44–5.64 Age 35–55 3.22–5.10
Alpha$_1$ globulins gm/100 ml	0.23–0.35
Alpha$_2$ globulins gm/100 ml	0.55–0.95
Beta globulins gm/100 ml	0.71–1.15
Gamma globulins gm/100 ml	0.79–1.51

PULMONARY	
Blood pH units	Art. 7.38–7.44 Ven. 7.36–7.41
Blood PCO_2 mmHg	Art. 35–40 Ven. 40–45
Blood PO_2 mmHg	Art. 95–100
Oxygen Saturation Percent	Art. 94–100 Ven. 60–85
CO_2 Content mM/L	24–30
Sodium mEq/L	135–145
Potassium mEq/L	4.0–4.8
Urea Nitrogen (BUN) mg/100 ml	8–18
Lactic Dehydrogenase Total Units	80-120
Lactic Dehydrogenase Heat Stable %	20–40

MUSCLE	
Creatine Phosphokinase (CPK) Int. Units	0–34
SGO Transaminase Karmen Units	10–40
Aldolase (S-L units)	Less than 33 (Males) Less than 19 (Females)
Chloride mEq/L	98–109
CO_2 Content mM/L	24–30
Sodium mEq/L	135–145
Potassium mEq/L	4.0–4.8
Myoglobin Urine	Less than 1.6 mg/day

WATER & ACID BASE	
Osmolality serum mOsm/Kg	285–295
Osmolality urine mOsm/Kg	300–1000
Blood pH Units	Art. 7.38–7.44 Ven 7.36-7.41
Blood PCO_2 mmHg	Art. 35–40 Ven. 40–45
Chloride mEq/L	98–109
CO_2 Content mM/L	24–30
Sodium mEq/L	135–145
Potassium mEq/L	4.0–4.8

METABOLIC	
Glucose 2 hr. pc. mg/100 ml.	65–115
Uric Acid mg/100 ml	Female 2.0–6.4 Male 2.1–7.8
Cholesterol mg/100 ml.	Age 20–30 130–230
Triglycerides mg/100 ml.	10–160
T_4 by Column ug/100 ml.	3.4–6.4
Creatinine mg/100 ml	0.6–1.2
Calcium mEq/L	4.5-5.4
Alkaline Phosphatase K–A Units	Adult 4–13 Child 13–20
SGO Transaminase Karmen Units	10–40
Lactic Dehydrogenase Total Units	80–120
Total Proteins gm/100 ml	6.7–8.3
ELECTROPHORESIS	
Albumin gm/100 ml	Age 15–35 3.44–5.64 Age 35–55 3.22–5.10
Alpha$_1$ globulins gm/100 ml.	0.23–0.35
Alpha$_2$ globulins gm/100 ml	0.55–0.95
Beta globulins gm/100 ml	0.71–1.15
Gamma globulins gm/100 ml	.79–1.51

LEGEND	
A. Laboratory Accident B. Confirmed C. Clotted D. Moderate E. Recollect Specimen F. Unit Notified G. Specimen not received H. Hemolysis J. Xanthochromic K. Marked (Over 100/hpf) L. Lactescence M. Minimum (Less than 0-1/hpf)	N. Not done — see schedule P. Patient not available Q. Quantity not sufficient R. Patient uncooperative T. Improperly labeled U. Test cancelled by physician W. Improper specimen X. Report to follow Y. Obscured by dye

Clinical Pathologist M. D.

staff, who feel that they are better informed in regard to individual patients.

Finally, organ panels represent an innovation that is in the best interests of the patient and attending physician. We must make the maximum use of our resources in the delivery of health care services, and in an academic environment it is essential that such innovations be compatible with the educational philosophy and the highest standards of medical care. We are confident that organ panels not only meet these requirements, but are responsive to the needs of society today.

What the Panels Include: Following is a review of 15 of our currently available panels, with the necessary specimen requirements and explanations of why certain measurements are selected. It is anticipated that each patient would have a CBC (hemoglobin, hematocrit, leukocyte count, peripheral smear evaluation and differential) and a urinalysis. Hence, these are not included with each panel. Other panels, such as coma and bleeding, may be anticipated in the future. At present, available panels include: cardiac injury, cardiac evaluation, cardiovascular (hypertension), pulmonary or respiratory failure, renal, water, electrolytes and acid-base, hepatic, pancreatic, intestinal (malabsorption), thyroid, parathyroid, adrenal cortex, metabolic (detection screen), muscle, and cerebrovascular accident.

Cardiac Injury Panel: Specimen is one plain tube of clotted blood. Data are creatine phosphokinase (CPK), SGOT, and lactic dehydrogenase (LDH) including heat-stable LDH or zymogram with elevated LDH.

CPK offers maximum specificity and sensitivity; it is elevated in about 95% of patients with acute myocardial infarcts. SGOT is about 85 to 90% sensitive, while nearly 100% of patients with documented myocardial infarctions have elevated LDH. Heat-stable LDH reflects specifically the myocardial fraction of LDH isoenzymes that are displayed in a zymogram. However, the time post-infarction also should be considered:

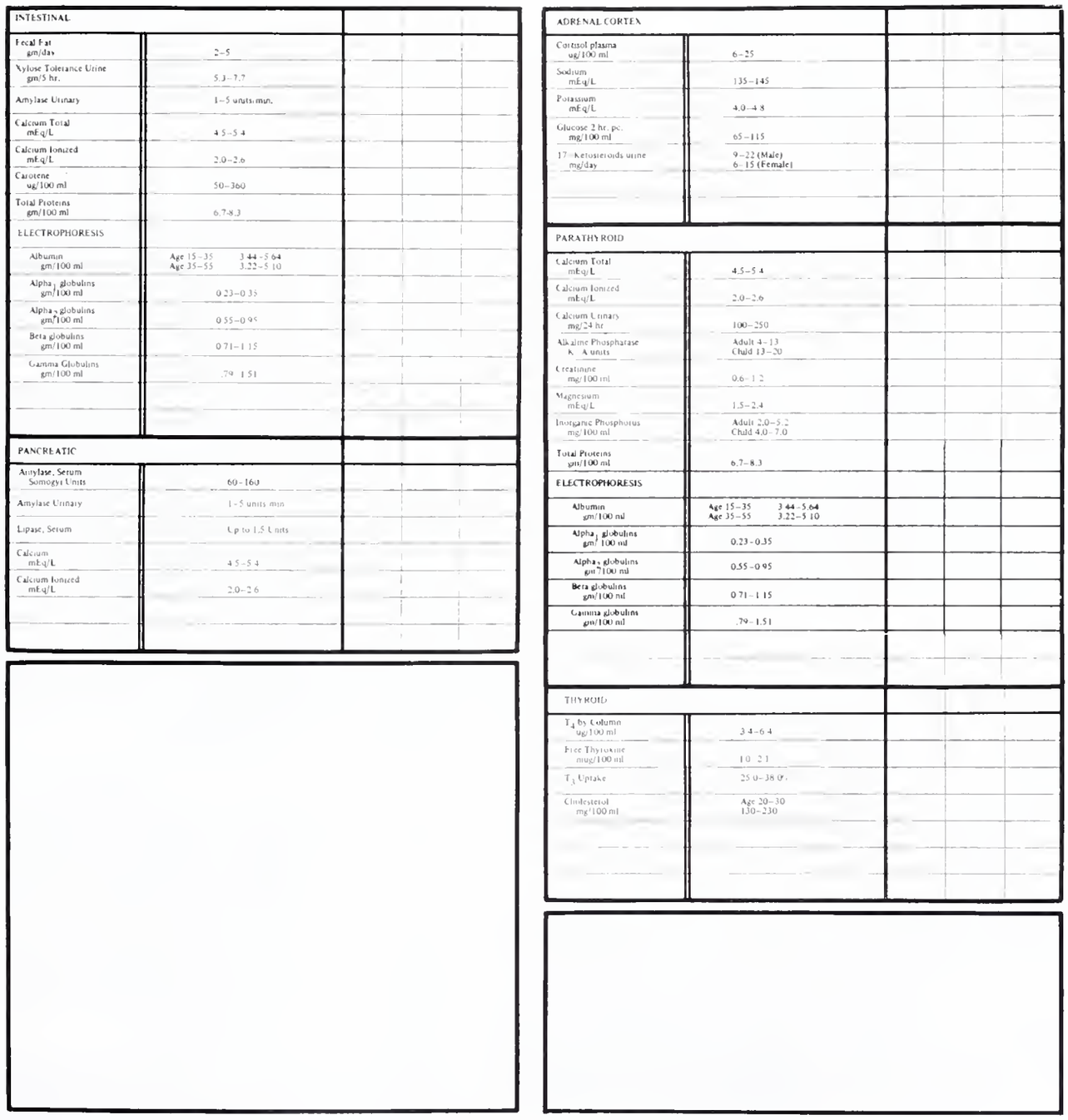
Days Post-infarction	Most Likely Enzyme Abnormality
First 24 hours	CPK
1 to 4	CPK, SGOT, or LDH
3 to 7	SGOT or LDH
7 or more	LDH

Cardiac Evaluation Panel: Specimens are one plain tube of clotted blood, one orange versene tube of anticoagulated blood, and one yellow fluoride heparin tube of anticoagulated blood. Data are serum cholesterol, plasma triglycerides, serum T_4 by column, and blood glucose two hours after ingestion of 100 gm glucose.

It is useful, in individuals with strong family histories of coronary and cerebral arterial disease, to make regular serum cholesterol and triglyceride measurements, and prescribe suitable diet and exercise as preventive efforts. To do this, one must rule out primary disorders of lipid metabolism (normal cholesterol and triglycerides accomplish this), as well as diabetes mellitus and hypothyroidism. A serum lipoprotein electrophoresis should be requested when there is an elevation of serum cholesterol and/or serum triglycerides (blood specimen collected after a 12-hour overnight fast).

Cardiovascular (Hypertension) Panel: Specimens are two blue heparin tubes of anticoagulated blood; one plain tube of clotted blood; one versene orange tube of anticoagulated blood; and one yellow fluoride heparin tube of anticoagulated blood. Data are creatinine clearance (1) serum creatinine and (2) urine creatinine (1, 2, or 24 hour timed urine specimen collection); urinary vanillylmandelic acid (VMA); plasma electrolytes (sodium, potassium, chloride, carbon dioxide content); blood pH and arterial carbon dioxide pressure (Pco_2); plasma cortisol; blood glucose two hours after 100 gm glucose ingestion; serum cholesterol; plasma triglycerides; serum LDH (heat-stable if elevated); total serum protein; and electrophoresis.

Fig 3. Clinical pathology, organ panel C.



INTESTINAL		
Fecal Fat gm/day	2–5	
Xylose Tolerance Urine gm/5 hr.	5.3–7.7	
Amylase Urinary	1–5 units/min.	
Calcium Total mEq/L	4.5–5.4	
Calcium Ionized mEq/L	2.0–2.6	
Carotene ug/100 ml	50–360	
Total Proteins gm/100 ml	6.7-8.3	
ELECTROPHORESIS		
Albumin gm/100 ml	Age 15–35 3.44–5.64 Age 35–55 3.22–5.10	
Alpha$_1$ globulins gm/100 ml	0.23–0.35	
Alpha$_2$ globulins gm/100 ml	0.55–0.95	
Beta globulins gm/100 ml	0.71–1.15	
Gamma Globulins gm/100 ml	.79–1.51	

PANCREATIC		
Amylase, Serum Somogyi Units	60–160	
Amylase Urinary	1–5 units/min	
Lipase, Serum	Up to 1.5 Units	
Calcium mEq/L	4.5–5.4	
Calcium Ionized mEq/L	2.0–2.6	

ADRENAL CORTEX		
Cortisol plasma ug/100 ml	6–25	
Sodium mEq/L	135–145	
Potassium mEq/L	4.0–4.8	
Glucose 2 hr. pc. mg/100 ml	65–115	
17–Ketosteroids urine mg/day	9–22 (Male) 6–15 (Female)	

PARATHYROID		
Calcium Total mEq/L	4.5–5.4	
Calcium Ionized mEq/L	2.0–2.6	
Calcium Urinary mg/24 hr.	100–250	
Alkaline Phosphatase K. A units	Adult 4–13 Child 13–20	
Creatinine mg/100 ml	0.6–1.2	
Magnesium mEq/L	1.5–2.4	
Inorganic Phosphorus mg/100 ml	Adult 2.0–5.2 Child 4.0–7.0	
Total Proteins gm/100 ml	6.7–8.3	
ELECTROPHORESIS		
Albumin gm/100 ml	Age 15–35 3.44–5.64 Age 35–55 3.22–5.10	
Alpha$_1$ globulins gm/100 ml	0.23–0.35	
Alpha$_2$ globulins gm/100 ml	0.55–0.95	
Beta globulins gm/100 ml	0.71–1.15	
Gamma globulins gm/100 ml	.79–1.51	

THYROID		
T_4 by Column ug/100 ml	3.4–6.4	
Free Thyroxine mug/100 ml	1.0–2.1	
T_3 Uptake	25.0–38.0%	
Cholesterol mg/100 ml	Age 20–30 130–230	

LEGEND	
A Laboratory Accident	N Not done – see schedule
B Confirmed	P Patient not available
C Clotted	Q Quantity not sufficient
D Moderate hemolysis	R Patient uncooperative
E Recollect Specimen	T Improperly labeled
F Unit Notified	U Test canceled by physician
G Specimen not received	W Improper specimen
H Hemolysis	X Report to follow
J Xanthochromic	Y Obscured by dye
K Marked (Over 100/hpf)	
L Lactescence	
M Minimum (Less than 0-1/hpf)	

M. D.
Clinical Pathologist

Creatinine clearance is the best single indicator of impaired renal function as a cause or complication of hypertension. Urinary VMA is preferable to catecholamine determination for identification of pheochromocytoma, since it reflects more quantitatively the metabolic end product of adrenal medullary hormone metabolism. Plasma electrolytes plus blood pH levels can be used to screen for mineralocorticoid that, with plasma cortisol, reflects glucocorticoid hypersecretion derangements associated with Cushing's syndrome as a cause of hypertension. Diabetes mellitus may be detected by elevated levels of glucose and fasting blood lipids (cholesterol and triglycerides). Serum lipoprotein electrophoresis is required to follow patients with hyperlipidemia. The LDH is a sensitive screening test for tissue necrosis, particularly of the heart. Urinary aldosterone and renin assays are additional measurements that may be required to delineate the pathogenesis of hypertension. Hyperaldosteronism is suggested by hypokalemia, alkalemia, and hypochloremia with normal or high sodium levels.

Pulmonary or Respiratory Failure Panel: Specimens are one syringe (5 ml) of heparinized arterial blood with rubber stopper on end of needle, and one plain tube of clotted blood. Data are Pco_2, CO_2 content, and pH, arterial blood; Po_2 and oxygen saturation, arterial blood; sodium, and potassium, plasma; BUN; and serum LDH.

Functional disturbances of ventilation are reflected primarily by elevation of Pco_2, while defects in diffusion result in depression of Po_2 and oxygen saturation. Chronic obstructive pulmonary disease is often associated with anatomic functional changes manifested by both ventilation and diffusion defects (Pco_2 and Po_2).

Renal Panel: Specimens are one plain tube of clotted blood and one blue heparin tube of anticoagulated blood. Data are BUN; creatinine clearance (1) serum creatinine and (2) urine creatinine (1, 2, or 24 hour timed urine specimen collection); total serum protein and electrophoresis; urinary culture and colony count (first morning clean voided specimen—sterile container); basic examination of urine (first morning voided specimen); and plasma and urine osmolality (with 12-hour water deprivation).

Although the BUN level is especially useful in patients undergoing dialysis, the serum creatinine is a better single screening test for renal function since it is virtually unaffected by protein ingestion and metabolism or hydration. The serum creatinine combined with urine creatinine values can be used to calculate the creatinine clearance, the most practical method for determining glomerular filtration rate. A serum protein electrophoresis usually shows a typical pattern in the nephrotic syndrome (depressed serum albumin and gamma globulins with alpha-$_2$ globulin elevation); an alpha-$_2$ globulin increment alone is helpful in identifying rejection in patients who have had a renal transplant. Plasma and urine osmolality measurements after water deprivation should be avoided in patients with azotemia or frank uremia; indeed, severely uremic patients cannot tolerate hydropenia for even 12 hours.

Water, Electrolytes and Acid-Base Panel: Specimens are one plain tube of clotted blood and one heparin tube of anticoagulated blood. Data are serum osmolality; urine osmolality (collect urine with clotted blood specimen; a timed urine collection is required for free water clearance and creatinine measurements); blood pH and Pco_2; sodium, potassium, chloride, and total CO_2 content, plasma.

Serum osmolality is useful in evaluating hyponatremia and hypernatremia, which are usually associated with hypo-osmolality and hyperosmolality, respectively, as well as disturbances of water balance. In severe diabetes mellitus, serum osmolality levels help forewarn the physician against hyperosmolality, which may lead

Fig 4. Clinical pathology, organ panel D.

URINALYSIS	Normal Values	Date:						
Appearance								
Color								
Sample								
Volume–ml								
Specific Gravity								
pH								
Glucose-gm/100 ml	0-0.18							
–gm/Total Volume								
Protein–mg/100 ml	0-6							
–gm/Total Volume								
Hemoglobin	0							
Bilirubin	0							
Phenylpyruvic Acid	0							
Cystine	0							
Acetone	0							
Acetonetic Acid	0							
Microscopic Examination RBC/hpf	0-2							
Microscopic Examination WBC/hpf	0-3							
Casts/lpf: Hyaline	0-1							
Granular, fine								
Granular, course								
Cellular								
Inclusion								
Crystals								

LEGEND

A. Laboratory Accident
B. Confirmed
C. Clotted
D. Moderate
E. Recollect Specimen
F. Unit Notified
G. Specimen not received
H. Hemolysis
J. Xanthochromic
K. Marked (Over 100/hpf)
L. Lactescence
M. Minimum (Less than 0-1/hpf)
N. Not done – see schedule
P. Patient not available
Q. Quantity not sufficient
R. Patient uncooperative
T. Improperly labeled
U. Test cancelled by physician
W. Improper specimen
X. Report to follow
Y. Obscured by dye

Descriptive Abbreviations

cl	clear
cld	cloudy
cv	clean voided
ms	midstream
cath	catherized

BACTERIOLOGY

S - Sensitive M - Moderately Sensitive
R - Resistant P - Partially Sensitive

Date Received	Specimen		Ampi	Cepha	Chloro	Colis	Eryth	Gant	Kana	Linco	Mathi	Neo	Nitrof	Oxac	Pen	Strep	Tetra			Initial	Number

M.D.
(Clinical Pathologist)

to intracellular dehydration, convulsions, and death. Urine osmolality is the most accurate method for assessing urine concentration, since renal and pituitary disturbances in function reflect changes in osmolality (number of solute particles), rather than specific gravity (mass of solute particles). Both serum and urine osmolality measurements generate the urine to plasma osmolality ratio (normal 4:1) which, with the urine volume, permit calculation of free water clearance. Knowledge of free water clearance aids in the management of postoperative patients, patients with cardiac failure, cirrhosis, Addison's disease, polyuric syndromes, and other conditions.

Hepatic Panel: Specimens are two plain tubes of clotted blood and one sodium oxalate tube of anticoagulated blood. Data are SGOT, serum alkaline phosphatase, bilirubin (total and direct), total serum protein, electrophoresis, BSP* if bilirubin is not elevated, and prothrombin time.

The SGOT is the most sensitive single serum enzyme assay for assessing hepatic cellular injury. The alkaline phosphatase value is useful in determining the degree of hepatobiliary obstruction or interference with bile flow. Total serum protein and electrophoresis indicate the kind of hepatic lesion; for example, in cirrhosis there is often a decreased concentration of albumin with diffusely elevated beta and gamma-globulins. A decrease in alpha and beta globulins is often seen in hepatitis, and an alpha-$_1$ globulin increase is noted often in hepatoma. Alpha and beta globulins are often elevated in obstructive jaundice. For the anicteric patient, the BSP is a sensitive test of disorders in hepatic excretory function. One disadvantage is that it occasionally results in an immediate and sometimes fatal hypersensitive reaction. The BSP is of no value when the serum direct bilirubin is above 2 mg/100 ml, since the BSP would also be retained abnormally. The prothrombin time, as well as being a useful liver function test, is a prerequisite for a liver biopsy.

Pancreatic Panel: Specimens are two plain tubes of clotted blood, and a urine specimen, one- or two-hour timed collection. Data are serum amylase, urinary amylase, serum lipase, and serum calcium, total and ionic.

The serum amylase level is of most value with acute pancreatitis during the first 24 hours. After two days, urinary amylase and serum lipase are more sensitive, as they are with relapsing pancreatitis. Serum calcium levels are often depressed within 24 hours after the onset of acute abdominal pain in pancreatitis. A sweat chloride test should also be requested if cystic fibrosis is a possible diagnosis.

Intestinal (Malabsorption) Panel: Specimens are two plain tubes of clotted blood in addition to specimens cited. Data are fecal fat (three-day stool collection); d-xylose absorption test* (at one hour, blue heparin tube of anticoagulated blood plus four-hour timed urine collection); urinary amylase (one or two-hour timed collection); serum calcium, total and ionic; serum carotene; total serum protein; and electrophoresis.

Quantitative fecal fat estimation is essential for detection of steatorrhea while the d-xylose absorption test delineates a defect in carbohydrate absorption. Serum carotene is a screening test for fat-soluble vitamin absorption, while protein electrophoresis may help identify exudative enteropathy. The urinary amylase and serum calcium measurements are included primarily to detect relapsing pancreatitis as a cause of malabsorption.

Thyroid Panel: Specimens are four plain tubes of clotted blood. Data are T_4 by column, free thyroxine index including T_3 uptake, and serum cholesterol.

The T_4 by column is particularly useful because exogenous iodine contamination can be elimi-

*By appointment.

*By appointment.

nated or at least identified by this method. The free thyroxine index correlates well with free thyroxine level, and is estimated by determining T_4 by column and T_3 uptake and multiplying one by the other; a valid (noncontaminated) T_4 by column is required. In the event of exogenous iodide contamination, the T_3 uptake, which is unaffected, reflects unsaturated thyroxine binding globulin level inversely. Pregnancy or oral contraceptives will, however, increase the T_4 column and lower T_3 uptake. Serum cholesterol is often elevated in hypothyroidism and in addition to T_4 by column, may be useful in evaluating treatment. With improvement in accuracy and precision, the free thyroxine should eventually replace the free thyroxine index.

Parathyroid Panel: Specimens are three plain tubes of clotted blood. Data are total and ionic serum calcium, total serum protein and electrophoresis, urinary calcium (24-hour specimen with patient on a dairy product-free diet for three days prior to collection), and serum alkaline phosphatase, creatinine, magnesium, and phosphorus.

We have observed relatively higher values of ionic calcium than total serum calcium elevations in primary hyperparathyroidism. Serum protein electrophoresis can help confirm other diseases which are associated with hypercalcemia, such as sarcoid and multiple myeloma. Urinary calcium elevations usually will rule out the milk-alkali syndrome. In rickets (vitamin D deficiency) and Paget's disease, serum alkaline phosphatase levels are high. Since magnesium levels are frequently elevated in vitamin D intoxication and normal in hyperparathyroidism, serum magnesium values may be required.

Adrenal Cortex Panel: Specimens are two plain heparin tubes of anticoagulated blood and one yellow fluoride heparin tube of anticoagulated blood. Data are urinary 17-ketosteroids (24 hour collection), plasma cortisol, plasma sodium and potassium, and blood glucose two hours after 100 gm glucose ingestion.

Elevations in 17-hydroxycorticosteroids (glucocorticoids) can be ascertained by measuring plasma cortisol. A 12-hour dexamethasone suppression test and fluorometric plasma cortisol measurements are recommended. Urinary 17-ketosteroid values will reflect elevations in androgens. Plasma potassium and sodium measurements can show mineral corticoid disturbances. Patients with Cushing's disease who have diabetic glucose tolerance curves may have elevated blood glucose values.

Metabolic Panel: Specimens are one yellow fluoride heparin tube of anticoagulated blood, two plain tubes of clotted blood, and one orange versene tube of anticoagulated blood. Data are plasma glucose two hours after 100 gm glucose ingestion, serum cholesterol, plasma triglycerides, total serum protein and electrophoresis, serum uric acid, serum T_4 by column, serum creatinine, total serum calcium, serum alkaline phosphatase, SGOT, and LDH.

The two-hour post-glucose ingestion plasma glucose is the best single screening test of carbohydrate metabolism. In regard to nucleic acid metabolism, hyperuricemia or gout may be identified with a serum uric acid determination. Paraproteinemia may be reflected by serum protein electrophoresis. Blood lipids (cholesterol and triglycerides) are essential measurements for evaluation of patients with possible hyperlipidemia. Addition of creatinine, calcium, and enzyme determinations makes this panel a more comprehensive screening profile for detection of other diseases in an apparently well individual.

Muscle Panel: Specimens are one plain tube of clotted blood and one blue heparin tube of anticoagulated blood. Data are serum CPK; serum SGOT and aldolase; plasma sodium, potassium, chloride, and carbon dioxide content; and urine myoglobin (random specimen).

Tissue damage in heart and skeletal muscle organs will cause elevation of CPK. More striking elevations of CPK are observed in patients

STATE UNIVERSITY HOSPITAL
Upstate Medical Center

CLINICAL PATHOLOGY DEPARTMENT

ORGAN PANEL STUDIES

Send one requisition to initiate panel study and another requisition with each specimen.

	Yes	No
Patient Contagious	___	___
Room No.	_____	

ADRENAL CORTEX		INTESTINAL MALABSORPTION		PULMONARY	
24 Hour urine		3 day stool		Arterial Blood	
CARDIAC INJURY		D-xylose		RENAL	
CARDIAC EVALUATION		2 hour urine		Urine colony count	
CARDIOVASCULAR		METABOLIC		24 hour urine	
(Hypertension)		MUSCLE		THYROID	
24 hour urine		Urine-random		WATER AND ACID BASE	
C.V.A.		PANCREATIC		2 hour urine	
Urine-random		2 hour urine			
C.S.F. Fluid		PARATHYROID			
HEPATIC		24 hour urine			
B.S.P. 45 min.					

Fig 5. Organ panels service request form.

with myositis and with Duchenne muscular dystrophy rather than the limb-girdle variety. CPK is not elevated secondary to liver damage.

Cerebrovascular-Accident (CVA) Panel: Specimens are one yellow fluoride heparin tube of blood, one plain tube of clotted blood, one heparin tube of anticoagulated blood, one sodium oxalate tube of anticoagulated blood, one orange versene tube of anticoagulated blood, one random urine sample, and one tube of cerebrospinal fluid. Data are plasma sodium, potassium, chloride, and carbon dioxide content; blood glucose and BUN; serum creatinine and cholesterol; plasma triglycerides; pH; cerebrospinal fluid LDH with heat stable fraction; partial thromboplastin time; prothrombin time; and thrombin time.

This panel is intended as a general screen for the stroke victim; it also contains tests (pH, electrolytes, BUN) that will aid initially in the management of the CVA.

In terms of a specific chemical analysis that will prognosticate, predict, or diagnose a CVA, there probably is none. However, abnormal values for plasma triglycerides and serum cholesterol can help the physician in predicting which patients are in a high-risk CVA group.

With regard to diagnosis after a stroke has occurred, the cerebrospinal fluid LDH elevation is probably the best indicator, although inflammation and tumors also cause elevation.

Blood glucose has been included for completeness, even though there is still controversy as to whether or not CVAs occur more frequently in diabetics than nondiabetics.

The three clotting tests should identify any clotting defect or hypercoagulable state.

Procedure: To request a particular panel, the physician writes the name of the selected panel in the order book and on the service request form; it is not necessary to specify each measurement or examination in a specific panel. Appropriate report forms incorporate data into the patient's record.

REFERENCES

1. Detection and Prevention of Chronic Disease Utilizing Multiphasic Health Screening Techniques. Hearings before the Subcommittee on Health of the Elderly, Special Committee on Aging, United States Senate, 89th Congress (Sept 20-22) 1966.

2. A Chemical Profile of Man Shapes Up, Med World News (April 11) 1969.

Dr. Henry, Director of Clinical Pathology, State University of New York, Upstate Medical Center, 750 East Adams St, Syracuse, NY 13210.

Lieutenant Commander Arras, Chief of Pathology, US Naval Hospital, Annapolis, Md.

RADIOLOGICAL CASE OF THE MONTH

Sponsored by the Texas Radiological Society

A 63-year-old white man consulted his physician because of persistent hoarseness during the preceding eight weeks, and particularly during the past three to four weeks. No history of pain, dysphagia, or weight loss was elicited. His wife had complained about the patient's foul breath for about two weeks.

Physical examination revealed a well-developed man with an obviously hoarse voice, in no distress. Foul breath was noted. The only other significant finding was a slightly enlarged, firm, mobile, nontender lymph node at the angle of the mandible on the *right* side. Radiological consultation was sought, and a positive contrast laryngogram was performed. Radiopaque contrast material (oily Dionosil) was introduced into the larynx from above, and the internal laryngeal surfaces were coated, following which films in various projections were obtained. Fig 1 is a film exposed in the anteroposterior projection and during phonation.

The patient was subsequently referred to an ear, nose and throat specialist for further evaluation.

Fig. 1

GEORGE NAIFEH, MD, and
MELVYN SCHREIBER, MD
Department of Radiology,
The University of
Texas Medical Branch,
Galveston, Texas

The laryngogram (Fig 2) was interpreted by the radiologist as showing a lesion enlarging the true and false cords and obliterating the ventricle on the right. The right pyriform recess was elevated and laterally displaced, and there was subglottic extension on the right (arrow). Carcinoma of the larynx was suspected.

Fig. 2

The examination by the laryngologist revealed no other pertinent physical findings. Mirror laryngoscopy was performed, and an irregular mass was noted on the right true cord with obliteration of the ventricle and extension superiorly to the false cord. The border of the vestibule above the tumor was convex instead of concave. Mobility of the cord was significantly impaired. A biopsy showed a poorly differentiated squamous cell carcinoma.

Histologically, almost all laryngeal malignancies are squamous cell carcinomas. Other less common tumors include adenocarcinomas and, rarely, sarcomas. Because of the likelihood of nodal involvement this lesion would be classified as a T_4 in the Tumor-Metastases-Nodes system. A lesion confined to its site of origin is classed as T_1; a lesion extending beyond its site of origin but confined to the adjacent anatomic division is classed as T_2; and a lesion extending farther but still confined to the larynx as T_3.

Radiographic examination of laryngeal tumors is utilized to delineate the extent of the neoplasm. There are generally three techniques of roentgenographic examination which can be applied. A soft tissue technique, using 130 to 150 kv with additional filtration of 3 mm of brass as described by Thornbury and Latourette,[1] gives good visualization of the larynx and subglottic area. Tomography of the larynx is an additional method of determining the extent of the tumor locally. Positive contrast laryngography utilizing topical anesthesia of the oropharynx and epiglottis followed by oily Dionosil instillation probably gives the most accurate diagnosis of the limits of the neoplasm. All these techniques furnish valuable information about the location and extent of laryngeal tumors, and are relatively easy to perform and interpret. They show subglottic extension, when present, better than any other nonoperative technique.

This patient, because of the extent of the tumor, the subglottic extension, and the nodal involvement, underwent a total laryngectomy and radical neck dissection. This was done six weeks after initial irradiation utilizing 5,000 rads delivered by megavoltage to the larynx and neck nodes. The irradiation was given over a period of five weeks.

Neoplasms in group T_1 may be treated with partial laryngectomy or irradiation with comparable results. Those in group T_2 may be treated with irradiation unless there is impaired mobility of the cord, in which case a laryngectomy should be done. In group T_3, there is considerable overlap depending on differentiation of the neoplasm and the presence or absence of subglottic extension and cord mobility. These factors determine for the most part the use of irradiation, surgery, or a combination of both. Almost all neoplasms in group T_4 are treated by irradiation, usually preoperatively, followed by laryngectomy and radical neck dissection.

The prognosis of laryngeal tumors follows closely the extent of the neoplasm and, to a degree, the differentiation. Patients with growths involving only the true cord but not the arytenoid have a 75-90% five-year survival rate regardless of the type of treatment. The rate in group T_3 is in the 50% range, and in T_4 it varies from 20-35%.

The most obvious conclusion, then, is that early diagnosis and treatment of laryngeal malignancies drastically affect the five-year survival. Persistent hoarseness or voice change in a patient 40 years or older demands thorough investigation for possible laryngeal malignancy.

REFERENCE

1. Thornbury, J R, and Latourette, H B: A Comparison Study of Laryngography Techniques. 150 KVP. Plain Roentgenography vs Positive Contrast Roentgenography, Amer J Roentgen 99:555 (March) 1967.

Health Planning an Essential Element of Personal Health Care

PAUL Q. PETERSON, MD

Our total health care system is too complex to be restructured quickly or easily. Nevertheless, we need a more orderly approach to begin solving problems that already exist. Comprehensive health planning, starting at the local level, offers the most practical way to develop workable health care delivery systems that will provide the maximum number of people with the kind of care they need most.

WE ALL KNOW THAT the unfilled health needs in the United States pose a crisis. Since the turn of the century, we have seen a scientific revolution which, in turn, has revolutionized medical science. During the past 20 years, changes in society have been no less revolutionary. Two decades ago the United States' population was 150 million; last year it passed the 200 million mark. It is a population not only dramatically larger but better educated and better equipped to pay for health care.

The social revolution accompanying this growth has fundamentally altered society's expectations for health care. Access to top quality health care is no longer considered a privilege but a right. And the pressure to produce is squarely on the health system.

This is a tall order, an order that cannot be met with the resources available now or in the near future. The existing gaps are enormous, and the resources are stretched too thin. In quantitative terms alone, we cannot do all things for all people at once. We will have to make choices, establish priorities, design new methods of delivering health services, redirect existing resources, and create new resources with all possible speed.

Further complicating the challenge, our society demands not only quantity but quality in health services—it is not willing to settle for less than the best for each of its members.

How will we meet this challenge? The federal government certainly cannot map out a master plan to meet the needs of all the communities, regions, and states of our nation, nor would we want it to. Effective planning cannot be imposed from above. It requires the active participation of all the elements of our health system: professionals, voluntary agencies, government, consumers. Recent federal health legislation has not only encouraged this cooperation, but demanded it. Congress established the "Partnership for Health" when it enacted Public Law 89-749 and invoked the concept of comprehensive health planning. The objective is to establish a framework, connected at all levels, within which all interested parties can assess health needs, formulate objectives, and recommend courses of action.

Present Situation: Now that we see our problem and the way in which we hope to go about solving it, let us examine the details of the situation in which we find ourselves today.

Cost: The most disturbing recent development has been the startling rise in the cost of medical care. This so-called medical cost crisis is really one of three interrelated crises in the health field. One is the unequal distribution of health care, whereby top quality services are less accessible to some people than to others. A second is the manpower crisis, involving serious shortages of professional and technical people to provide services. In addition, the manpower we have is unevenly distributed and inefficiently deployed. The third is the cost

crisis itself, whereby the prices people must pay for the care they need are rising much more rapidly than most other costs in our society.

Private expenditures for medical care in this country more than tripled between 1950 and 1965. In the decade 1956-1966, medical care prices increased twice as much as the consumer price index as a whole. Hospital per diem rates are now $100 a day in some areas. These facts are alarming because they mean that individuals are being deprived of needed health services or are making undue sacrifices to secure these services.

The reasons underlying the medical cost crisis are rarely challenged. Among these are:

1. The increase of scientific knowledge in medicine has not only greatly increased medicine's potential benefits but also generated an extremely costly technology.
2. The health industry began its rapid growth from a low base of salaries and wages which are only now beginning to rise to a status comparable with other service occupations.
3. The consumer public is better informed about medicine's potential benefits and increasingly insistent that its health needs be met as a civic right.
4. The development of private insurance and, more recently, governmental assistance to meet the health needs of the aged and the indigent through Medicare and Medicaid, have translated long-standing needs for care into what the economist calls "effective demand."

Whenever there is a sudden upsurge of effective demand for a commodity that is in short supply, the classic conditions for rapid inflation prevail. When this occurs in a marketplace with the peculiar characteristics of the health system, in which competitive factors have a limited effect and the consumer has a limited base of information from which to make his choices, the upward pressure on prices is subject to very little control.

Considering separately the factors contributing to inflation of medical prices, there appears to be little room for effecting economies. We cannot turn back the clock on scientific technologic advance. We would not reverse the trend to create effective demand for health care for those who need it. We could not suppress the gradual increase in wages in the health industry without further aggravating the manpower situation.

These factors interact with each other to the extent that physician and patient alike feel the pressure to use the best, most modern, and usually most costly mode of treatment. Yesterday's charity patient, now a paying customer, is not and should not be content with less than the best, and his doctor has the normal professional urge to use medical science to the fullest. The hospital administrator and board of trustees want their hospital to be second to none in equipment and scientific capability.

As I have mentioned, the federal government cannot solve the problem by grand decree from Washington, even though about $16 billion of the total investment of $50 billion in health now comes from federal sources. The way it can be done is for each physician to weigh cost in the balance of every treatment he prescribes; for each hospital to consider total community resources rather than institutional aggrandizement in every capital investment; for each community to view its health resources to assure that lower-cost alternatives—home care, for one example—are available to those who do not need more expensive levels of service; for insurance plans, private and governmental alike, to build in incentives for prevention and lower-cost services where these will do the job and reduce the total bill.

Lack of Organization: Our present health system is incoherent and inefficient precisely because it has *not* organized scientific knowledge, technical and physical resources, trained manpower, and financing mechanisms to produce a maximum impact on the problem of health care needs.

Planning in states and communities must be encouraged because only through intelligent assessment of needs and resources, followed by rational assignment of priorities, can we make our limited health resources responsive to the needs of our people.

Given the increasing shortage of financial resources—especially stringent as the consequences of inflation appear—the need for questioning health programs is increased. We must keep in mind our long-term goals and objectives, as well as the desirable immediate results of all health programs. As professionals, we tend to turn away from political choice and competing priorities but we all need to recognize that the current effort in planning is designed to assist in making decisions to allocate scarce financial resources.

Health resources constantly compete with a host of other desirable programs for human betterment. Even within the health field the competition is intense, and there are few guidelines to assist in the choice between, for example, research for health improvement and delivery of health care, or among differing programs for health care itself.

The field of health care is so vast that a national health program cannot be simply defined or readily found. In accord with our pragmatic American bent, we have until now specialized in establishing categorical programs aimed at disease, techniques, or specific population groups.

Need for a Guide: We cannot easily or readily restructure the total health care system, but we do need a health plan to guide our development and choice of activities. I would suggest that the primary focus in managing health programs should be the *individual in the family setting,* regardless of his age, health, or socioeconomic status. To bring coherence to the present patchwork of health programs, the development of a health plan should commence with the concept that our goal is the delivery of comprehensive personal health care to all our citizens. Experts may differ in their techniques of achieving this, but the keys are (1) the integrated treatment and care of the individual and the family, and (2) the availability of the full range of services.

Therefore, our health plan must provide for improvement of the quality, effectiveness, and accessibility of health services for the urban and rural poor, who need care the most and obtain the least. What they need most are simply the routine medical services which are readily available to some of our people but not to them. The widest expressed health care demand in our country today, in other words, is not for those exciting new procedures on the frontier of medical science. Rather, it is for the day-to-day health care needs of a vast number of people who do not now enjoy the benefits of medical care.

To provide comprehensive personal health care at costs we can afford, we must start developing measurement techniques which can show the extent of correlation between proposed expenditures and their ascertainable results. I am not suggesting the application of cost benefit principles to the performance of health personnel or procedures, because I do not believe that this economic index can appropriately be applied to health care. But we must be able to measure the results of our health programs

more effectively. Without mechanisms that can make more accurate judgment regarding the effectiveness of our various activities, we cannot be assured of necessary progress.

It is necessary to proceed from the basic assumption that the federal government does not know what is best for everybody or what is most urgently needed in any locality. There is no one best way of doing things. Institutional change should come about in many forms. Given the vastness of the health care enterprise and the diversity of the public/private relationships which it covers, no one can realistically expect it to be otherwise.

Therefore, what we must strive to do is encourage not one partnership but many. The test of genius will be whether all the partnerships can work. Those who are charmed by the abstract simplicity of tidy pyramidal relationships in health planning do not reckon with the complexity of the health care system. What we are tackling in health care is one of the most complicated experiments in intergovernmental, interprofessional, and public/private relationships ever undertaken in American history.

Influence at Local Level: Comprehensive health planning at the state and local levels gives physicians a mechanism for meeting responsibilities in providing health care. By cooperating with local organizations and individuals providing or receiving health services, you must determine the needs of the people in your own area, examine the facilities, manpower, and financial resources at your disposal, and then determine your priorities and plan of action. The role of the federal government is to encourage, stimulate, and provide some financial support for your efforts. You, as members of your community, must provide the leadership and the hard work.

And as we think of the magnitude and complexity of the problems before us, we can perhaps take heart from Sir Winston Churchilll. When he was asked, in late 1941, how long it would take to lick the Axis powers, he thought for a moment then answered: "If we manage it well, it will take only half as long as if we manage it badly."

Dr. Peterson, Assistant Surgeon General, US Public Health Service, Washington, DC 20201.

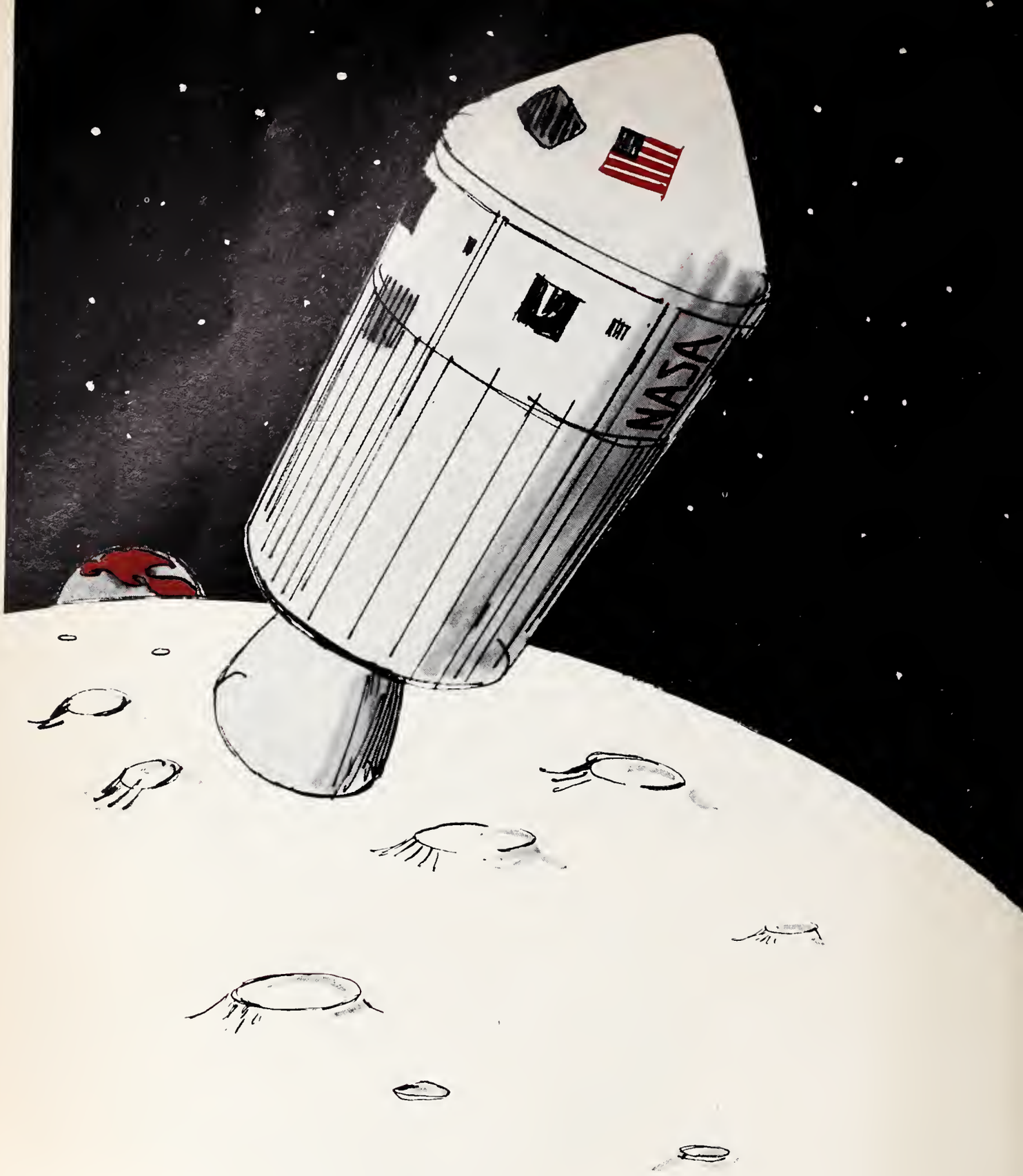
PROTEIN CONTENT / 7 oz. Serving*

Bean with Bacon	6.8	Green Pea with Ham (Frozen)	7.6
Beef	8.0	Hot Dog Bean	8.4
Chicken Broth	5.5	Pepper Pot	6.1
Chicken 'N Dumplings	5.8	Split Pea with Ham	10.2
Chili Beef	6.2	Vegetable Beef	5.0
Green Pea	6.9	Vegetable with Beef (Frozen)	5.4

When protein is the focal point in your patients' special diets, Campbell's Soups can be a convenient supplementary source of that essential nutrient.

* From "Nutritive Composition of Campbell's Products" which gives values of important nutritive constituents of all Campbell's Products. For your copy, write to Campbell Soup Company, Dept. 365, Camden, New Jersey 08101.

There's a soup for almost every patient and diet ...for every meal and, it's made by Campbell



LOMOTIL®

TABLETS/LIQUID

Each Lomotil tablet and each 5 cc. of Lomotil liquid contain:

diphenoxylate hydrochloride . . . . . 2.5 mg.
(Warning: May be habit forming)
atropine sulfate . . . . . 0.025 mg.

One hundred per cent of all travelers who have traveled 200,000 miles or more away from home have relied on Lomotil to control diarrhea.

When your patients need a reliable antidiarrheal—
at home or away from home—rely on Lomotil.

In diarrheas associated with:

- gastroenteritis
- acute infections
- functional hypermotility
- irritable bowel
- ileostomy
- drug-induced diarrhea

Warnings: Lomotil should be used with caution in patients taking barbiturates and, if not contraindicated, in patients with cirrhosis, advanced liver disease or impaired liver function.

Precautions: Lomotil is a federally exempt narcotic with theoretically possible addictive potential at high dosage; this is not ordinarily a clinical problem. Use Lomotil with considerable caution in patients receiving addicting drugs. Recommended dosages should not be exceeded, and medication should be kept out of reach of children. Signs of accidental overdosage may include severe respiratory depression, flushing, lethargy or coma, hypotonic reflexes, nystagmus, pinpoint pupils, tachycardia; continuous observation is necessary. The subtherapeutic amount of atropine sulfate is added to discourage deliberate overdosage.

Adverse Reactions: Side effects reported with Lomotil therapy include nausea, sedation, dizziness, vomiting, pruritus, restlessness, abdominal discomfort, headache, angioneurotic edema, giant urticaria, lethargy, anorexia, numbness of the extremities, atropine effects, swelling of the gums, euphoria, depression and malaise. Respiratory depression and coma may occur with overdosage.

Dosage: The recommended initial daily dosages, given in divided doses until diarrhea is controlled, are as follows:

Children:

3-6 mo. . . . . ½ tsp.* t.i.d. (3 mg.)
6-12 mo. . . . . ½ tsp. q.i.d. (4 mg.)
1-2 yr. . . . . ½ tsp. 5 times daily (5 mg.)
2-5 yr. . . . . 1 tsp. t.i.d. (6 mg.)
5-8 yr. . . . . 1 tsp. q.i.d. (8 mg.)
8-12 yr. . . . . 1 tsp. 5 times daily (10 mg.)
Adults: . . . . . 2 tsp. 5 times daily (20 mg.)
or 2 tablets q.i.d.

*Based on 4 cc. per teaspoonful

Maintenance dosage may be as low as one-fourth the initial daily dosage.

G. D. SEARLE & CO.
P. O. Box 5110, Chicago, Illinois 60680
Research in the Service of Medicine 952

Nose clear as a whistle

(THANKS TO DIMETAPP®)

Dimetapp Extentabs® does an outstanding job of helping to clear up the stuffiness, drip and congestion of colds and upper respiratory allergies and infections. Each Extentab keeps working up to 12 hours. And for most patients drowsiness or overstimulation is unlikely. Try Dimetapp. It clearly works.

FOR UPPER RESPIRATORY ALLERGIES AND INFECTIONS

Dimetapp Extentabs®

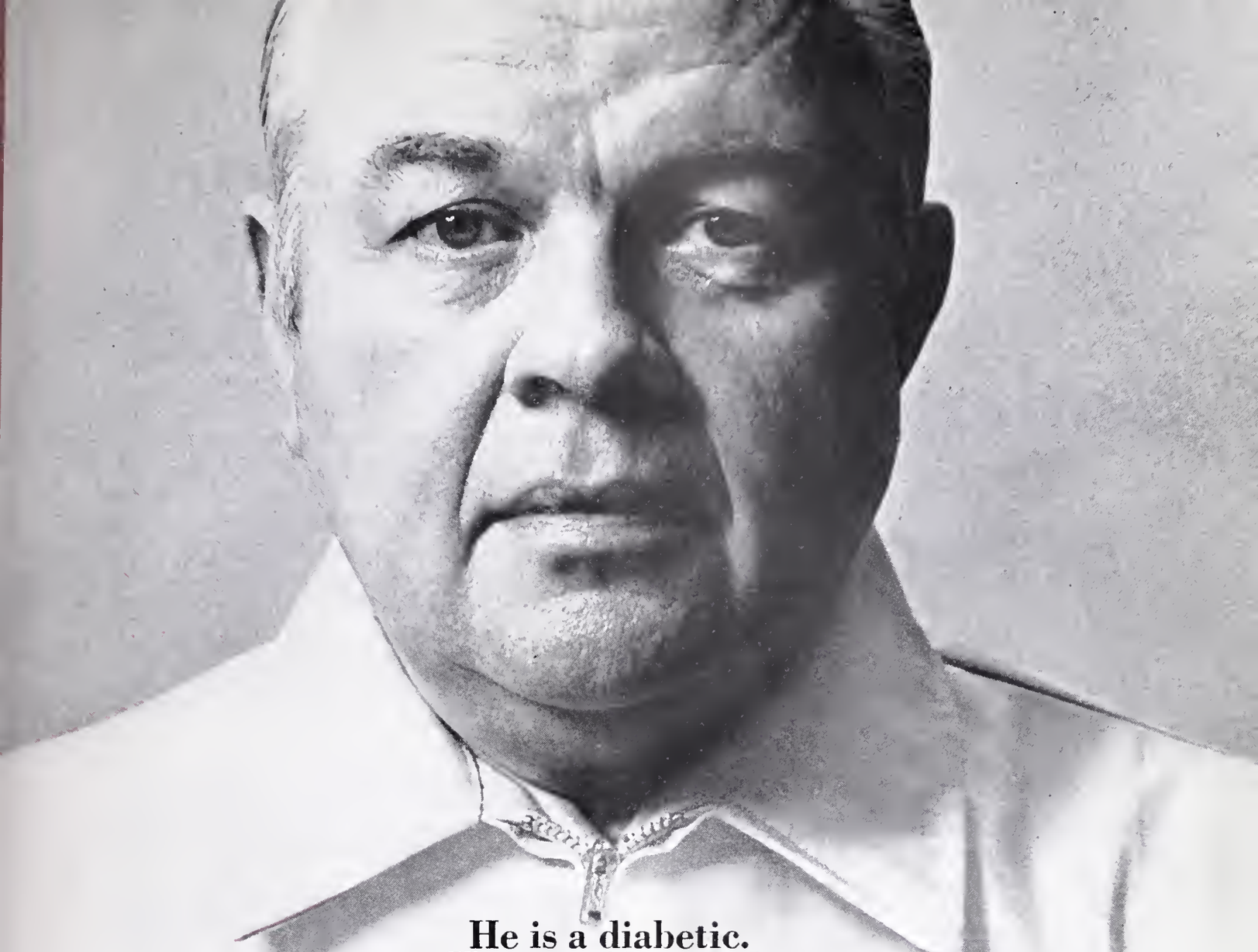
Dimetane® (brompheniramine maleate), 12 mg.; phenylephrine HCl, 15 mg.; phenylpropanolamine HCl, 15 mg.

UP TO 12 HOURS CLEAR BREATHING ON ONE TABLET

Indications: Dimetapp is indicated for symptomatic relief of the allergic manifestations of respiratory illnesses, such as the common cold and bronchial asthma, seasonal allergies, sinusitis, rhinitis, conjunctivitis, and otitis.
Contraindications: Hypersensitivity to antihistamines. Not recommended for use during pregnancy.
Precautions: Until patient's response has been determined, he should be cautioned against engaging in operations requiring alertness. Administer with care to patients with cardiac or peripheral vascular diseases or hypertension.
Side Effects: Hypersensitivity reactions including skin rashes, urticaria, hypotension and thrombocytopenia, have been reported on rare occasions. Drowsiness, lassitude, nausea, giddiness, dryness of the mouth, mydriasis, increased irritability or excitement may be encountered.
Dosage: 1 Extentab morning and evening.
Supplied: Bottles of 100 and 500.

A.H. ROBINS COMPANY
RICHMOND, VA. 23220

A·H·ROBINS



He is a diabetic.
He is middle-aged.
When he needs an antibiotic
he may be a candidate for

DECLOSTATIN® 300

Demethylchlortetracycline HCl 300 mg
and Nystatin 500,000 units
CAPSULE-SHAPED TABLETS Lederle

b.i.d.

To guard susceptible patients against intestinal monilial overgrowth during broad-spectrum therapy—the protection of nystatin is combined with demethylchlortetracycline in DECLOSTATIN.

For your susceptible candidates, prescribe DECLOSTATIN—the broad-spectrum therapy that prevents monilial overgrowth.

Effectiveness: Because its antibacterial component is DECLOMYCIN Demethylchlortetracycline, DECLOSTATIN should be equally or more effective therapeutically than other tetracyclines in infections caused by tetracycline-sensitive organisms. The antifungal component, Nystatin, protects against superinfection by antibiotic-resistant fungal overgrowth (particularly monilia) in the intestinal tract.

Contraindication: History of hypersensitivity to demethylchlortetracycline or nystatin.

Warning: In renal impairment, usual doses may lead to excessive accumulation and liver toxicity. Under such conditions, lower than usual doses are indicated, and, if therapy is prolonged, serum level determinations may be advisable. A photodynamic reaction to natural or artificial sunlight has been observed. Small amounts of drug and short exposure may produce an exaggerated sunburn reaction which may range from erythema to severe skin manifestations. In a smaller proportion, photoallergic reactions have been reported. Patients should avoid direct exposure to sunlight and discontinue drug at the first evidence of skin discomfort. Necessary subsequent courses of treatment with tetracyclines should be carefully observed.

Precautions: Overgrowth of nonsusceptible organisms may occur. Constant observation is essential. If new infections appear, appropriate measures should be taken. In infants, increased intracranial pressure with bulging fontanels has been observed. All signs and symptoms have disappeared rapidly upon cessation of treatment.

Side Effects: Gastrointestinal system—anorexia, nausea, vomiting, diarrhea, stomatitis, glossitis, enterocolitis, pruritus ani. Skin—maculopapular and erythematous rashes; a rare case of exfoliative dermatitis has been reported. Photosensitivity; onycholysis and discoloration of the nails (rare). Kidney—rise in BUN, apparently dose related. Transient increase in urinary output, sometimes accompanied by thirst (rare). Hypersensitivity reactions—urticaria, angioneurotic edema, anaphylaxis. Teeth—dental staining (yellow-brown) in children of mothers given this drug during the latter half of pregnancy, and in children given the drug during the neonatal period, infancy and early childhood. Enamel hypoplasia has been seen in a few children. If adverse reaction or idiosyncrasy occurs, discontinue medication and institute appropriate therapy. Demethylchlortetracycline may form a stable calcium complex in any bone-forming tissue with no serious harmful effects reported thus far in humans.

Average Adult Daily Dosage: 150 mg q.i.d. or 300 mg b.i.d. Should be given 1 hour before or 2 hours after meals, since absorption is impaired by the concomitant administration of high calcium content drugs, foods and some dairy products. Treatment of streptococcal infections should continue for 10 days, even though symptoms have subsided.

Lederle

LEDERLE LABORATORIES
A Division of American Cyanamid Company, Pearl River, New York

Methotrexate Treatment of Psoriasis

In 75 consecutive cases of severe psoriasis treated with methotrexate, there were excellent results in three-fourths of the patients. In five, chronic hepatic dysfunction developed; three of these had a history of chronic alcoholism. Hepatotoxicity is a risk of methotrexate therapy. Periodic liver function tests may disclose the onset of hepatic damage at a stage where the process is still reversible.

DAVID S. SHELMIRE, MD

METHOTREXATE WAS FIRST reported to be effective for psoriasis in 1951,[1] and is extremely effective in controlling extensive psoriasis. The results and side effects encountered in treating 75 consecutive cases of severe psoriasis with methotrexate are evaluated.

Material and Methods: This series was composed of 75 patients, ages 8 to 71 years. There were 52 males and 23 females. Treatment periods ranged from four weeks to four years.

Three dosage schedules were used: (1) daily method (at least one tablet every day), 47 patients; (2) weekday method (at least one tablet every weekday, none on Saturday and Sunday), 37 patients; and (3) weekly method (entire dose ingested orally once weekly), 13 patients. Some patients were treated with more than one method if their response to the initial method used was not satisfactory.

Results: Three-fourths of the patients had clearing of 90% or more of their psoriatic lesions; in 17% there was less than 50% clearing, and treatment was considered to be a failure (Table 1). These results are similar to those reported by others.[2]

As to which dosage schedule is the most desirable, the weekly and weekday methods worked about equally well. The daily method so frequently produced minor side effects that it was later discarded (Table 2).

Side Effects: The many minor side effects included numerous instances of mouth ulcers (predominantly in patients using the daily method); leukopenia below 4,500 (six patients, the lowest count being 2,000); folliculitis of the trunk (three patients); and vague symptoms of malaise and dyspepsia (five patients).

Six patients had major side effects; cirrhosis developed in five patients and bleeding peptic ulcer in one. The cases of cirrhosis are presented in detail, as only four cases of cirrhosis associated with methotrexate used for psoriasis have been reported previously.[3,4]

Case 1: This 52-year-old man had generalized psoriasis of many years' duration. Pretreatment white blood count (WBC) and blood urea nitrogen levels (BUN) were normal. No liver function tests were performed before treatment was started. He was treated for two months with the maximum dose being ten tablets weekly, using the weekday method. His psoriasis was clearing satisfactorily when ascites, delirium tremens, and hepatosplenomegaly developed, and the patient was in critical condition for several days.

Laboratory tests showed the following values: bilirubin, 2.1 mg/100 ml (normal < 1.0); re-

versed albumin/globulin ratio; serum glutamic oxalacetic transaminase (SGOT) 95 (normal < 40); and alkaline phosphatase 37 King-Armstrong units (normal 8 to 13 units). Three months later his bromsulphalein (BSP) test remained elevated at 18% retention, with the alkaline phosphatase reverting to 3 King-Armstrong units. The patient recovered and resumed his work as a mail carrier.

Comment: Although this patient denied alcoholic intake, it is estimated from several other sources that his daily alcohol consumption has approached one quart per day for many years. A BSP test probably would have detected his preexisting alcoholic cirrhosis and the use of methotrexate would have been contraindicated.

Case 2: This 54-year-old man's generalized psoriasis previously had been controlled with methotrexate prescribed by another physician.

Only a pretreatment WBC was done. He was treated with a maximum dose of ten tablets weekly, using the weekday method with essentially no rest periods. After one year he began "feeling sluggish and fatigued." Complaints of this type are common in many patients who are taking methotrexate, but they were particularly pronounced in this patient.

After 15 months of treatment, pain developed in his left upper quadrant; splenomegaly was present. Laboratory tests at this time showed normal values for CBC, BUN, and protein electrophoresis. BSP retention was 36% (normal $< 6\%$), total bilirubin 1.3 mg/100 ml (normal < 1), lactic dehydrogenase (LDH) 210 units (normal 25-100), and alkaline phosphatase 24 King-Armstrong units.

A percutaneous liver biopsy showed posthepatitic cirrhosis, with the prominent feature being periportal fibrosis (Fig 1). The patient denied any previous heavy alcoholic consumption or liver disease. Splenectomy was performed. Later, acute cholecystitis developed and a gangrenous gallbladder was removed. The internist commented: "It may well be that he had infection in the gallbladder with ascending cholangitis, causing the initial liver difficulty and then being aggravated by methotrexate."

Case 3: This 73-year-old man was treated for four years with methotrexate, one tablet every other day for one month, and then a one-month

% Psoriasis Gone	No. Cases	% Total Cases
90 or more	56	75
50-90	6	8
0-49	13	17

Table 1. Results of treatment with methotrexate.

Initial Method	Number of Patients	
	Uneventful Clearing*	Problems Encountered†
Daily	17	29
Weekday	11	10
Weekly	5	3

*90% of psoriasis lesions cleared, no complications.
†Mouth ulcers, leukopenia, or unsatisfactory clearing.

Table 2. Dosage schedules and results.

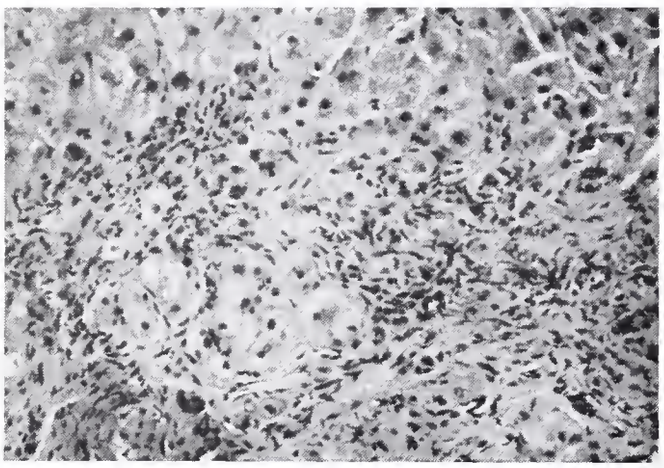


Fig 1. Liver biopsy, case 2, shows fibrosis, new bile duct proliferation, and small inflammatory cell infiltrate.

rest period. If any higher dose was used, his skin lesions would ulcerate.

Four months after the last dose of methotrexate, the patient returned with recurrent psoriasis. He also casually mentioned, "My legs are swelling." Examination showed pitting pedal edema (2+). A BSP test was ordered and retention was 34%. When asked about alcoholic intake, he said he had consumed a pint of whiskey daily for many years.

Further laboratory values were: SGOT 70 units, alkaline phosphatase 34 King-Armstrong units, LDH 100 units, reversed albumin/globulin ratio, and bilirubin 1 mg/100 ml.

Percutaneous liver biopsy showed a toxic reaction in the hepatocytes, and an increased amount of fibrous tissue without any inflammatory cells. The diagnosis was toxic hepatitis consistent with methotrexate toxicity.

Case 4: This 48-year-old woman was referred specifically for methotrexate therapy, as conventional treatment had been inadequate for her widespread psoriasis. No liver tests were done before treatment.

She received methotrexate orally (average dose, two tablets each weekday), with no more than a one-week rest period each month. After 15 months of treatment, a routine BSP test three weeks following withdrawal of the drug showed 14% retention. No further medication was given for three months, when a repeat BSP retention was 15%. At this time the patient was questioned about any liver problem in the past. She remembered having "yellow jaundice" for one week during childhood. Unfortunately, the patient did not permit a more detailed hepatic study.

Comment: This patient has chronic hepatic insufficiency which is now asymptomatic. Although methothexate could have been the cause of her hepatic damage, it is more likely that she has postnecrotic cirrhosis resulting from childhood hepatitis. In either event, she is not a suitable patient for further methotrexate therapy.

Case 5: This 65-year-old man had been treated with methotrexate by a dermatologist in another state. No pretreatment liver tests were done. He received one tablet every other day for four weeks, then no medication for approximately two months. This regimen was continued for two years.

On his last visit, he was told that a routine liver test would be necessary. He volunteered that he had recently received a diagnosis of "alcoholic cirrhosis" from his internist. His alcoholic intake had been 10 to 12 oz a day since his retirement four years ago.

Results of liver function tests were SGOT 84 units, BSP 13.5% retention, and cephalin flocculation 4+ (he had not received any methotrexate for six months preceding these tests). No liver biopsy was done.

Comment: Again, the lack of pretreatment liver tests is regrettable. The combination of alcoholism and methotrexate appears to be particularly devastating.

Discussion: Methotrexate has proved to be effective in treating psoriasis. I have found 15 published cases of death resulting from use of methotrexate for psoriasis.[4-14] Most of these deaths were due to bone marrow depression, although this complication evidently is rare if small initial doses are used (no more than 12.5 mg during the first week of therapy) and periodic WBCs are performed.

It is becoming apparent that the limiting factor in the long-term use of this drug for nonmalignant disorders will be hepatic toxicity. A recent study of 22 patients who had normal results of liver function tests before treatment showed that practically all patients develop measurable liver function abnormalities while taking the drug. These revert to normal approximately one month after the drug is stopped.[15] However, in a few patients, hepatic fibrosis develops. I now perform a BSP test before treatment begins, and then yearly thereafter on patients who continue to require the drug. The BSP test appears to be more sensitive than the transaminase or alkaline phosphatase in my experience, although the latter tests might be useful between BSP tests. Methotrexate must be withdrawn one month before liver function tests are done in order to obtain valid results.

Our present knowledge of the potential hepatotoxicity of methothrexate indicates that several precautions are advisable: (1) exclusion of patients with a history of alcoholism, liver problem, or jaundice; (2) pretreatment BSP test, and yearly thereafter; and (3) requiring patients to take frequent rest periods from the drug. In this way, we may be able to keep this valuable drug available for the treatment of severe psoriasis.

REFERENCES

1. Gubner, R, et al: Therapeutic Suppression of Tissue Reactivity; Effect of Aminopterin in Rheumatoid Arthritis and Psoriasis, Amer J Med Sci 221:176 (Feb) 1951.

2. Edmundson, W F, and Guy, W B: Treatment of Psoriasis with Folic Acid Antagonists, Arch Derm 78:200 (Aug) 1958.

3. O'Rourke, R A, and Eckert, G E: Methotrexate-Induced Hepatic Injury in an Adult, Arch Intern Med 113:191 (Feb) 1964.

4. Coe, R O, and Bull, F E: Cirrhosis Associated with Methotrexate Treatment of Psoriasis, JAMA 206:1515 (Nov 11) 1968.

5. Rees, R B, et al: Aminopterin for Psoriasis, A Decade's Observation, Arch Derm 90:544 (Dec) 1964.

6. Black, R L, et al: Methotrexate Therapy in Psoriatic Arthritis; Double-Blind Study on 21 Patients, JAMA 189:743 (Sept 7) 1964.

7. Shrank, A B, and Blendis, L M: Folic-Acid Antagonists in Treatment of Psoriasis, Brit Med J 5454:156 (July 17) 1965.

8. Ryan, T J, and Vickers, H R: Correspondence: Psoriasis and Folic Acid Antagonists, Brit J Derm 78:612 (Nov) 1966.

9. McKenzie, A W, and Aitken, C V: Psoriasis and Folic Acid Antagonists, Brit J Derm 79:122 (Feb) 1967.

10. Haim, S, and Alroy, G: Methotrexate in Psoriasis, Lancet 1:1165 (May 27) 1967.

11. Land, W A: Short-Term Observations in the Use of Intravenous Methotrexate in the Treatment of Psoriasis, Aust J Derm 9:183 (Dec) 1967.

12. Sanderson, M: Methotrexate in Psoriasis, Lancet 1:1251 (June 8) 1968.

13. Ryan, T J, and Baker, H: Systemic Corticosteroids and Folic Acid Antagonists in the Treatment of Generalized Pustular Psoriasis; Evaluation and Prognosis Based on the Study of 104 Cases, Brit J Derm 81:134 (Feb) 1969.

14. Roenigk, H H, Jr, et al: Methotrexate for Psoriasis in Weekly Oral Doses, Arch Derm 99:86 (Jan) 1969.

15. Hersh, E M, et al: Hepatotoxic Effects of Methotrexate, Cancer 19:600 (April) 1966.

Dr. Shelmire, 1410 Medical Arts Bldg, Dallas, Tex 75201.

CUTANEOUS DRUG REACTIONS

REES B. REES, MD

Cutaneous reactions to drugs are not unusual. The classification of possible skin reactions and the drugs most likely to cause them may help practicing physicians recognize these side effects when they occur.

A FEW YEARS AGO, a group of hematologists under the aegis of the AMA Council on Drugs began to compile data on drugs suspected of causing blood dyscrasias. A method of compiling data was evolved with several columnar headings: at the far left, drug alone; next, drug given together with a drug of known risk; then, drug given with a drug having little or no known risk. As data accumulated, figures in the left column tended to incriminate specific drugs and to show the relative importance of each drug. Chloramphenicol soon stood out as a producer of agranulocytosis. Butazolidin was also a common offender.

Because of the success of the blood dyscrasia program, other panels were formed, including one on dermatology. The Registry on Adverse Reactions was developed to aid in the early detection of reactions and to alert physicians to the potential danger of certain drugs in connection with specific reactions. The Registry is not a repository of statistical data; its aim is to pinpoint areas where further attention is necessary. It is difficult to prove a cause and effect relationship between drug exposure and a specific reaction, and the appearance of a drug in a Registry tabulation does not necessarily incriminate it.

Although more than one-third of a million substances may have been used as drugs at one time or another, there are perhaps only 1,000 in regular use today. Food additives, agricultural chemicals and other occult exposures make detection of the cause of a drug reaction especially difficult, as does the patient's faulty memory or lack of knowledge. As many as 5-10% of hospital patients may have a drug reaction, mild or severe. On the basis of reaction per dose, penicillin, coumarin compounds, and imipramine are most frequently incriminated. Some 300 penicillin deaths per year are estimated to occur in the USA.

Life-threatening cutaneous drug reactions are a special category.[1] These include exfoliative dermatitis, erythema multiforme, urticaria-anaphylaxis, toxic epidermal necrolysis, and lupus erythematosus-like reactions.

A classification of drug reactions[2] on the basis of causative mechanisms would include overdosage; idiosyncrasy (pharmacogenetic variations in enzyme systems); side effects (pharmacologic effects other than the desired or expected one); ecologic imbalance (killing off one species of organism to allow overgrowth of another); the Herxheimer reaction (sudden release of pharmacologically active substances from killed organisms); Sanarelli-Schwartzman reaction (hemorrhagic reactions from drug-induced reactions in skin prepared by endotoxin from existing infection); enzyme induction (for example, the hyper-reactivity of Coumadin when barbiturates are suddenly withdrawn); and hypersensitivity reactions based upon formation of reagins, precipitating antibodies or humoral

cytotoxic antibodies, or delayed type sensitivity.

Much remains to be learned about the mechanisms of drug reactions. For example, the role of the complement system and drug interactions are complex subjects in themselves. Newer techniques, such as fluorescent antibody studies, may give helpful information in the future. Perhaps most drug reactions are based on pharmacogenetic deviations and not on hypersensitivity mechanisms. The cause of fixed drug eruptions, for example, remains completely unknown.

Photosensitivity to drugs and other chemicals is of increasing importance.[3]

The dermatology panel has prepared a list of high-risk drugs and their possible skin reactions (Table 1).[4]

Table 1.

ACHROMOTRICHIA	
Chloroquine	
ACNEIFORM	
ACTH	Cyanocobalamin
Bromides	Iodides
Corticosteroids	
ALOPECIA	
Alkylating agents	Quinacrine
Anticoagulants	Triparanol
Antimetabolites	
ECZEMATOUS	
Arsphenamine	Procaine and other local anesthetics
Chlorpromazine	Promethazine
Ephedrine	Quinacrine
Formaldehyde	Resorcin
Meprobamate	Streptomycin
Neomycin	Sulfonamides
Novobiocin	Thiamine
Penicillin	
ERYTHEMA MULTIFORME	
Chlorpropamide	Sulfonamides
Penicillin	Thiazide derivatives
Phenothiazines	
EXANTHEMATOUS (Scarlatiniform, Morbilliform)	
Aminosalicylic acid	Novobiocin
Anticonvulsants	Penicillin
Barbiturates	Phenothiazines
Chlorothiazides	Phenylbutazone
Chlorpromazine	Quinacrine
Gold salts	Streptomycin
Griseofulvin	Sulfonamides
Insulin	Sulfones
Meprobamate	Thiouracil
Methaminodiazepoxide	
EXFOLIATIVE ERYTHRODERMA	
Aminosalicylic acid	Mercurials
Arsenicals	Penicillin
Barbiturates	Phenothiazines
Chlorpropamide	Phenylbutazone
Gold compounds	Sulfonamides
FIXED[5]	
Antipyrine	Phenylbutazone
Barbiturates	Quinidine
Gold	Salicylates
Phenacetin	Sulfonamides
Phenolphthalein	Tetracyclines
LICHENOID AND LICHEN PLANUS-LIKE	
Aminosalicylic acid	Quinacrine
Chloroquine	Quinidine
Gold	Thiazides
LUPUS ERYTHEMATOSUS-LIKE	
Aminosalicylic acid	Isoniazid
Griseofulvin	Penicillin
Hydantoins	Phenothiazines
Hydralazine	Sulfonamides
PHOTOSENSITIVE	
Griseofulvin	Sulfonylureas
Phenothiazines	Tetracyclines
Psoralens	Thiazides
Sulfonamides (antidiabetics, diuretics)	
PIGMENT CHANGES	
Chloroquine	Gold salts
Chlorpromazine	Silver salts
PORPHYRIA (Exacerbation)	
Barbiturates	Griseofulvin
Chloroquine	
PURPURIC	
Barbiturates	Griseofulvin
Carbamides	Iodides
Chlorothiazide	Quinidine
Chlorpromazine	Sulfonamides (antidiabetics and diuretics)
Gold salts	
URTICARIAL[6,7]	
ACTH	Penicillin
Barbiturates	Phenolphthalein
Chloramphenicol	Phenothiazines
Enzymes	Salicylates
Griseofulvin	Streptomycin
Insulin	Sulfonamides
Opiates	Tetracyclines
VESICULO-BULLOUS	
Aloin	Mercury
Arsenic	Phenolphthalein
Bromides	Salicylates
Iodides	

REFERENCES

1. Rostenberg, A, Jr, and Fagelson, H J: Life-Threatening Drug Eruptions, JAMA 194:660 (Nov 8) 1965.
2. Rook, A, et al: Textbook of Dermatology, Philadelphia, F A Davis Co, 1968, pp 362-396.
3. Baer, R L, and Harber, L C: Photosensitivity Induced by Drugs, JAMA 192:989 (June 14) 1965.
4. Fellner, M J, and Baer, R L: Cutaneous Reactions to Drugs, Med Clin N Amer 49:709 (May) 1965.
5. Derbes, V J: The Fixed Eruption, JAMA 190:765 (Nov 23) 1964.
6. Fellner, M J: An Immunologic Study of Selected Penicillin Reactions Involving the Skin, Arch Derm 97:503 (May) 1968.
7. Rees, R B: Cutaneous Reactions to Antibiotics, JAMA 189: 685 (Aug 31) 1964.

Dr. Rees, 450 Sutter St, San Francisco, Calif 94108.

Management of Common Skin Diseases

REES B. REES, MD

Ten skin disorders account for nearly 75% of all dermatologic complaints. These are discussed, as are the usual forms of management.

A NATIONAL PROGRAM for dermatology is being established under the auspices of the American Academy of Dermatology and other national dermatologic organizations. One of its immediate aims is to define the most pressing problems in dermatology and to set up programs for their control. A first step will be to determine the incidence of skin disease. This massive program was anticipated nearly a decade ago by Welton,[1] who performed a survey with the aid of 50 practicing dermatologists. Each kept a tally sheet on every patient seen during a one-week period for four different weeks throughout the year to equalize seasons. Geographic distributions were taken into account. These records showed that ten dermatoses accounted for three-fourths of the 26,000 patient visits. Nearly 20% were for acne and rosacea, and about 10% were for eczematoid dermatitis (including atopic dermatitis, nummular eczema, neurodermatitis, pruritus ani et vulvae, and infectious eczematoid dermatitis). The ten most common dermatoses are listed in Table 1.

The future of a drug depends on what it can do when used by the general physician, and not what it should do on the basis of experiments.[2] Medicine is practiced on the basis of probabilities, and the physician therefore chooses the technique which he thinks offers the best chance of success with each patient and set of circumstances.[3] One must constantly ask if a new drug will be better for the patient than older treatment.

With the advent of the new Food and Drug Administration regulations in 1962, on the heels of the thalidomide disaster, it became apparent that the drug industry would be scrutinized more minutely than ever, and that greater controls would be exerted over the habits of the practicing physician. Recent Senate hearings lead to the strong suspicion that the government may exert a formidable influence on prescribing habits of the individual physician in the not too distant future.[4]

Dermatology has always been one of the "treat-ingest" specialties. In a recent survey conducted by the National Academy of Sciences, three panels of dermatologists were needed to examine the efficacy of drugs for dermatologic use which were already on the market by 1962.

In addition to systemic treatment, dermatology includes intralesional and topical drug therapy. The latter, in turn, has three categories: wet dressings for acute weeping eruptions, non-greasy shake lotions for subacute dermatoses, and the whole gamut of topical remedies for chronic dermatoses.[5]

Intralesional treatment refers primarily to use of suspensions of corticosteroids. Triamcinolone acetonide suspension, 10 mg/ml, diluted one part in three of sterile physiologic saline, is excellent for injecting into acne cysts and localized forms of eczema and psoriasis. A total of 0.5 to 5 ml of this dilution may be injected per visit. For keloids and even for lipomas, the same preparation, 40 mg/ml, may be injected undiluted not exceeding 1 ml per injection.

Acne Vulgaris and Acne Rosacea: No age group is exempt, but the peak incidence is in the teens. There are strong genetic overtones. Sebaceous glands are always overactive, and acne occurs when there is obstruction of the sebaceous follicle. *Corynebacterium acnes* tends to overgrow in incarcerated sebum, and there is some evidence that antibody reactions to this organism or its growth products, or both, play an important part in acne. The disease cannot occur without sexual maturity and if a child develops acne, one may be sure that puberty is not far away.

Skillful removal of comedones and succulent whiteheads by the physician at each visit may help. We also use a peeling paste (Table 2) which is applied for five minutes and then wiped clean with mineral oil, then followed by exposure to a cold quartz lamp.

Topical remedies are aimed primarily at degreasing and cleansing the skin surface in an attempt to remove blackheads and "defuse" whiteheads. A number of excellent cleansing preparations are on the market, and many commercial topical acne remedies are available as well. When the patient cannot tolerate preparations containing salicylic acid and sulfur or resorcin, the formula in Table 3 may be used. This tends to stain the finger tips, not the complexion. Quinolor compound ointment may work

DIAGNOSIS	%
Acne and Rosacea	18
Eczematoid & Neurodermatitis	12
Contact Dermatitis	8
Skin Cancer	6.7
Warts	6.5
Fungus	5.4
Psoriasis	4.6
Keratoses	4.6
Pyoderma	3.7
Seborrheic Dermatitis	3.3
Total	72.6

Table 1. Ten most common diagnoses.

℞	Beta naphthol	2.0
	Precipitated sulfur	15.0
	Soft soap	
	Rose water ointment	
	aa qs	30.0

This is an office procedure. The paste is applied with a tongue depressor; after five minutes, the skin is wiped clean with mineral oil, then a cold quartz lamp treatment is given.

Table 2. Peeling agent for acne.[14]

℞	Tannic acid	1.2
	Salicylic acid	2.4
	Bay rum qs ad	120.0

Rub into complexion with cotton twice a day.

Table 3. Alternate remedy for acne.

where other remedies fail. Whichever remedy is used, it must be worked into the skin well each night, or less often if it is too drying.

By now, millions of people have been treated for acne with low doses of tetracycline or other safe broad-spectrum oral antibiotics for months or even years. Tetracycline, 250 mg each morning, is the most popular. Occasionally it is necessary to use erythromycin in a similar dosage, or triacetyloleandomycin in the same dosage (cholestasis does not appear to be a problem in this dosage). Signemycin, a combination of tetracycline and triacetyloleandomycin, may prove effective. Occasionally a triple sulfa such as Terfonyl, one tablet twice daily, may be used for a couple of months.

Anovulatory drugs, particularly C-Quens used in a cyclic fashion, may be helpful in girls or women with resistant acne, but response is delayed for at least two months as a rule.[6]

For severe, explosive cystic acne one may have to use systemic corticosteroids, high doses of estrogens in the female, high doses of antibiotics, and perhaps even sulfone drugs.

Conservative x-ray therapy in the hands of the expert still has a place in the management of severe acne, especially in older people. Rosacea is managed somewhat along the same lines as acne.

Eczematoid Dermatitis: For acute eruptions, wring out a turkish towel in a cold solution and lay it on the involved areas for at least 15 minutes twice a day without occlusive covering, frequently freshening the towel in the solution. Plain water may be used, although Domeboro or Bluboro powder offer a ready source of aluminum acetate. A tablespoon of either is used in a pint or quart of cold water.

For subacute phases, one may apply a calamine lotion-type formula containing 5% solution of coal tar. This may be used on widespread areas except hairy or infected sites. Shake the preparation and smooth on thinly morning and night. Tar-sensitive patients may use any of a number of corticosteroid lotions instead, taking care not to use them on infected areas, in or near the eyes, or in the presence of herpetic or tuberculous infections of the skin.

For the more chronic phases, one may use corticosteroid creams, ointments, or lotions. A number of these are available with tar or iodochlorhydroxyquin, and these combinations may work better than corticosteroids alone in some instances. The fluorinated hydrocortisones appear to be the most effective. One can start with higher concentrations and then use weaker, less expensive ones, for maintenance or long-term therapy. Such preparations include triamcinolone acetonide, fluocinolone acetonide, and betamethasone valerate. For inveterate, local areas, these preparations may be used under Saran Wrap overnight. Complications of such treatment include the development of miliaria, folliculitis, and localized atrophy of the skin, including striae.

Conservative, systemic corticosteroid therapy may be necessary in severe cases, especially for initial control. Two routines seem to be useful: triamcinolone acetonide, 40 mg intragluteally once every three weeks, may be highly effective. Long-term adrenal cortical atrophy does not seem to occur with this routine, but hypermenorrhea in women, and ecchymoses on the forearms due to loss of connective tissue support of capillaries, may be troublesome complications. Another approach is to give ACTH gel, 20 to 40 mg intragluteally, once every three weeks, and to hand the patient 30 prednisone tablets, 5 mg each, with instructions to take one each morning and night for five days out of the week.

Expert use of grenz rays or x-rays may be beneficial for chronic, thickened eczemas.

Infiltration of well-localized lesions with dilute triamcinolone acetonide may be highly effective.

Contact Dermatitis: The "big five" include poison oak, ivy and sumac dermatitis, sensitivity to nickel, hair dye, rubber additives, and formalin.[7] These should be removed and the patient treated with cool wet dressings, topical corticosteroids, and a short but vigorous course of oral corticosteroids if necessary. Give the patient 28 prednisone tablets, 5 mg each, and instruct him to take 7 tablets the first day, 6 the second day, and continue to decrease the dose by 1 tablet each day for seven days.

Skin Cancers: Curettage and electrodesiccation with a high-frequency current give a high cure rate for both squamous cell and basal cell cancers.[8] Although the procedure is scarring, the cosmetic results are surprisingly good in most instances. Removed tissue is always examined histopathologically. When lesions are not easily amenable to electrosurgery, we take a preliminary biopsy specimen. Then, a total of 3,000 roentgens is administered in divided doses of 750 R each, with .5 mm of aluminum, once weekly for four weeks. Half-value layer is about 0.7 mm of aluminum (unfiltered).

If the skin cancer is over 2 cm in diameter or if there is a possibility of metastases, a consultation is needed. For recurrences or especially difficult problems, chemosurgery is a technique which picks up where others leave off.[9] This is a microscopically-controlled routine of applying a zinc chloride paste, followed by bloodless dissection and frozen section examination in each of several stages of removal. This technique, aided by mapping of the frozen section findings, is especially valuable for finding occult ramifications of basal cell epitheliomas.

Warts: Warts and psoriasis tend to ruin the reputation of the dermatologist; both are unpredictable in their natural course and in their response to treatment.

Application of liquid nitrogen with a cotton-tipped applicator is certainly the cleanest and most direct way of destroying a few localized warts, in almost any location.[10] The nitrogen is held on the lesion for several seconds. Blistering generally ensues in 24 hours and resultant destructive change generally heals within two weeks. One may remove localized warts with curettage and application of trichloroacetic acid on a tightly wound applicator, using Xylocaine anesthesia.

℞ Formalin	6.0
Aquaphor qs ad	15.0
Rub into warts nightly with cotton-tipped applicator. Stop if soreness or fissuring occurs.	
℞ Salicylic acid	4.0
Podophyllin	4.0
Alcohol	
Acetone aa qs ad	15.0
Paint on warts nightly with cotton-tipped applicator. Stop if soreness occurs and use cold soaks.	

Table 4. Wart prescriptions.

℞ Salicylic acid	0.3
Precipitated sulfur	0.9
Hydrophilic ointment qs ad	30.0
Rub a thin film into involved areas twice a day.	
℞ Tolnaftate solution	10 ml
Rub a thin film into involved areas twice a day.	
℞ ½ strength Whitfield's ointment	30
Rub in a small amount twice a day.	
℞ Verdefam solution (Texas Pharmacal Company)	30
Saturate nails twice a day, using a cotton-tipped applicator.	

Table 5. Topical remedies for superficial fungus infections (athlete's foot, ringworm).

1. Patient bathes in solution of coal tar, 4 oz to 20 gal of water.
2. Ultraviolet light is given, starting with small doses.
3. Stiff anthralin paste is applied with tongue depressor, then finger. Paste contains 0.2% of anthralin, gradually increased to 0.8%. Vehicle is milled Lassar's Paste, made stiff by adding soft paraffin, plus 2.5% to 5% of paraffin wax. The paste must contain 0.4% salicylic acid.
4. Each treated lesion is then covered with talcum powder.
5. Precut rolls of stockinette are rolled onto extremities and trunk, joined with tape at groins and axillae.
6. This routine is repeated DAILY.

Table 6. Ingram method for treatment of psoriasis.[15]

Table 4 gives a prescription for plantar warts. When the formalin is used, a cotton-tipped applicator dipped in the formalin-Aquaphor cream is rubbed into the warts each night. The patient is instructed to stop the treatment if irritation or splitting of the wart occurs; the treatment should be maintained for at least a month since delayed benefit may occur. The podophyllin-containing prescription may produce severe pain and burning, and the patient must be cautioned to stop it immediately and to soak the foot in cold water if this occurs. X-ray therapy is still useful for well-circumscribed plantar warts, but must be employed with great care with close shielding of the lesion.

For anogenital warts, 25% podophyllin in compound tincture of benzoin may be painted on once a week. The patient should always be given a prescription for analgesics, and should be instructed to compress the areas with cold wet dressings if irritation occurs.

Fungus: It is well to get into the habit of scraping any suspicious lesion with a scalpel and examining the skin scales in 15% potassium hydroxide under the microscope with subdued sub-stage light. Hyphae of dermatophyte infections can be seen as refractile, branching elements under the low power. Tinea versicolor has large, coarse, blunt hyphae with large spores in clusters.

For most dermatophyte infections, griseofulvin, 500 mg of the micronized form by mouth after a meal once daily, is effective. This is useful for tinea capitis, ringworm of the body, and so-called athlete's foot, but it is relatively ineffective for *Trichophyton rubrum* infections of the body, hands, feet, and nails. Nail involvement in general is relatively unresponsive, but griseofulvin may be the best treatment despite this disappointing fact. Table 5 shows several useful preparations for topical application to dermatophyte infections.

Candida or monilial infections in body folds or nail folds may be treated with amphotericin lotion or nystatin powder or cream. Initially, as an office procedure, Castellani's solution may be painted on the areas and then dusted over with talc.

For tinea versicolor, Selsun suspension containing selenium sulfide, which is ordinarily used for a dandruff shampoo, may be used to scrub the involved areas once or twice a day for several weeks.

Psoriasis: The Goeckerman regimen—application of crude coal tar ointment or solution of coal tar, followed by ultraviolet light therapy—is a standard approach. It is best carried out in the hospital. The treatment must be performed daily for several weeks if necessary. The Ingram method—use of an anthralin paste (Table 6)—is also an inpatient procedure. For ambulatory patients one may use tar, corticosteroids under wraps, 5% ammoniated mercury in cold cream, 0.1% anthralin ointment, salicylic acid, and patent remedies, some of which are pretty good, including Siroil and Riasol. One must guard against mecurialism with the ammoniated mercury and salicylism with the salicylic acid. Long-term use of mercury also may produce a darkening of the skin.

Grenz rays may be fairly effective and the approach is conservative.

Systemic treatments include arsenic in the form of Fowler's solution, triamcinolone tablets or injections, or methotrexate, but all of these should be avoided if possible and used only with full awareness of possible complications should individual problems demand such formidable approaches. *The physician's thorough familiarity with the pharmacology of these drugs is a necessary precondition for their use.*[11]

Solar Keratoses (Actinic Keratoses): Fair-skinned individuals with lifelong exposure to intense sunlight develop these premalignant, rough excrescences on exposed areas. Lesions may be saucerized with a scalpel, and the base

of the wound then touched with cautery or Monsel's solution, with histopathologic examination of the specimen. Liquid nitrogen used as for warts may suffice for superficial lesions.

For "farmer's and sailor's skin," 1% 5-fluorouracil in propylene glycol may be rubbed into the lesions morning and night until they become sore, which happens in one to three weeks as a rule. Severe inflammation occurs and then the lesions gradually subside, for the most part. The eyes must be protected.

Pyoderma: Impetigo, furuncles, carbuncles, ecthyma, and infectious eczematoid dermatitis fall into this category. One should not hesitate to use systemic treatment, especially in the young child, as complications such as nephritis may occur. Erythromycin is good treatment for the child or adult. For older individuals tetracyclines or triacetyloleandomycin may be used. Resistant pyoderma may be cultured with a Medikit blood auger plate with sensitivity testing. Topical treatment may include tetracycline, neomycin, or bacitracin ointment. Neomycin is being reported as a cause of sensitization dermatitis with increasing frequency. Complete blood count and urinalysis may be in order in the presence of pyoderma. Scabies and pediculosis may initiate the skin infections. For stubborn furunculosis, particularly of the ping-pong variety in families, recolonization of the skin with a harmless strain of staphylococcus (strain 502-A) after preliminary systemic antibiotic treatment, may be necessary.[13]

Seborrheic Dermatitis: As with acne and psoriasis, there are strong genetic overtones in this disorder. The role of yeast-like *Pityrosporon* organisms has never been clarified. Scalp involvement may be treated with Fostex cream, Sebulex, Sebutone, Sebical, or Zetar shampoo, or with Selsun suspension. Sodium sulfacetamide, 10% in hydrophilic ointment with 0.5% hydrocortisone added, may be useful for involvement on the face, ears, chest, back, or body folds. Tar and ultraviolet light to nonhairy areas are helpful, and expert grenz ray therapy may be useful. Individuals with severe, recalcitrant seborrheic dermatitis probably need to change their pattern of living, with avoidance of stress, frequent vacations, sensible diet, and control of alcohol intake.

REFERENCES

1. Welton, D G: Inside Dermatology, USA—From a National Survey of Private Office Practice, Southern Med J 53:210 (Feb) 1960.

2. Batterman, R C: Appraisal of New Drugs, Correspondence, JAMA 158:1547 (Aug 27) 1955.

3. Schiffrin, M J: Ethics and New Drugs, Postgrad Med 24:305 (Sept) 1958.

4. Senator Nelson vs the Prescribing Physician, Med World News (Jan 31) 1969, pp 15-18.

5. Rees, R B, in: Brainerd, H, et al: Current Diagnosis and Treatment, Los Altos, Lange Medical Publications, 1969.

6. Pochi, P E, and Strauss, J S: Treatment of Acne with Estrogen-Progestogen Drugs, in: Waisman, M, Ed: Pharmaceutical Therapeutics in Dermatology, Philadelphia, Charles C Thomas, 1968, pp 104-116.

7. Fisher, A A: Contact Dermatitis, New York, Lea & Febiger, 1967.

8. Knox, J M, et al: Treatment of Skin Cancer, Southern Med J 60:241 (March) 1967.

9. Tromovitch, T A, et al: Mohs' Technique (Cancer Chemosurgery): Treatment of Recurrent Cutaneous Carcinomas, Cancer 19:867 (Aug) 1967.

10. Kee, C E: Liquid Nitrogen Cryotherapy, Arch Derm 96:198 (Aug) 1967.

11. Farber, E M, and McClintock, R P, Jr: A Current Review of Psoriasis, Calif Med 108:440 (June) 1968.

12. Dillaha, C, et al: Further Studies with Topical 5-Fluorouracil, Arch Derm 92:410 (Oct) 1965.

13. Shinefield, H R, et al: Bacterial Interference, in: Maibach, H I, and Hildick-Smith, G, Eds: Skin Bacteria and Their Role in Infection, New York, McGraw-Hill, 1965, pp 235-251.

14. Sulzberger, M B, et al: Dermatology; Diagnosis and Treatment, Chicago, Year Book Publishers, 1961.

15. Comaish, S: Ingram Method of Treating Psoriasis, Arch Derm 92:56 1965.

Dr. Rees, 450 Sutter St, San Francisco, Calif 94108.

Clinicopathologic

The patient, a 56-year-old Negro man who had prior pulmonary tuberculosis, was hospitalized because of generalized lymphadenopathy and hepatosplenomegaly. He had granulocytopenia and thrombocytopenia with normochromic, normocytic anemia. He initially appeared to respond to antituberculous therapy, but his subsequent course was more consistent with that of malignant lymphoma.

CASE PRESENTATION: *Dr. Bomboy:* This 56-year-old Negro man was first admitted because of lower abdominal pain, weakness, and weight loss of three months' duration.

Present Illness: This man was in apparent good health until approximately four months before admission when lower abdominal pain, dysuria, urinary frequency, and nocturia developed along with generalized weakness, subjective fever, and night sweats. He also had dyspnea on exertion, but no chest pain, cough, sputum production, hemoptysis, or edema. He had lost about 65 lb, but recalled no rash, bruising, melena, jaundice, or pruritus. He had seen a local physician and had been receiving shots and pills for heart and kidney trouble for the past four months. He had pulmonary tuberculosis 19 years before, which was treated for three years with para-aminosalicylic acid (PAS) and streptomycin. Otherwise, his history was noncontributory.

His temperature was 101° F, pulse rate 108/minute and regular, respirations 20, and blood pressure 130/70 mm Hg. He appeared thin and chronically ill. His skin showed no petechiae or rash. He had generalized nontender lymphadenopathy. Funduscopic examination revealed flat optic discs with multiple, sharply circumscribed, yellow exudates and flame hemorrhages. There were no Roth's spots. His chest was clear. The heart size was normal, and a grade II/VI systolic ejection murmur was heard along the left sternal border, radiating to the right at the base. His abdomen was flat with the liver percussed 3 cm below the right costal margin. The spleen was felt, firm and nontender, 4 cm below the left costal margin. The remainder of the physical findings were within normal limits.

Course in the Hospital: The previous history of tuberculosis, along with his fever and findings at the time of admission, suggested disseminated tuberculous disease. His second-strength PPD was 12 mm at 48 hours. He had normochromic, normocytic anemia with a hemoglobin of 5 gm/100 ml. His white blood cell (WBC) count was 4,400 with only 6% polymorphonuclear leukocytes. The platelet count was 8,000. Multiple routine blood and urine cultures, as well as multiple cultures for acid-fast bacilli, were negative. Before the acid-fast bacilli cultures were back, treatment was begun with PAS and isoniazid (INH), and the patient was afebrile after five days of this therapy.

A bone marrow biopsy showed infiltration of malignant-appearing cells which were consistent with either Hodgkin's disease or histiocytic medullary reticulosis. Results of biopsy studies of the left axillary node were consistent with histiocytic medullary reticulosis, although some observers in the pathology department thought that this was equally indicative of a variant of agnogenic myeloid metaplasia. Acid-fast bacilli stains on the specimens from the left axillary node biopsy and bone marrow biopsy, as well

Conference

Clifton R. Daniel, MD
James D. Bomboy, MD
Lee W. Bennett, MD
Eugene P. Frenkel, MD
Jay P. Sanford, MD
Bruce D. Fallis, MD
Edwin H. Eigenbrodt, MD, Guest Editor

as three sputum smears, were all negative. Fungal complement fixation titers were all nonreactive. On the 13th hospital day, prednisone 60 mg per day, Halotestin 10 mg per day, and allopurinol 300 mg per day were added to the treatment regimen. He acquired a *Proteus mirabilis* urinary tract infection secondary to an indwelling Foley catheter, and ampicillin, 2 gm daily was begun on the 18th hospital day. On the 20th day, a hematology consultant recommended that the steroids be tapered since differential diagnoses included histiocytic medullary reticulosis, malignant reticulum cell sarcoma, agnogenic myeloid metaplasia, and disseminated tuberculosis. The patient had improved clinically and his nodes, liver, and spleen appeared to be decreasing in size, so the dose of steroids was tapered.

He was discharged to be seen regularly in Hematology Clinic; daily doses of prednisone 40 mg, Halotestin 30 mg, allopurinol 300 mg, INH 300 mg, PAS 4 gm, and ampicillin 2 gm were prescribed.

Ten days later he was readmitted. He had been ill with fever and night sweats for approximately one week, and also complained of vague chest and abdominal pain. He denied any cough, dysuria, nausea, vomiting, or diarrhea. He had no known drug allergies at this time. His blood pressure was 140/90 mm Hg, pulse pressure 80/min and regular, and temperature 103° F. He had a generalized erythematous maculopapular rash, with areas of purpura intervening over many parts of his body. He still had generalized lymphadenopathy and hepatosplenomegaly. His systolic murmur was present, and his chest was clear to auscultation and percussion. His extremities were normal except for a splinter hemorrhage in the left fourth finger. He also had bilateral knee effusions

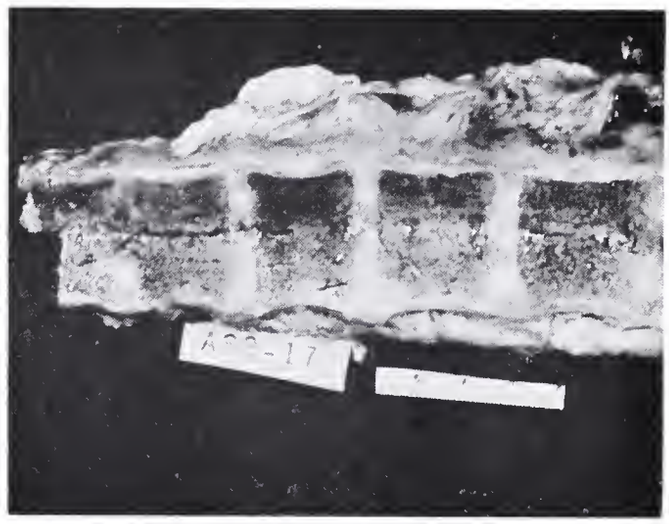


Fig 1. Gross photograph of a section of vertebral bone marrow showing irregular coloration from the patchy replacement of marrow by histiocytes.

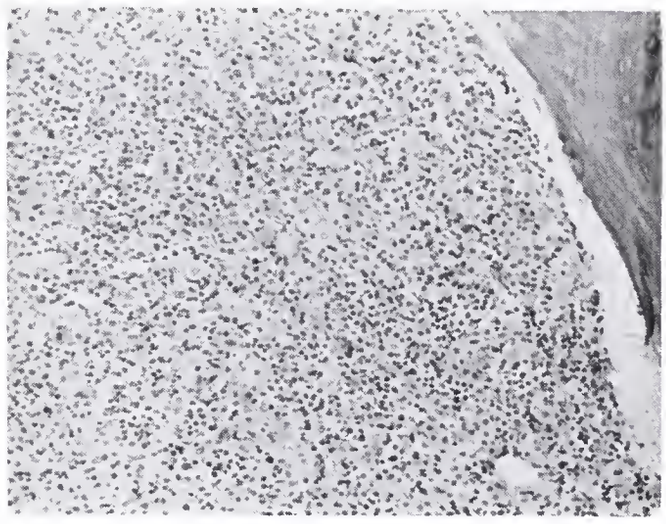


Fig 2. Low power photomicrograph showing the bone marrow replaced by dense sheets of histiocytes. Bony spicule is in the upper right hand corner.

without crepitation, tenderness, or warmth. The patient was initially thought to have had an allergic drug reaction, and he admitted the following day that he had been allergic to PAS. A chest roentgenogram showed no acute infiltrates. The cerebrospinal fluid was normal. His WBC count had dropped to 2,700 with no polymorphonuclear leukocytes. The platelet count was 19,000.

His temperature promptly dropped to normal with no treatment except prednisolone, 40 mg every day. On the fourth hospital day, he again spiked a temperature to 104° F. The night before, he had a vague anterior chest pain with shortness of breath. Also multiple gingival ulcers had developed. He was given kanamycin 1 gm for one day, and Keflin 8 gm a day for 2½ days. His temperature rapidly became normal. During this time he had a transient pericardial friction rub, and on his electrocardiogram there were S-T changes compatible with pericarditis. He showed evidence of salt depletion with postural hypotension, rising blood urea nitrogen (BUN) level, and decreased urine output, and responded promptly to intravenous saline and blood transfusions. Because of repeatedly positive *Klebsiella pneumoniae* cultures from his mouth, he was discharged with instructions to take a daily dose of 750 mg chlortetracycline as well as INH, allopurinol, Halotestin, and prednisone.

He was admitted for the last time two weeks later with chills, fever, and gingival ulcerations. He died on the ward during his evaluation. Blood cultures at the time grew *Proteus mirabilis*. His hemoglobin level, despite the previous transfusions, had fallen to 4.3 gm/100 ml. The WBC count was 1,600 with 2% polymorphonuclear leukocytes and 98% lymphocytes.

Radiological Findings: *Dr. Bennett:* A chest roentgenogram showed a calcified nodule in the right upper lobe as evidence of old granulomatous disease. The bones were fairly dense for a 56-year-old man. Looking at the ribs, we could not distinguish cortex from medullary bone, which is abnormal. The texture of the bones was consistent with some sclerotic process. Abdominal films showed an enlarged spleen. In all the repeat chest films there were no changes in the lung fields. There was no pulmonary congestion. The heart was within normal limits as to size, and there was some ectasia of the aorta with some dilation and unfolding which would be consistent with the man's age.

In summary, this patient had an enlarged spleen, and minimally sclerotic bones. Any disease process that would involve the bone marrow and then have secondary myeloid metaplasia producing an enlarged spleen should be considered. The most probable etiology would be agnogenic myeloid metaplasia.

Clinical Discussion: *Dr. Frenkel:* The patient had a brief history predominantly of constitutional symptoms characterized by profound weakness, weight loss, night sweats, and fever. Physical features were hepatosplenomegaly and generalized lymphadenopathy. The initial laboratory study revealed a significant pancytopenia with evidence of a selective agranulocytosis consisting of less than 500/cu mm absolute granulocytes. The other noteworthy features were the BUN level of 43 mg/100 ml, creatinine of 1.9 mg/100 ml, and serum alkaline phosphatase of 81 King-Armstrong units with an SGOT of 150.

Our initial diagnostic considerations focused upon potential mechanisms for this patient's febrile toxic course which was associated with evidence of lymphoid mass disease and pancytopenia. Since the clinical data were enhanced by the examination of the bone marrow and lymph node, one can use these data as a point of expediency. The consideration of an "atypical" Hodgkin's disease seems quite unlikely largely because of the very fulminant nature of this patient's illness, the persistence of peripheral lymphocytes, the severity of the pancytopenia, and finally the lack of histologic

criteria for Hodgkin's disease in the bone marrow and lymph node that I had the opportunity of reviewing. The most significant aspect of these tissues was the preservation of normal architecture. For similar histologic reasons, we did not think that this was compatible with leukemia. Finally, the peripheral hematologic findings were not consistent with a "variant of agnogenic myeloid metaplasia."

Our diagnosis then, at the time he was first seen, focused upon two possibilities. With his past history of documented tuberculosis, the first consideration was that of miliary tuberculosis or systemic mycobacteriosis. In spite of the absence of granulomas in the marrow and node, we felt justified in a trial of antituberculous therapy while awaiting the cultures and ancillary studies. A rather dramatic improvement in his clinical state and subsidence of fever after five days of therapy was noted. The second diagnostic consideration was that of histiocytic medullary reticulosis.

The original description and characterization of histiocytic medullary reticulosis was done by Scott and Robb-Smith[1] in 1939. They delineated the clinical and morphologic picture of the disease and, unfortunately, we have progressed but little from the purely descriptive stance since that time. In general, this uncommon illness has a short clinical history of weeks to a few months with evidence of profound constitutional symptoms characterized by a marked and unexplained weight loss, variable fever, and wasting. The weakness is frequently out of proportion to the clinical presentation of the patient. Occasionally generalized muscle aches and sometimes arthralgias are described, as well as a somewhat bizarre anterior chest pain that has been likened to a "mass" behind the sternum. On physical examination the findings are essentially those of our current case. Jaundice is not uncommon and some patients have displayed nodular infiltrative skin lesions.

The laboratory findings typically demonstrate pancytopenia with a selective agranulocytosis. The anemia may in part be due to increased destruction[2] secondary to the erythrophagocytosis, as well as to an iron reutilization defect. Hyperuricemia with decreased renal function and evidence of a cholangiolitic liver process

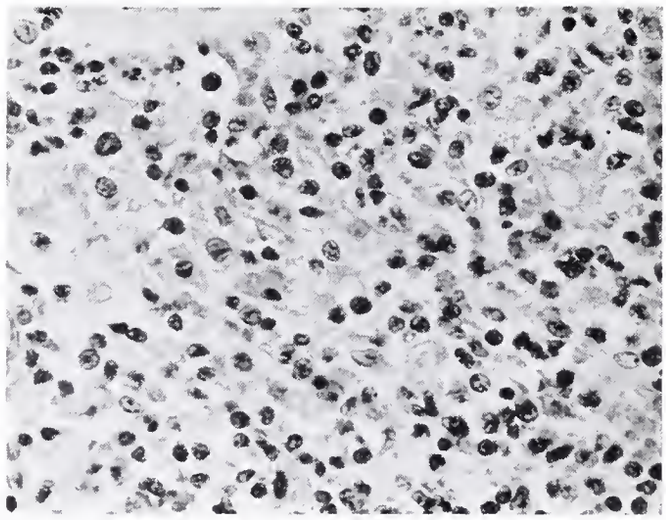


Fig 3. High power photomicrograph showing sheet-like growth in bone marrow of large histiocytes.

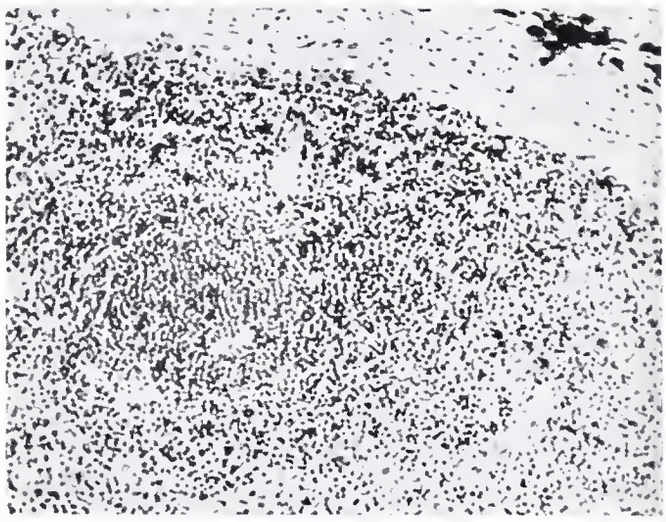


Fig 4. Low power photomicrograph of lymph showing capsule along upper margin. The subcapsular sinusoids show no histiocytic infiltrate nor is there any derangement of the cortical follicular architecture.

are the other laboratory findings that are common.

The morphologic equivocation on the original tissues is not unusual in this disease. The morphologic criteria that lead one to the diagnosis are: First, lymph node medullary sinusoidal infiltration with cells of the histiocytic type. These cells may be bizarre and multinucleated. Secondly, one anticipates erythrophagocytosis by these histiocytes. Indeed, the erythrophagocytosis has been considered a hallmark of the entity. Finally, these changes occur in nodes with otherwise normal architecture or, at least, a rim of normal lymphoid tissue. Some authors[3] believe the descriptive name for this entity is misleading: lymph nodes are not invariably involved; when the term "medullary" is utilized many persons infer bone marrow; and lastly, the overall architecture of the nodes, when involved, is normal. These, of course, are perhaps minor issues of semantics and could easily be overlooked were the histologic criteria absolute. Unfortunately, histiocytic proliferation and erythrophagocytosis may be seen in hemolytic anemia, other histiocytic diseases, and a variety of other diseases as was noted by Greenberg and others.[4] It is this very lack of specificity that led to the initial equivocation in diagnosis in the present case. The early disappearance of fever on antituberculous therapy pressed us to continue to consider this as the first choice, since this represented a treatable condition.

The protocol fails to document the transient nature of the "response to therapy." After about two weeks his symptoms recurred and I believe the house staff instituted the steroids and androgens because of the pancytopenia and the growing conviction that this was indeed histiocytic medullary reticulosis. Somewhat unusual for this diagnosis, however, was the definite, albeit transitory, response to steroid therapy.

By the time of his second admission, I think it was clear that this case appeared to best fit the clinical and laboratory pattern of histiocytic medullary reticulosis. The problem that faced us related to an intelligent means of management, if that diagnosis was indeed correct. The literature is replete with trials of steroids, chemotherapeutic agents, and cytotoxic agents. I could find no evidence of any documented responses to any type of therapy and the classic pattern is similar to the present case, with inexorable deterioration and death in five to six months, although one patient did survive 15 months.

Since the reports of therapeutic trials do not help direct an approach to management, perhaps speculation on the nature of the lesion could help. One consideration of the pathophysiologic mechanism is that this is a neoplastic disease. It's difficult to accept this view in the face of relatively undisturbed architecture of the involved lymphoid mass, and the fact that the proliferating pool of histiocytes are functional. Indeed, it's the erythrophagocytosis that serves to lead the morphologist toward this diagnosis in most cases studied. Normally functioning neoplastic cells are uncommon.

A second possibility is that this is a variant or the adult form of Letterer-Siwi's disease.

A third consideration relates the changes to underlying infection. It is interesting that an unusually large number of cases have been reported from China and Uganda. In spite of this distribution, and many careful studies for a specific infectious agent, none has been identified. Even a potential epidemiologic pattern or vector pattern as noted in Burkitt's lymphoma has not emerged. In the Uganda[3] study, the authors have tried to correlate Kupffer cell hyperplasia secondary to infective and parasitic infestations as the prodromal histiocytic hyperplasia. They propose that a continued stimulus to such hyperplasia may lead to neoplastic proliferation. Again, as I mentioned before, I cannot easily accept this as a simple neoplastic disease, malignant though its course may be.

There is one other intriguing observation on

this somewhat rare disease that supports an infectious basis. Boake and others[5] reported the concurrence of histiocytic medullary reticulosis in a father and a son.

In summary, our original clinical considerations rested between infectious granulomatous disease and histiocytic medullary reticulosis. From his early course, we felt the latter to be the best diagnosis. In spite of all this, we felt obligated to obtain appropriate cultures and studies and treat him for suspected granulomatous disease. We did not and still do not have a crisper therapeutic approach should this be, as we actually believe, histiocytic medullary reticulosis.

Dr. Sanford: Two of the problems which arose during the care of this individual were first, management of the patient with profound granulocytopenia, and second, the use of kanamycin or chlortetracycline in a patient with renal disease.

When first determined, the leukocyte counts showed as many as 19% neutrophilic leukocytes, then, one month later, the percentage decreased to the range of zero to 6%. The agranulocytosis was most probably due to the underlying disease, but it should be recalled that neutropenia or agranulocytosis is one of the rare manifestations of sulfonamide toxicity and that para-aminosalicylic acid (PAS) is a sulfonamide. If the skin rash was due to hypersensitivity to PAS, then the granulocytopenia may have represented an associated manifestation of hypersensitivity. Regardless of the etiology for the granulocytopenia, management is quite similar from the standpoint of infection. Also, management has not been too satisfactory. The approaches include protection against colonization and subsequent invasion by microorganisms which are extraneous to the patient—his "normal flora." The keystone to protection against exogenous organisms is reverse isolation. Optimally this may be accomplished by using plastic isolator systems similar to those employed in rearing germ-free animals. Such isolators are not yet readily available and still have shortcomings. In most general hospitals, alternatives are undertaken. These should involve strict isolation with *all* personnel, visitors, and family members wearing masks, sterile gowns and, if they are to touch the patient or any of his belongings, wearing sterile disposable gloves. Strict attention should be paid to any liquid or moist materials which might be used in patient care, as these may not be sterile originally or may be contaminated. For example, lotions used in backrubs have been contaminated with *Pseudomonas,* hexachlorophene-containing liquid soaps may be contaminated with gram-negative bacilli, and solutions such as aqueous benzalkonium chloride (Zephiran) deteriorate in the presence of protein and readily support bacterial growth. Such organisms most often produce disease by gaining access through the skin or mucosa at sites of intravenous catheters, urethral catheters, decubitus ulcers, etc. Control requires meticulous attention to details as well as avoidance of any absolutely unnecessary diagnostic or therapeutic procedures.

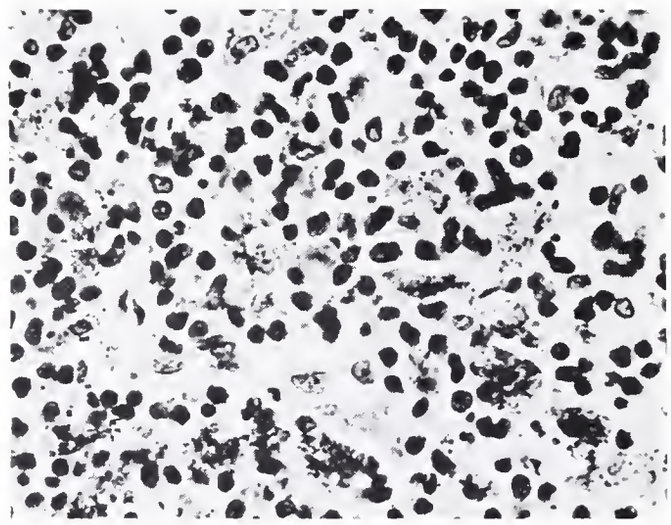


Fig 5. High power photomicrograph of medullary portion of lymph node showing infiltration of large bizarre histiocytes, some containing phagocytized carbonaceous pigment.

While such programs will afford a degree of protection, endogenous organisms continue to pose a hazard. "Sterilization" of the gastroin-

testinal tract has been attempted with some success; however, resistant organisms such as one of the superficial fungi usually emerge if the agranulocytosis is of any duration. The usual prophylactic antibiotic therapy is not indicated; however, it has been reported that prompt initiation of antibiotic therapy with agents effective against *Pseudomonas*, such as gentamicin and carbenicillin, is effective in patients with neutropenia associated with acute leukemia. It has been recommended that with the onset of fever, blood cultures should be obtained, but then treatment started immediately rather than awaiting the reports from the laboratory. The results seem to justify this approach under the circumstances of agranulocytosis.

Next, a brief comment on the use of kanamycin in patients with renal disease. The report of Cutler and Orme[6] provides useful guidelines: administer 7.0 mg/kg every third half-life. The half-life (t/2) of kanamycin may be estimated by multiplying the concentration of serum creatinine (mg/100 ml) by 3. For example, this patient had a serum creatinine of 4.5 mg/100 ml (3×4.5 would give a t/2 of approximately 13 hours); thus, 7 mg/kg every 36 hours would represent a reasonably safe approach if no alternative nontoxic drugs were considered likely to be effective.

Finally, what of the use of chlortetracycline (Aureomycin)? Chlortetracycline is unstable and breaks down *in vivo* even if the patient is unable to excrete the tetracyclines. In patients with renal failure, active chlortetracycline does not accumulate but the degradation products do accumulate. The question as to the potential hepatotoxicity of these degradation products has not been fully elucidated, although they appear to have less potential for hepatotoxicity than the antimicrobially active tetracyclines. However, I would prefer to regulate the dosage of tetracycline in accord with renal function than to administer chlortetracycline in full dosage and be uncertain as to the accumulation and toxicity of degradation products.

Terminally, this patient developed bacteremia due to *Proteus mirabilis* which probably invaded from the urinary tract. This terminal event all too clearly emphasizes the unsolved problems in protecting the compromised host from the world of bugs in which we live while at the same time providing sophisticated medical care.

Pathological Findings: *Dr. Daniel:* At autopsy, this was a wasted Negro man with diffuse cutaneous ecchymoses and peripheral lymphadenopathy. The principal lesions involved the reticuloendothelial system, bone marrow, lymph nodes, spleen, and liver.

The vertebral marrow was light pink with irregular areas of a gray-white infiltrate. On microscopic examination it was composed of sheets of mononuclear cells replacing the marrow with the exception of a few remaining adipose tissue cells and also large areas of necrotic mononuclear cells. The bony spicules were normal. These mononuclear cells were histiocytes. They had indented, lobulated nuclei, some round oval nuclei and there was a dense reticulum network surrounding the cells.

Sections of the lymph node demonstrated preservation of the cortical architecture. The capsule was intact and the subcapsular sinusoid was preserved. There were cortical lymphoid follicles remaining. The medulla, however, was strikingly abnormal and was obliterated by sheets of proliferating histiocytes. Again, there was the characteristic cytologic configuration of the histiocytes. High power examination of the histiocytes revealed the phagocytic capacity of these cells; there was carbonaceous pigment in the cytoplasm.

The spleen was enlarged, weighing 625 gm. The cut surface was marked by irregular geographic areas of light tan-pink tissue alternating with dark red splenic pulp in which small lymphoid follicles could be discerned. Microscopically, the lighter areas had a diffuse histiocytic infiltrate.

The liver was enlarged, weighing 1,780 gm. On cut section the lobular architecture was accentuated by gray-white threadlike extensions of the portal triads. The accentuation was seen microscopically to be due to a dense portal histiocytic infiltrate. The infiltrate also involved the sinusoids. The hepatic parenchymal cells were normal.

The kidneys weighed 200 gm each. There were two simple cysts in the right kidney and multiple ecchymoses and petechiae in the renal pelvis. There was also a histiocytic infiltrate of the kidney extending to involve the pelvic fat pad. The infiltrate also patchily involved the renal parenchyma. There was also evidence of a late-healing lower nephron nephrosis manifested as sloughed necrotic tubule cells in tubules lined by large hyperchromatic regenerative cells

which probably dated from the episode of postural hypotension, azotemia, and oliguria which occurred during his second admission.

Dr. Fallis: As Dr. Daniel has demonstrated, this is a clear-cut case of histiocytic medullary reticulosis. Let me go over certain other features which are perhaps obscure in this case.

The disease obviously represents a proliferation of histiocytes ranging from rather primitive reticulum-like cells to more mature macrophages or histiocytes. They betray their nature by their phagocytic capacity. In most cases there is a great deal of erythrophagocytosis; this was not a notable feature in this case, although, as Dr. Daniel pointed out, there was phagocytosis of carbon pigment in some of the mediastinal nodes.

In the bone marrow are seen two points of importance: First, the rather large amount of reticulum fibrin material is responsible for the extraordinary difficulty in aspirating material from the marrow, and I believe this difficulty was encountered in this case which necessitated an open bone marrow biopsy. Second, in the marrow there is an irregular involvement of the lesion. Unlike the usual leukemic infiltrate, this infiltrate is a patchy or spotty one. This has been described before. In fact, areas of myelofibrosis occurring in hypocellular areas have been described.

The outstanding characteristic of this disease is the peculiar structural change in the lymph nodes. This is a medullary disease and it is this medullary involvement which gave it the term "histiocytic medullary reticulosis." It is not a disease of the sinusoid. The subcapsular sinusoids are completely normal as are the cortical lymphoid nodules. Instead, the disease localizes in the medullary part of the node and simply overruns the architecture there. This is unlike any other malignant lymphoma. There are malignant lymphomas composed of cells not unlike the ones seen in this case—the so-called plasmatocytic lymphoma of Gall and Mallory.[7] However, in these cases, the architecture is completely destroyed and you do not have the preservation of the cortical lymphoid nodules and the subcortical sinusoids so characteristic of the nodes seen in this case.

In the spleen the disease corresponds to the distribution of the histiocytic cells in the sense that it involves the red pulp predominantly and crowds out the white pulp. This was seen in this case.

Finally, in the liver I think we find equally bizarre changes compared to the nodes. Specifically, you find the infiltrate both grossly and microscopically predominantly within the portal connective tissue. However, in the liver, the reticuloendothelial cells, or histiocytes, are out, as the Kupffer cells, in the lobules. Why this disease produces proliferation in the portal tracts, with much lesser involvement of the intralobular parenchyma where the Kupffer cells are lodged is, to me, a bizarre, inexplicable situation.

He had an old, completely healed, childhood-type tuberculosis lesion in the left upper lobe of the lung. He also had healed, completely inactive, tuberculosis in the right upper lobe. There was no evidence of tuberculosis in the bone marrow.

The terminal event was evidently *Proteus* bacteremia. We did not find any specific port of entry. There were ecchymoses in the urinary tract, but these could easily be a reflection of a generalized bleeding diathesis. There were, of course, ulcers in the mouth and perhaps these are the most likely sources. We did not find any evidence of disseminated bacterial lesions, so presumably the bacteremia was a terminal or agonal event.

In summary, then, this is a case of histiocytic medullary reticulosis.

REFERENCES

1. Scott, R B, and Robb-Smith, A H T: Histiocytic Medullary Reticulosis, Lancet 2:194 (July 22) 1939.

2. Lynch, E C, and Alfrey, C B, Jr: Histiocytic Medullary Reticulosis; Hemolytic Anemia Due to Erythrophagocytosis by Histiocytes, Ann Intern Med 63:666 (Oct) 1965.

3. Serck-Hanssen, A, and Purchit, G P: Histiocytic Medullary Reticulosis; Report of 14 Cases From Uganda, Brit J Cancer 22:506 (Sept) 1968.

4. Greenberg, E, et al: Histiocytic Medullary Reticulosis, Proc Mayo Clin 37:271 (May 9) 1962.

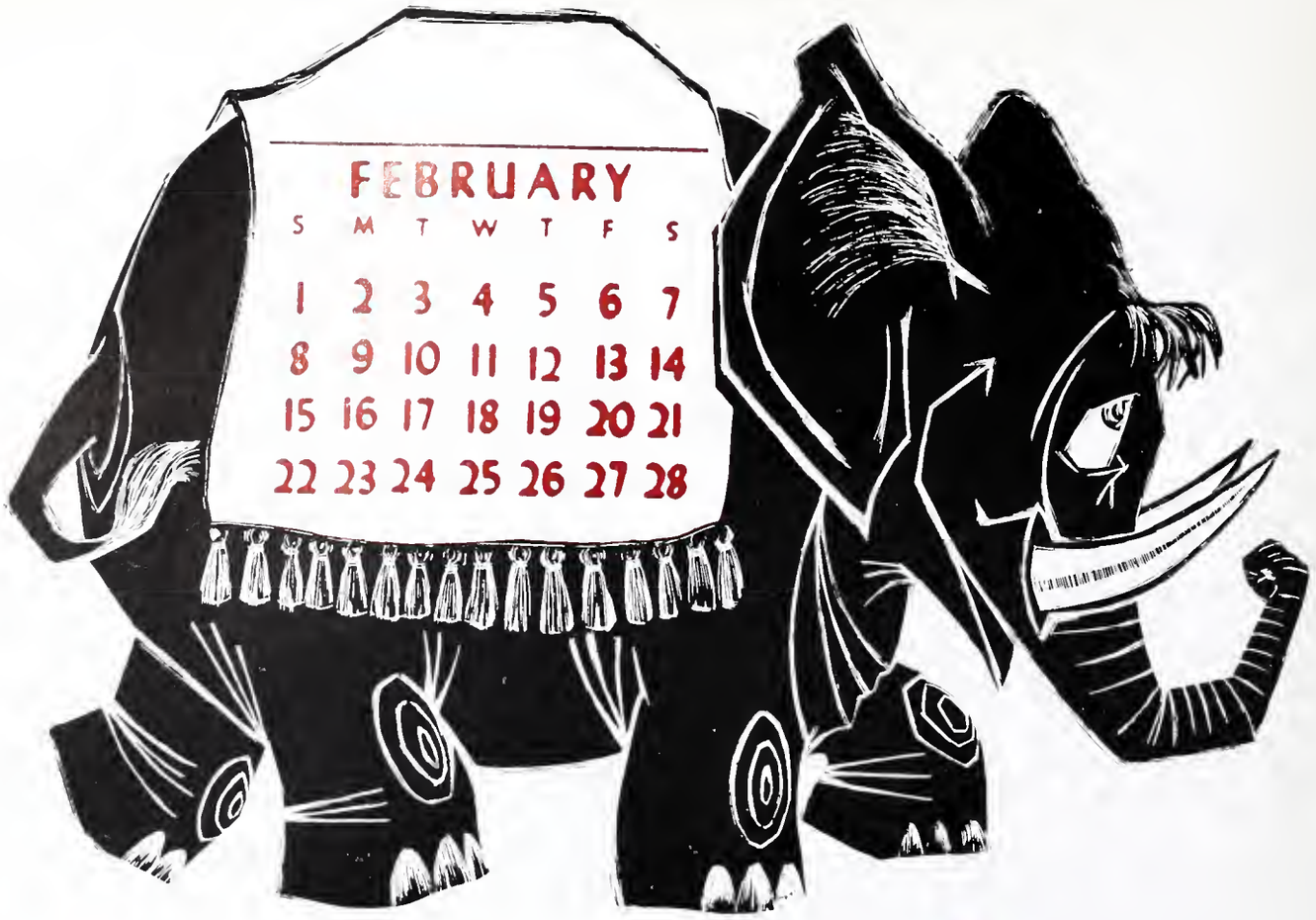
5. Boake, W C, et al: Histiocytic Medullary Reticulosis, Arch Intern Med 116:245 (Aug) 1965.

6. Cutler, R E, and Orme, B M: Correlation of Serum Creatinine Concentration and Kanamycin Half-Life, Therapeutic Implications, JAMA 209:539 (July 28) 1969.

7. Gall, E A, and Mallory, T B: Malignant Lymphoma; A Clinico-Pathologic Study of 618 Cases, Amer J Path 18:381 (May) 1942.

Drs. Bomboy, Daniel, and Bennett, Parkland Memorial Hospital, 5201 Harry Hines Blvd, Dallas, Tex 75235.

Drs. Frenkel and Sanford, Department of Internal Medicine; Drs. Fallis and Eigenbrodt, Department of Pathology, The University of Texas (Southwestern) Medical School, Dallas, Tex 75235.



DON'T FORGET!

Enrollment during the month of February on Major Medical coverage is available to all members under age 60, with no medical evidence required except on those members who were rejected by the previous carrier.

The effective date of Major Medical coverage under the new Texas Medical Association Group Plans is April 1, 1970.

the Prudential
INSURANCE COMPANY OF AMERICA
SOUTHWESTERN HOME OFFICE HOUSTON, TEXAS
LIFE INSURANCE • HEALTH INSURANCE • ANNUITIES • GROUP INSURANCE • GROUP PENSIONS

Complete and clip the attached coupon and mail it today to the Association and you will be sent the necessary enrollment materials.

To: Texas Medical Association
1801 North Lamar Blvd.
Austin, Texas 78701

Please mail me Texas Medical Association Major Medical enrollment forms.

MEMBER_____

ADDRESS_____

CITY_____

NEWS

Texas MDs Hear Suggestions to Improve Medical Services in 1970

Members of the Texas Medical Association focused their attention on medical service, legislation and political action in 1970, and insurance problems at TMA's 1970 Conference on Medical Service Jan. 17 in Austin. They heard four main speakers emphasize the challenges facing physicians as they attempt to deliver quality medical care in the next decade, and they listened to suggestions for meeting the future demands of their profession.

Dr. Charles Max Cole of Dallas, President, Texas Medical Association, spoke on "The 1970's; New Vistas and Challenges for Texas Medicine." He reviewed the highlights of medical accomplishments in the 1960's and discussed several of what he believes are primary upcoming issues. He cited the dangers of "people pollution," or "the ill effects of overpopulation," and discussed the increasing problem of distorted communications in the spreading of scientific knowledge through mass media. Concerning the effects of irresponsibly made charges on the physician's public image, he felt that since "our professional skills are not challenged, our rebuttal must come in the form of increased service outside the professional realm . . . no better way could be found for improving the public image of our profession than by its widespread community involvement" in solving society's problems. Because "the nature of medical practice in the '70's will be decided in the legislative halls," Dr. Cole also emphasized to his audience the necessity of supporting candidates who share physicians' political beliefs through active work in their campaigns and liberal financial support and the particular influence on legislation physicians can exert through contributions to the PAC movements.

In an address entitled "Legislation 1970—Public or Private Medicine?," Dr. H. Phillip Hampton of Tampa, Fla., discussed health care legislation that might be considered by Congress in 1970. "If present financing trends continue," he warned, "a tax-supported, government-supervised health care delivery system inevitably will result within the decade of the 1970's; and physicians will be providing medical care under strict government control." A member of the AMA Council on Legislative Activities, he believes that through technology and proper legislation, the private medical sector can provide for the health care of the entire population better than can any government medical program. He maintained that "to survive the environment of today, he (the physician) must maximize his time and efforts through the cooperative use of modern communication and electronic data processing methods in order to fulfill the responsibility of making adquate health care available to all who need it."

Painting the current political picture for his audience was Dr. James H. Sammons of Baytown, chairman, board of directors, American Medical Political Action Committee. He outlined the achievements of AMPAC since its conception in 1961. The organization is the second largest source in the United States of financial support for Congressional candidates. Dr. Sammons forecast legislative activities for 1970 which will affect the practice of medicine. Soliciting TMA members for their leadership, time, and resources, he said, "In that complex equation which governs medicine's continuing relations with our lawmakers, we (PAC members) are the ones charged by our profession with the continuing responsibility of helping elect the right lawmakers. If we fail, our patients suffer. If we suc-

Preparing to field their colleagues' questions concerning utilization of fees and services are Dr. Dewey W. Johnston of Fort Worth, left, and Dr. Elgin W. Ware, Jr., of Dallas.

Dr. Harvey Renger of Hallettsville, left, and Dr. H. Phillip Hampton of Tampa, Fla., relax during a break between sessions of the 1970 Conference on Medical Service.

Guest speaker Dr. John M. Rumsey of San Diego, Calif., right, discusses "The Climate for Private Practice—Where Will it Lead?" with Dr. George V. Pazdral of Somerville, Vice President of TMA.

From left to right, panel members Dr. Doyle W. Ferguson of Dallas; Dr. Richard C. Shaw of Hartford, Conn.; Dr. M. E. Rougraff of Houston; and Dr. E. Stuart McCleary of Hartford bone up on "Doctors, Patients, Insurers and Their Beefs" before their session gets under way.

President of TMA, Dr. Charles Max Cole of Dallas, challenges Texas physicians to meet the responsibilities of the 1970's.

Dr. Haden E. McKay, Jr., of Humble, Tex., center, introduces Dr. Lowell S. Johnson of Lubbock, left, to Dr. James H. Sammons of Baytown, chairman, board of directors, American Political Action Committee.

ceed, we make possible the reemphasis on medical education, research, and scientific programs that expands patient care."

Speaking on "The Climate for Private Practice—Where Will it Lead?," Dr. John M. Rumsey of San Diego, Calif., chairman, AMA Council on Medical Service, discussed physicians' charges for services rendered and their billing practices; but he insisted that "financing is not our forte. Our forte is quality and it is service." Advocating utilization review and peer review as means for physicians themselves to achieve improvement in both areas, he defined the latter as "the taking of responsibility to insure that our patients are getting quality care and are getting it for a proper price." In addition, he outlined the basic freedoms in medicine on which he believes the future of medical service depends, including the freedom of the patient to choose his personal physician or fire him at will; the freedom of the physician to treat only those cases about which he feels competent; the responsibility of the medical profession itself for the quality of medical care; the freedom of the physician to choose his place and type of practice; and the freedom of the physician to engage in any ethical, lawful type of remunerative plan he desires.

"Doctors, Patients, Insurers and Their Beefs" was the subject of discussion at the morning panel session, moderated by Dr. M. E. Rougraff of Houston, medical director, Great Southern Life Insurance Company. Topics and participants were management, labor, and insurers, Dr. Kenneth F. Schaefer, Newark, N.J., medical director, group insurance, The Prudential Insurance Company of America; what insurers do when a major medical claim is higher than UCR, Dr. E. Stuart McCleary, Hartford, Conn., assistant medical director, The Equitable Life Assurance Society; description of services, Dr. Doyle W. Ferguson, Dallas, vice president, medical director, Blue Cross-Blue Shield of Texas; confidentiality of medical information given as an insurer, Dr. Richard C. Shaw, Hartford, medical director, Connecticut Mutual Life Insurance Company; and what insurers are doing to ease the load of physicians' paperwork, Dr. Daniel J. Sullivan, New York, associate medical director, Metropolitan Life Insurance Company.

Presiding over the afternoon session on concepts in medical practice was Dr. James D. Murphy of Fort Worth, Past President of TMA and chairman, Committee on Government Health Programs. Speakers and their subjects were Dr. Walter Walthall of San Antonio, President-elect, TMA, the advantages of direct billing; Dr. Elgin W. Ware, Jr., of Dallas, chairman, Committee on Usual, Customary, and Reasonable Fees, TMA, the concept of usual, customary, and reasonable fees; Dr. Joseph T. Painter of Houston, president-elect, American Society of Internal Medicine, utilization problems related to professional services; and Dr. Dewey W. Johnston of Fort Worth, chairman, Committee on Liaison with Blue Shield, TMA, the role of the physician and the medical society in evaluating fees and the utilization of services.

Round table discussions on direct billing; usual, customary, and reasonable fees; and peer review—utilization of medical services and fees—were added attractions on the conference program. Discussions were divided according to county medical society membership size—large (100 members or more), medium-size (30 to 100 members), and small (5 to 29 members), and the problems peculiar to each size were stressed. Usual conference weekend events included an orientation program for new and transfer members of the Texas Medical Association, meetings of the Woman's Auxiliary to TMA, and a hospitality hour in the ballroom of the Sheraton-Crest Inn sponsored by Texas Employers' Insurance Association.

Forty-seven committees and councils met during the weekend to transact Association business, and business meetings culminated in the Jan. 18 meeting of the Executive Board. Total attendance at the conference was 582 physicians, wives, and guests.

TMA Selects Winners Of Anson Jones Award

The Texas Medical Association has recognized contributions to a better public understanding of medicine and health by the news media of Texas. Four newspapers, a magazine, radio station, and television station were named 1970 winners in the Association's annual Anson Jones Award competition for excellence in communicating health information to the public.

Selected to receive engraved award plaques and $100 in cash were Miss Ruth A. Eyre, medical writer, Dallas *Times Herald;* Miss Anna Catherine Day, staff writer, Amarillo *Globe-News;* Jesse Garza, Jr., publisher, *The Austin Herald* and *La Fuerza;* Mrs. Dorothy Edge, staff writer, Fort Worth *Press;* Miss Lynnell Jackson and Tom Shuford, editors, *Texas PTA* magazine; Walter E. Evans, producer, "Ask the Doctor," KRLD Radio, Dallas; and Bob Guthrie, moderator, "Crisis: Drug Abuse," WOAI-TV, San Antonio.

Award winners were announced by TMA President Dr. Charles Max Cole of Dallas. He will present award plaques and cash prizes to the seven winners at a special luncheon ceremony during TMA's 103rd Annual Session, to be held in Dallas April 30-May 3.

Accuracy, significance, quality, public interest, and impact were used as the basis for selecting winners. Printed entries were evaluated by Dr. Norris G. Davis (PhD), chairman, department of journalism, The University of Texas at Austin; Vern Sanford, general manager, Texas Press Association; and Mrs. Marilyn Baker, managing editor of *Texas Medicine*. Radio and television entries were reviewed by a special committee of the Texas Association of Broadcasters. The seven physician-members of TMA's Council on Public Relations and Public Service made the final determination of winners.

Miss Eyre's and Miss Day's award-winning entries consist of representative articles showing their general coverage of medical news and features. A series of articles on teenage drug abuse won the award for Mrs. Edge, and a special health careers issue of *La Fuerza* and *The Austin Herald* was a top choice. Articles on school health, drug abuse, and the new rubella vaccine brought top honors to the *Texas PTA* magazine.

KRLD radio's weekly health program, "Ask the Doctor," was the only second-time winner among the 1970 selections, having won the award previously in 1966. The news department of WOAI-TV won the award for their outstanding 90-minute special on drug abuse.

Presented annually since 1956, TMA's Anson Jones Award is named in honor of the last president of the Republic of Texas, who was also a noted physician, statesman, and journalist.

Foundations, Gifts Fund Project HOPE in Laredo

Project HOPE's new pilot health career training program in Laredo has received substantial funding from private foundations and special gifts; and its three-year goal of $1,100,000 seems to be well within reach, Dr. William B. Walsh, founder and president of Project HOPE, has announced.

More than one half of the support for HOPE's first domestic venture has come from the Sid Richardson Foundation of Fort Worth, which has pledged $300,000 over the next three years; the Moody Foundation of Galveston, which has pledged $75,000 for the first year; and the Tinker Foundation of New York City, which has pledged $50,000 yearly for three years. In addition, the American Medical Association has given $5,000 to the Laredo project. These donated funds assure the continuation of the pilot program toward its three-year goal.

Project HOPE has pledged to Laredo the development of teaching programs which will produce enough trained auxiliary medical personnel over the next three years to enable local physicians and medical facilities to deliver easier and more effectively comprehensive health care to the community. The preliminary success of the project was cited in the Dec. 7, 1969, issue of *Parade* magazine.

Two 1969 Grads Score Highest on Board Exam

Two physicians were named to the honor roll at the Dec. 8-10 examinations held in Fort Worth by the Texas State Board of Medical Examiners.

Recipient of a certificate for the highest average grade at the examination was Dr. Keitha Davis Scott of Roswell, N.M., a 1969 graduate of The University of Texas Medical Branch at Galveston. Now located in Los Angeles, Calif., she scored 90.7 on the examination.

Also named to the honor roll for his average of 90.2 was Dr. James Clark Huff of Laurel, Miss., who is now in Salt Lake City, Utah. He was graduated in 1969 from The University of Texas Southwestern Medical School at Dallas.

Nursing System Granted Continuing Accreditation

The National League for Nursing has notified The University of Texas Nursing School System that the Board of Review for Baccalaureate and Higher Degree Programs has voted to grant continuing accreditation to the system's master's and baccalaureate programs.

Dean Marilyn Willman of the UT Nursing School System, who made the announcement, said, "Participation in the NLN accrediting program is voluntary, and achievement of accredited status indicates that the school has met criteria of excellence established by the Council of Baccalaureate and Higher Degree Programs of the League."

The system presently offers a four-year baccalaureate and master's degree programs in nursing at Austin and a clinical program at Galveston consisting of the final two years in the nursing major. A new clinical program in San Antonio has enrolled students for the 1970 spring semester, and planning for development of a four-year program in El Paso is in progress.

Fall, 1969, enrollment in the nursing school system totaled 433 at Austin and 101 at Galveston.

LVN Examining Board Revokes Two Licenses

Two licenses were revoked by the Texas Board of Vocational Nurse Examiners at its meeting in October, 1969.

Employers and organizations concerned with licensed vocational nurses may note that the revoked licenses had been issued to Jeanette Young Bivin, LVN #31070, whose latest address was Sinton, Tex., and to Doris Jean Dawson, LVN #29468, formerly licensed in Colorado but whose latest address is Dallas.

Planning Consultant Named For Schools

The appointment of a Chicago firm as planning consultant for two UT System component institutions has been approved by the regents of The University of Texas System.

The firm will work with the Office of Facilities Planning and Construction, a system-wide agency, in planning the new UT Medical School at Houston and in additional planning at the UT Medical Branch at Galveston. It has done similar work with that office for the UT Southwestern Medical School at Dallas.

New PR Vice President Appointed at Blue Cross

Eugene W. Aune, assistant vice president, administration, of Blue Cross and Blue Shield of Texas, succeeds Fred R. Higginbotham as vice president of public relations. Higginbotham has been named chief executive officer of the Atlanta, Ga., Blue Cross and Blue Shield Plans. Tom L. Beauchamp, Jr., president of Texas Blue Cross and Blue Shield, announced the appointments.

In addition to directing the vast claims processing function for Blue Cross-Blue Shield during the past five years, Aune has been the chief coordinator between the plans and the State Department of Public Welfare in all matters relating to the Medicaid Title XIX programs. He has been with Blue Cross and Blue Shield since his graduation from The University of Texas at Austin in 1949.

Pediatrics Department Receives Moody Grant

The Department of Pediatrics at The University of Texas Medical School at San Antonio has recently received a grant of $24,725 from the Moody Foundation of Galveston.

The grant will be used to equip an intensive care unit at the Robert B. Green Hospital Nursery. According to Dr. Stanley E. Crawford, professor and chairman of the pediatric department, such a facility will enable the department to provide an intensification of infant care and will permit an upgrading of resident, student, and nurse training.

Academy Surgeons Study High Jumping Injuries

A nationwide study of spinal injuries occurring in high jumping is being undertaken by the Committee on Sports Medicine of the American Academy of Orthopaedic Surgeons in Chicago, Dr. Jack C. Hughston of Columbus, Ga., committee chairman, recently announced.

Lack of valid and reliable information on the subject, particularly regarding the controversy over the new Fosbury supine technique of high jumping, has prompted the study, according to Dr. Hughston. A continuing pooling of such injury data, he said, is needed for competent analysis and for the effective protection of the athlete.

The survey is directed to physicians, athletic organizations, school authorities, and the public. They are asked to report all known cases of spinal injuries to high jumpers, regardless of technique used, as they occur.

Information should be sent to Dr. Martin E. Blazina, UCLA Medical Center, Los Angeles, Calif. 90024. Dr. Blazina, committee member and orthopedist for UCLA varsity teams, is conducting the study.

UTSMS Biochemists Win Research Grants

The Robert A. Welch Foundation of Houston has awarded research grants totaling $132,000 to four biochemists on the faculty of The University of Texas Southwestern Medical School at Dallas, announced Dr. Ronald W. Estabrook (PhD), Virginia Lazenby O'Hara Professor and chairman of the department of biochemistry at the school.

Recipients of the grants and their subjects are Dr. G. Larry Cottam (PhD), "The Mechanism of the Chemical Reactions Catalyzed by Pyruvate Kinase," $36,000; Dr. Rene Frenkel (PhD), "The Dissociation of the Active and Allosteric Sites of Enzymes," $36,000; Dr. Louis B. Hersh (PhD), "Enzymatic and Chemical Reactions of Hydroxy Pyroglutamates," $36,000; and Dr. Julian A. Peterson (PhD), "Metabolic Control of Microbiol Hydrocarbon Oxidation Reaction," $24,000.

The Welch Foundation was established in 1954 from the estate of the late Robert A. Welch, Houston philanthropist. Dr. W. O. Milligan (PhD) of Houston is director of research for the foundation.

"That last patient didn't complain about the fee . . . she said 'The price is right.' "

Regents, Hospital Board OK Affiliation Agreement

The University of Texas System Board of Regents recently approved an affiliation agreement with the board of managers of Tarrant County Hospital District.

The two boards are acting, respectively, for The University of Texas Southwestern Medical School at Dallas and the John Peter Smith Hospital at Fort Worth.

The affiliation agreement lists several common objectives of the Fort Worth hospital and the Dallas medical school, including the conduct of multidiscipline educational programs for health care professionals; the development and conduct of new or expanded educational programs for physicians at the undergraduate, graduate, and postgraduate levels; and the application of integrated research and training to improve health care. This initial agreement is for a one-year period, renewable annually.

Academy Establishes Scholarship Foundation

The Houston Academy of Medicine has established a new foundation providing scholarship loans to Texas students in medical, paramedical, and nursing fields, announced Dr. James H. Sammons of Baytown, president of the Academy.

The Houston Academy of Medicine Memorial Education and Research Foundation will be headed by Dr. Byron P. York, Sr., a member of the academy Board of Trustees and a past president of the Harris County Medical Society. It was established to enable those interested in Houston's medical community to create special memorials for medical education, lectureships, and research honoring family, friends, colleagues, and other institutions.

Foundation loans will be repaid by recipients over a four-year period following graduation, thus replenishing the scholarship loan funds created by contributions, Dr. Sammons said.

The Foundation plans to make its first student loan this spring from The Lester and Elizabeth Karotkin Scholarship Fund established by Dr. Lester Karotkin, past president of the Harris County Medical Society and longtime trustee of the academy.

Directors of the new foundation, all of them trustees of the Houston Academy of Medicine, are Drs. Sammons; York; Joseph T. Ainsworth; John T. Armstrong; Lloyd J. Gregory, Jr.; Wendell H. Hamrick; Robert A. Hettig; Jack

R. Hild; Haden E. McKay, Jr.; and Robert D. Moreton. Administrator is Mrs. R. C. Torrence, executive director of the academy.

Regents Appoint Dean For New Medical School

Dean of the new University of Texas Medical School at Houston will be Dr. Cheves McCord Smythe of Evanston, Ill., effective April 1, 1970, announced Chancellor Harry H. Ransom, The University of Texas System, following a recent board of regents meeting.

The choice of the faculty search committee, representatives of Hermann Hospital, and the Health Affairs Council, Dr. Smythe is associate director of the Association of American Medical Colleges and lecturer in medicine at Northwestern University Medical School. He has held the two positions since 1966. An honor graduate of Harvard Medical School and former dean of the Medical College of South Carolina, he is also a consultant to the Veterans Administration Research Hospital and Wesley Memorial Hospital, both in Chicago, and a consultant to the Department of HEW Regional Medical Programs and Bureau of Physician Manpower.

One of the reasons for his accepting the post, Dr. Smythe said, was the fact that the school could start accepting students immediately, admitting approximately 20 students in September, 1970, well in advance of the original projected opening date. Establishment of the new medical school was authorized last year by the regular session of the Texas Legislature.

"Let's try to make this short and sweet—I'm due back in surgery in twenty minutes."

UT Southwestern Names Gifford-Hill Professor

Gifford-Hill Visiting Professor at The University of Texas Southwestern Medical School at Dallas March 9-13 will be a nationally known authority on blood disorders, Dr. James H. Jandl, announced Dr. Donald W. Seldin, professor and chairman of the department of internal medicine at Southwestern.

Dr. Jandl, 44, is the George Richards Minot Professor of Medicine at Harvard Medical School and is director of the Thorndike Memorial Laboratory and Second and Fourth Medical Services of Boston City Hospital.

The lectureship is made possible by a grant established by the Gifford-Hill companies, a Dallas-based and diversified construction materials firm. An outstanding physician who is interested in some aspect of the broad field of neoplasia (cancer) is invited to the medical school each year. He conducts ward rounds and seminars with students and staff and consults with faculty members on their research projects in his field of interest.

Dr. Jandl will present two formal talks at Southwestern. The Gifford-Hill Lecture will be held at 11 a.m. Thursday, March 12, before students, faculty, and clinical faculty on the subject of "The Mechanisms and Clinical Features of the Various Immunohemolytic Disorders." A second lecture will be a technical seminar before the department of medicine entitled "Reversible and Adaptive Alterations of Normal and Abnormal Hemoglobins: The Influence of These Properties on Function and Catabolism."

Texas Among 12 States Receiving Big Benefits

More than $2 out of every $3 in private health insurance benefits is paid to people in 12 states, including Texas, the Health Insurance Institute finds.

At the end of 1969, said the institute, families in each of these top dozen states should have received at least a quarter of a billion dollars in benefits. New Yorkers seem certain to have received the biggest chunk, followed by Californians. They both probably got well over $1 billion each. Predictably, residents in states with smaller populations such as Alaska, Wyoming, Nevada, South Dakota, Vermont, North Dakota, and Delaware almost certainly received the smallest dollar totals.

Institute estimates are based on state-by-state health insurance benefit figures for 1967. In that year New Yorkers received more than $1.38 billion in private benefit insurance payments; Californians took in $1.14 billion; and Pennsylvanians received the third highest amount—almost $.75 billion. The other big benefit payment states, in order of their payments, were Michigan, Illinois, Ohio, Texas, New Jersey, Massachusetts, Indiana, Missouri, and Wisconsin.

Total payments for all types of private health insurance were more than $11 billion. Overall, residents of the dozen top states received $7.5 billion in health insurance benefit payments, or more than two-thirds of that paid in the entire nation.

Texas Osteopathic College Prepares for '70 Opening

Plans are underway to locate the seventh college of osteopathic medicine in the United States in Fort Worth and to admit its first class in September, 1970, according to a report in the Fort Worth *Star-Telegram*.

Associate dean of the planned Texas College of Osteopathic Medicine will be Dr. Henry B. Hardt (PhD), former chairman of the chemistry department at Texas Christian University. As the only administrator to be employed by the college so far, he is currently developing curricula, employing faculty members, and reviewing student applications. The board of directors has not yet appointed a dean or a president, said Ray Stokes, director of development for the college, according to the article in the *Star-Telegram* on Jan. 4.

Fort Worth has been selected as the site of the college "because it was the only major city in the state without a medical school or a professional school of any type. Yet it has the largest concentration of osteopathic physicians in Texas," said Stokes. He added that about 40% of the 810 osteopaths in Texas practice in Dallas and Tarrant counties.

The school plans to grant the degree of Doctor of Osteopathy and other scientific and honorary degrees. It hopes to provide a four-year medical training program, and all work is to be accredited by the American Osteopathic Association. Graduates will take the same state medical examinations as other medical school graduates, Dr. Hardt said.

College organizers hope to open with a freshman class of 32 in September, double the entering class to 64 in 1971, and eventually admit 96 freshmen a year when the college is well established. Students would be recruited primarily from Texas, Oklahoma, Colorado, Arizona, California, and New Mexico.

Five hospitals in the Dallas-Fort Worth area have agreed to serve as teaching hospitals for the college's stu-

dents, the newspaper article reported. They are Fort Worth Osteopathic, Dallas Osteopathic, Hurst General, East Town Osteopathic in Dallas, and Mid-Cities Osteopathic in Grand Prairie. Texas College of Osteopathic Medicine hopes to have its own 200-bed teaching hospital on a permanent campus, which will include a basic science building, administration building, auditorium, clinic, student union and bookstore, student apartments, men's dormitory, and an animal building. Until the permanent campus can be financed and built, however, Stokes said that the college will operate in temporary facilities in downtown Fort Worth.

Accidental Death Rate Climbs Slightly in 1969

An estimated 116,000 deaths in 1969, or approximately 1,000 more than in 1968, were caused by accidents, according to statisticians of Metropolitan Life Insurance Company. The provisional death rate last year was virtually the same as in 1968, when the figure was 57.5 per 100,000 population.

An increase in the death toll from motor vehicle accidents was largely responsible for the rise in the total number of deaths from accidents during 1969. Motor vehicle fatalities increased by somewhat over 1,000 to a new high in 1969 of 56,500. Preliminary data indicate, however, that motor vehicle deaths rose less than the volume of travel, thus producing a slightly lower death rate per 100 million vehicle miles traveled than the 5.5 recorded in 1968 and the third successive decline in this annual figure.

Public accidents other than those involving motor vehicles also figured prominently in the rise in the combined death toll for 1969 from all accidents, with an increase to 21,500—about 1,000 over the figure for the previous year.

The number of job-related fatalities in 1969 was approximately 14,500, or about the same as in the previous year; yet, about 3,300 of these deaths are included in the estimate of 56,500 motor vehicle fatalities previously mentioned. The toll from injuries in and about the home declined to about 27,000, or by approximately 1,500 from the 1968 total.

Metropolitan statisticians point out that, effective in 1968, a revision was made in the official method of classification of the *International List of Causes of Death* (Eighth Revision). The figures for that year and 1969 are not strictly comparable with those for earlier years. It is believed that the 1969 and 1968 estimated figures are somewhat higher than they will be when the official totals are published by the National Center for Health Statistics.

PAMPHLETS

A comprehensive booklet covering all aspects of child health care and written especially to answer the many questions which frequently confront parents concerning the health of their children has been published by the American Academy of Pediatrics.

Entitled *Growing Pains,* the publication includes helpful information on subjects such as accidents, bedwetting, bottle feeding, cancer, color blindness, diet and eating habits, emotional problems, growth, head-banging, physical examinations, language and grammar, obesity, popularity, reading, running away, toilet training, and vaccination and vaccines. It consists of answers to letters on all aspects of child health published by the academy in its monthly column appearing in *Today's Health,* the family magazine published by the American Medical Association.

Copies of the 230-page pamphlet may be obtained from the academy for $1 a copy. Requests for the booklet should be sent to the Publications Department, AAP, 1801 Hinman Ave., Evanston, Ill. 60204.

An up-to-date picture of the assistance now available to the unwed mother, the gaps in services, and what communities and social agencies can do to help these young women get the care they and the unborn child need is provided in a new Public Affairs Pamphlet, *The Unmarried Mother,* by Alice Shiller.

The life problems faced by many unmarried mothers are complex and reflect the unmet needs of all the poor, nonwhite, urban ghetto dwellers. But there is much that can be done to help unmarried pregnant young women avoid the common pattern of "failure to continue education, dependence on the state welfare system, never marrying, and continuing to reproduce illegitimate offspring."

For the one in five who today does get help, there are several different kinds of resources, including maternity homes, foster family homes, and mutual service or wage homes, which Miss Shiller discusses. The problem is how to provide such help to the four out of five unmarried mothers who today do not receive guidance before the birth of their children.

Early and sound care and counseling can help many of these young women avoid repeated out-of-wedlock births. There is conclusive evidence that this pattern of repeated unwed motherhood can be avoided or broken when there are programs to help the young women continue their education, counsel them on their future, and offer them vocational guidance as well as prenatal care. Even more unmarried adolescents can be helped when a community responds to their needs rather than condemning or shunning them. The pamphlet presents several community programs that have been tried in cities across the United States to fill this need.

The pamphlet is available for 25 cents from the Public Affairs Committee, 381 Park Ave. S., New York 10016.

The 42 papers presented at the First International Symposium of the American Medical Association Institute for Biomedical Research held in March, 1969, by international scientists in neurophysiology, neuroanatomy, neurochemistry, paleontology, and neurology have been published by the AMA.

Entitled *Neurobiology of Cerebellar Evolution and Development,* this major publication covers in depth discussions on aspects of cerebellar phylogeny, ontogeny, and function and morphology from lower amphibian to man. Topics range from basic aspects of vertebrate evolution to the most complex and current research being done in neurobiology.

Of special appeal to physicians seeking to broaden their understanding of the nervous system, the book features a step-by-step analysis of the problems of neurobiology; and it is a particularly valuable and unique adjunct to both graduate and undergraduate student teaching.

Orders with accompanying checks should be addressed to AMA, 535 N. Dearborn St., Chicago 60610. Single copies cost $35; 11 or more, $25; copies for medical students, interns, and residents, $25; and non-North American orders, $39. The prevailing AMA 50% discount applies to medical society orders, however.

The American Medical Association Council on Rural Health has recently produced a new brochure, "Health Care Delivery in Rural Areas—Selected Models." It presents an overview of the problems involved in the delivery of health services in rural areas and summarizes selected plans and models for these programs which have proved effective in various rural but disparate regions throughout the United States.

Free copies may be obtained from the Department of Community Health, AMA, 535 N. Dearborn St., Chicago 60610.

Corpus Christi windjammer urges fellow MDs to try their own sails

By Jack McKemie, M.D.

One of man's most ancient modes of transportation is boating, which evolved rather early in the history of civilization from poling and rowing to using sails to catch the wind and propel the boat in the direction of the wind. In fact, most of the world was discovered by sailing ships which could not go upwind. Machine age innovations made the beautiful sailing ships of the 19th century extinct, however, except for museum pieces and a few small pleasure boats. Yet, since World War II, there has been a world-wide revival of sailboating for recreation, sport, and pleasure; and it is presently one of the most rapidly growing sports in the United States. Nearly every inland lake and coastal city has one or more yacht clubs.

Here in Corpus Christi, located on the west shore of a 10- by 15-mile protected bay where winters are mild, sailing is a year-round sport and recreation. There is plenty of wind, and the bay is from 10 to 15 feet deep with very little shore obstruction. A well planned marina; a beautiful, well organized yacht club; ocean cruisers, some as much as 50 feet long and costing about $80,000, as well as sporty little 14-foot Sunfish costing about $400 can all be found. More than a hundred of the latter are on the Yacht Club floats alone, and a sailboat to suit almost everyone's taste and budget is available. Trips may be made—and even quite inexpensively as a crewman—to sailing ports all around the Gulf of Mexico, including Tampico and Vera Cruz in Mexico, Nicaragua and Honduras in Central America, the Virgin Islands and the Bahamas in the Caribbean (but hopefully not Cuba!), and the East Coast of the United States.

Usually two races on Saturday afternoon and one on Sunday afternoon are held for the small boats on Corpus Christi Bay the first weekend of each month. Marker flags outline the race course in the bay in a roughly triangular pattern totaling five to seven miles. Upwind and crosswind legs are provided, thereby equalizing any particular merit a boat may have on one of these legs. A race usually takes from one to one and a half hours, after which time the winners adjourn to the bar to tell jokes and relate humorous experiences, while the losers often seem to have to do some repairing or adjusting on their boats before the next race. It is truly a pleasure to win one of these races, since the victory is the result of many hard hours of boat maintenance and rigging, much crew practice and training, and the exercise of the right tactics under the prevailing conditions.

The NAYRU book of rules by which all sailors abide perhaps deserves mention here. Racing rules for almost any situation seem to be spelled out clearly in the book, but there are always exceptions. I remember one race that took a little over an hour to complete, but the protest hearing lasted three and a half hours! Competition skippers are the friendliest, most fraternal, and most likeable people imaginable while ashore, but out on that race course—watch out! A race is sometimes like having seven or eight boxers in one ring at the same time.

It might be a couple of years after one begins racing before he does begin winning anything except the rear-guard position; yet, contrary to general opinion, it is not difficult to learn to sail. Dozens of excellent books graphically illustrating the fundamentals are written for the beginner. If one learns to sail small boats well on lakes and bays, he should make a crackerjack ocean racer—unless the old "mal-de-mer" prostrates him. And the sport is such a challenge that the novice will lie awake at night and resail his mistakes until, eventually, thinking is not required and action becomes almost automatic the next time a situation repeats itself. However, sailboating involves about as many situations and even more "ifs" than does contract bridge—but that's why it is so fascinating.

New materials used in sailboats make maintenance and replacement of gear very simple and economical. The hulls are usually made of corrosion-resistant fiber glass and strong stainless steel or bronze. The sails are Dacron and do not even require drying before they are

stuffed in a bag for storage (although they will look better and last longer with a *little* care). Most small boat owners maintain their own boats, doing their own sanding, varnishing, and installation of secret speed-inducing hardware. Boats which are left in the water require antifouling paint to retard marine growth on the hull. Even with this protection, the underwater hull will have to be cleaned and repainted two to three times a year.

One misconceived notion held by most newcomers involves their desire for a yacht on which they can sleep and do a little light housekeeping. A word to the wise—the finest yacht on which I have ever been, from the standpoint of comfort, is worse than any third-rate flophouse within a hundred-mile radius of anywhere. You freeze or roast alive (no heating or air-conditioning); all yachts leak water on your bunk, you, and your clothes; the bunks are small and are usually heeled 15 to 30 degrees; the man sleeping 18 inches above you snores; no one has had a bath for three days; the ice is all melted by the second day out; the seas are too rough to permit lighting the stove for cooking; and that head (toilet to you landlubbers) is something else again when the boat is heeled 20 to 30 degrees and bucking around like a bronco. Can't you just picture your wife going out with you for an overnight cruise for the first time expecting something like the Ritz for that $30,000 you just plunked down for your rig?!! Nevertheless, the beautiful side of sailing offsets all of these necessary discomforts to such an extent that they become accepted without question. Creature comfort is only a relative thing anyway!

My boat is a 20-foot centerboard sloop with a lot of sail (225 sq. ft.) for its light weight (700 lbs.). There are 11 of these "Highlanders" on Corpus Christi Bay, and they have been the mainstay of racing activity here. Within the past two or three years, however, some of the larger and more expensive boats (midget ocean racers) have unfortunately cast somewhat of a shadow on their activities and popularity. "Highlanders" are "dry sailed"—that is, they are lifted out of the water after races and placed on specially designed trailers and stored at home in the garage (the car stays out in the driveway, of course). A crew of three or four is required to hold one down and to develop the great power of which her sails are capable. On a crosswind course with winds of 20 to 22 miles per hour, the boat often reaches speeds of 15 to 20 miles per hour. What a thrill it is to surf across the face of a wave with the crew all hiked outboard and with spray shooting the length of the boat!

You do not have to own a boat to enjoy sailing, however. It is great fun to crew for someone else. Learning all of the technical problems of a particular boat, be it large or small, and learning to work smoothly with the rest of the crew to get the most performance out of the boat can be almost as satisfying to a crew member as to the skipper himself. The off-shore ocean racing yachts (30 to 70 ft.) require from 6 to 15 crew members; for ocean races sometimes last three to four days, and the crew divides the sailing of the boat into four-hour watches—four hours on and four hours off duty. The "off" watch sleeps, eats, and cleans up the boat, while the "on" watch steers, keeps look out, and handles sails. The skipper directs all procedures and often does the navigation. Some yachts as large as 40 feet are transported by special truck across the nation to participate in regional regattas. Most, however, are sailed to the regatta area; and a skilled crew is not required for these ferry trips. Such a trip might provide an opportunity for the inexperienced to try himself at sea life before committing his family jewels for a "toy."

Seriously, skippers are very often looking for a "ferrymullet," and a young or middle-aged physician is especially welcome aboard many ocean cruises since the offshore sailor usually has a nagging fear that he may become severely ill or injured at sea where medical attention is not readily available. You MDs fill the bill quite well—especially if you can also help sail the boat!

The girth control pill

Tepanil® Ten-tab®

(continuous release form)

(diethylpropion hydrochloride)

works on the appetite not on the 'nerves'

When girth gets out of control, TEPANIL can provide sound support for the weight control program you recommend. TEPANIL reduces the appetite—patients enjoy food but eat less. Weight loss is significant—gradual—yet there is a relatively low incidence of CNS stimulation.

Controindicotions: Concurrently with MAO inhibitors, in patients hypersensitive to this drug; in emotionally unstable patients susceptible to drug abuse.

Worning: Although generally safer than the amphetamines, use with great caution in patients with severe hypertension or severe cardiovascular disease. Do not use during first trimester of pregnancy unless potential benefits outweigh potential risks.

Adverse Reoctions: Rarely severe enough to require discontinuation of therapy, unpleasant symptoms with diethylpropion hydrochloride have been reported to occur in relatively low incidence. As is characteristic of sympathomimetic agents, it may occasionally cause CNS *effects* such as insomnia, nervousness, dizziness, anxiety, and jitteriness. In contrast, CNS depression has been reported. In a few epileptics an increase in convulsive episodes has been reported. Sympathomimetic *cardiovascular effects* reported include ones such as tachycardia, precordial pain, arrhythmia, palpitation, and increased blood pressure. One published report described T-wave changes in the ECG of a healthy young male after ingestion of diethylpropion hydrochloride; this was an isolated experience, which has not been reported by others. *Allergic* phenomena reported include such conditions as rash, urticaria, ecchymosis, and erythema. *Gastrointestinal effects* such as diarrhea, constipation, nausea, vomiting, and abdominal discomfort have been reported. Specific reports on the hematopoietic system include two each of bone marrow depression, agranulocytosis, and leukopenia. A variety of miscellaneous adverse reactions have been reported by physicians. These include complaints such as dry mouth, headache, dyspnea, menstrual upset, hair loss, muscle pain, decreased libido, dysuria, and polyuria.

Convenience of two dosage forms: TEPANIL Ten-tab tablets: One 75 mg. tablet daily, swallowed whole, in midmorning (10 a.m.); TEPANIL: One 25 mg. tablet three times daily, one hour before meals. If desired, an additional tablet may be given in midevening to overcome night hunger. Use in children under 12 years of age is not recommended.

T-006A / 1/70 / U.S. PATENT NO 3,001,910

THE NATIONAL DRUG COMPANY
DIVISION OF RICHARDSON-MERRELL INC
PHILADELPHIA, PENNSYLVANIA 19144

TEXAS MEDICAL ASSOCIATION
1970 ANNUAL SESSION DALLAS
APRIL 30—MAY 3

PLAN NOW TO ATTEND!
USE THESE HANDY FORMS TO REGISTER IN ADVANCE, BUY TIC
AND MAKE HOTEL RESERVATIO

STA

TEXAS MEDICAL ASSOCIATION
DALLAS HOUSING BUREAU
1507 PACIFIC AVENUE
DALLAS, TEXAS 75201

38 GUEST SPEAKERS

plus 225 special and TMA-member speakers

JOHN ADRIANI, M.D.
New Orleans, anesthesiology

STEPHEN M. AYRES, M.D.
New York, internal medicine

KURT BENIRSCHKE, M.D.
Hanover, N.H., pathology

WILLIAM J. BROWN, M.D.
Atlanta, preventive medicine

WILLIAM D. DAVIS, JR., M.D.
New Orleans, internal medicine

JAMES L. DENNIS, M.D.
Oklahoma City, pediatrics

PHILIP P. ELLIS, M.D.
Denver, ophthalmology

ROBERT J. FREEARK, M.D.
Chicago, surgery

JACK CHANDLER HUGHSTON, M.D.
Columbus, Ga., orthopaedic surgery

STANLEY E. GITLOW, M.D.
New York, internal medicine

ALAN F. GUTTMACHER, M.D.
New York, obstetrics and gynecology

CARL V. GRANGER, M.D.
Boston, physical medicine and rehabilitation

J. WILLIAM HILLMAN, M.D.
Nashville, orthopaedic surgery

BARRETT KENNEDY, M.D.
New Orleans, dermatology

THOMAS J. KIRBY, M.D.
Rochester, Minn., ophthalmology

BARBARA M. KORSCH, M.D.
Los Angeles, pediatrics

JOHN L. LEWIS, JR., M.D.
New York, obstetrics and gynecology

ROSS L. McLEAN, M.D.
Austin, internal medicine

DELBERT OBERTEUFFER, Ph.D.
Columbus, Ohio, Editor,
The Journal of School Health

FRANCIS X. PALETTA, M.D.
St. Louis, plastic and reconstructive surgery

WILLIAM G. REESE, M.D.
Little Rock, psychiatry

GEORGE P. ROSEMOND, M.D.
Philadelphia, surgery

ANTHONY RUPPERSBERG, M.D.
Columbus, Ohio, obstetrics and gynecology

MAYNARD I. SHAPIRO, M.D.
Chicago, Immediate Past President American Academy of Gen. Practice

JAMES L. SHEEHY, M.D.
Los Angeles, otolaryngology

GABRIEL F. TUCKER, M.D.
Philadelphia, otolaryngology

P. V. SIEGEL, M.D.
Washington, D.C., federal air surgeon

MARVIN STEIN, M.D.
Brooklyn, psychiatry

FRANK L. WEAKLEY, M.D.
Cleveland, proctology

LUNCHEON SPEAKERS

GERALD D. DORMAN, M.D.
New York, President,
American Medical Association

MAJ. GEN. J. B. MEDARIS, USA (Ret.)
Winter Park, Fla.
Former Commanding General,
US Army Ordnance Missle Command

HAVE YOUR TICKETS READY FOR YOU WHEN YOU GET TO DALLAS

Avoid the lines, the last minute rush, and the possibility of missing out on the TMA functions listed below. Fill out this form, mail it to TMA wit your check, and your tickets will be waiting for you.

GENERAL MEETING LUNCHEON—FRIDAY, MAY 1, Statler-Hilton Hotel. Featured speaker will be Maj. Gen. J. B. Medaris (Ret.), former commanding general, US Army Ordnance Missle Command.

GENERAL MEETING LUNCHEON—SATURDAY, May 2, Statler-Hilton Hotel. Featured speaker will be Gerald D. Dorman, M.D., president, American Medical Association.

"SATURDAY NIGHT AT THE FAIRMONT"—A fabulous cocktail party, dinner, and dance, Saturday, May 2, in the Regency Ballroom of the elegant new Fairmont Hotel. Dress is optional. Price includes cocktail party, dinner, entertainment, and set-ups after dinner. Thls wi be the party of the year!

CONTINENTAL BREAKFAST ROUND TABLES—FRIDAY, MAY 1, Fai mont Hotel. There is no charge, but attendance is limited and ticket necessary. Have juice, coffee, and rolls with a guest speaker, the participate in the informal discussion period.

CURBSTONE CONSULTATIONS—FRIDAY, MAY 1, 5-6:30, and Satu day, 4-5:30, Fairmont Hotel. Twenty informal "shop talk" round tabl sessions (10 each day), wit beer, coffee and soft drinks served. N charge, but tickets ne

ADVANCE T

NUMBER OF TICKETS	FUNCTION AND PRI	
_____		_____
		_____
	ONT" @ $17.25 each	_____
	REAKFAST ROUND TABLES (see list at right) 3. ☐ 4. ☐ 5. ☐ 6. ☐ 7. ☐	No Charge
	CURBSTONE CONSULTATIONS—FRIDAY	No Charge
_____	CURBSTONE CONSULTATIONS—SATURDAY	No Charge

Check enclosed for total $_____

Mail to: Texas Medical Association, 1801 North Lamar Blvd., Austin, Texas 78701

CONTINENTAL BREAKFAST ROUND TABLES
Friday, May 1 8:15-10 a.m.

1. *Treatment and Evaluation Shock*
   Stephen M. Ayers, M.D.
   New York, internal medic
2. *Ocular Complications of Systemic Medications*
   Philip P. Ellis, M.D.
   Denver, ophthalmology
3. *Pitfalls in the Diagnosis o the Acute Surgical Abdom*
   Robert J. Freeark, M.D.
   Chicago, surgery
4. *Sports Medicine—Orthopaedic Oriented*
   Jack Chandler Hughston, M Columbus Ga., orthopaedi surgery
5. *The Interview and the Pediatric Patient*
   Barbara M. Korsch, M.D.
   Los Angeles, pediatrics
6. *Acute Injuries of the Hand*
   Francis X. Paletta, M.D.
   St. Louis, plastic and reconstructive surgery
7. *Thyroid Nodule*
   George P. Rosemond, M.D
   Philadelphia, surgery

Authors Focus Attention on Medical Specialties—Pediatrics to Surgery

Textbook of Pediatrics, Waldo E. Nelson, Victor C. Vaughan, III, and R. James McKay, eds., ed. 9, 1589 pp., illus., Philadelphia, W. B. Saunders Co., 1969, $21.50.

INTENDED "for the student as an introduction to pediatrics and for the clinician as a useful and competent reference," according to the preface, this book meets the stated objectives of its authors.

Its table of contents and index are well prepared, making it easy for the reader to find subjects he wishes to review; and it contains many easy-to-find tables of values and reactions of things the pediatrician sometimes needs to know that he may have forgotten. Many contributors to this edition, some of them quite well known to Texas pediatricians, are listed.

Discussions of specific conditions and treatments are well covered, and treatments are up to 1969 standards. Although a single-volume text cannot go into details as a multi-volume publication can simply because of the space limitation, the reviewer wishes that more information on adolescence had been included.

"Nelson's" has been a respected text since the first edition was published in 1933, and this ninth edition should maintain that splendid reputation. It is an excellent textbook on pediatrics.

CLARENCE E. GILMORE, M.D.,
Paris, Tex.

The Acute Abdomen, Thomas W. Botsford and Richard E. Wilson, vol. 10, **Major Problems in Clinical Surgery,** 179 pp., illus., Philadelphia, W. B. Saunders Co., 1969, $8.

WELL WRITTEN with subject matter presented in an interesting, stimulating, and educational manner, this book concisely covers a spectrum of conditions and correlates them with unusually well done diagnostic diagrams. Subject presentation includes appropriate laboratory and x-ray studies essential for accurate diagnosis. Stressing adequate physical examination, Sections I and II are outstanding and include such studies, which bring into proper focus the value of new enzymatic determinations and angiographic studies.

Any deficiency in the book perhaps lies in the brevity with which subjects are covered in the remaining sections. However, since the book is small and the nature of the subjects reviewed is rather comprehensive, brevity may be appropriate. The book should be readily available for reference for residents and staff in all emergency rooms.

RICHARD D. HAINES, M.D.,
Temple, Tex.

Physiology of the Gastrointestinal Tract, E. Clinton Texter, Jr., et al, 262 pp., illus., St. Louis, The C. V. Mosby Co., 1968, $10.75.

ANY EFFORT to bring together and to interrelate the widely scattered segments of information concerning the physiology of the gut should be applauded warmly. Such a work, the product of authors of sound physiological and clinical background, has been published recently with a stated orientation "toward the medical student." The authors are too modest. This comprehensive book should be of value not only to all students of medicine, but also to physicians at all levels of development and to students of physiology as well.

Offered as a textbook of "more than usual clinical orientation," the book ranges widely and thoroughly through the vast field of gastrointestinal physiology, including detailed coverage of the physiology of the circulation of the gut.

In some instances the writing style is faulty. Truisms, such as, "Fat and related substances are important constituents of the diet" (page 240), and ambiguous phrases, such as, "substances of *lipid origin*" (page 240), presumably meaning substances having the characteristics of lipids, may be found.

Treatment of the material is somewhat uneven. Certain sections are quite dogmatic, presenting views which many consider controversial or tentative in a smoothly pedagogic manner. In contrast, conflicting observations in other sections are presented in detail; and tentative conclusions are carefully drawn.

The omission of documentation of the text is in keeping with the limited orientation which is the authors' stated aim, and well-selected references are provided. However, those who turn to this work as a reference and those who wish to explore the controversies so carefully set out surely will regret the omission of specific documentation; for a future, documented version of this book could well become the standard reference work in the field.

W. CROCKETT CHEARS, JR., M.D.,
Dallas, Tex.

NEW BOOKS IN TMA LIBRARY

Battle, R. J. V., ed.: *Plastic Surgery, Operative Surgery,* ed. 2, Philadelphia, J. B. Lippincott Co., 1969.

★

Specialized Service

IN

PROFESSIONAL LIABILITY INSURANCE

is a high mark of distinction

THE

MEDICAL PROTECTIVE COMPANY

FORT WAYNE, INDIANA

Professional Protection Exclusively since 1899

AUSTIN OFFICE: Robert F. Reiman, Representative
3201 Clearview, Austin 78703 Telephone: 512-472-9603

DALLAS OFFICE: Gayle Nelson and Arthur F. Ennis, Jr., Representatives
816 Medical Arts Building, Dallas 75201 Telephone: 214-742-4980

HOUSTON OFFICE: Richard B. Ross and William A. Orsburn, Representative
1525 Hermann Professional Bldg., Houston 77025 Telephone: 713-523-1127

Turner's Clinical & X-Ray Laboratories

Medical Center

El Paso, Texas

Telephone 532-4689

☆

SURGICAL PATHOLOGY

CLINICAL PATHOLOGY

RADIOLOGY

☆

GEORGE TURNER, M.D.
DELPHIN von BRIESEN, M.D.
JEANNE TURNER BOWMAN, M.D.

The Martin X-Ray and Radium Clinic

3501 Gaston Ave. Dallas, Texas

ADJOINING
GASTON EPISCOPAL HOSPITAL

For X-ray diagnosis and the X-ray and radium treatment of cancer and other conditions suitable for radiation therapy.

Chas. L. Martin, M.D. James A. Martin, M.D.

Duke-Elder, S., and Ellis, M., eds.: *Eyes and Ear, Nose and Throat, Operative Surgery*, ed. 2, Philadelphia, J. B. Lippincott Co., 1969.
Gibbon, J. H., Jr., Sabiston, D. C., Jr., and Spencer, F. C.: *Surgery of the Chest*, ed. 2, Philadelphia, W. B. Saunders Co., 1969.
Greenfield, G. B.: *Radiology of Bone Diseases*, Philadelphia, J. B. Lippincott Co., 1969.
Zancolli, E.: *Structural and Dynamic Bases of Hand Surgery*, Philadelphia, J. B. Lippincott Co., 1968.

PERSONALS

Dr. John J. Andujar of Fort Worth recently received the Gold Headed Cane Award from the Tarrant County Medical Society. The award is bestowed each year upon a member of the society "by virtue of his professional integrity and exemplary personal contribution to medical stature and the community."

The following Texas physicians have been elected to section offices in the Southern Medical Association: **Dr. Phillip W. Voltz, Jr.,** San Antonio, secretary, section on radiology; **Dr. Robert J. Rowe,** Dallas, chairman, section on proctology; **Dr. H. Gray Carter,** Dallas, vice-chairman, section on proctology; **Dr. Charles Ronald Stephen,** Dallas, chairman-elect, section on anesthesiology; **Dr. Thomas K. Burnap,** Dallas, secretary, section on anesthesiology; and **Dr. Orville C. Thomas,** Houston, chairman-elect, section on allergy.

New Medical Advisory Committee chairman of the Houston Gulf Coast Branch of the Texas Society for the Prevention of Blindness is **Dr. Percy E. Lowe,** Houston ophthalmologist.

Dr. Jerry J. Eller will join the pediatric department staff at The University of Texas Medical School at San Antonio on July 1, 1970, as assistant professor of pediatrics, section of infectious disease. He now practices at the Fitzsimons General Hospital in Denver.

The Veterans Administration's highest award for medical research has been won by **Dr. Roger H. Unger,** associate professor of internal medicine at The University of Texas Southwestern Medical School at Dallas and director of research and chief of the metabolic section at the Dallas Veterans Administration Hospital. Dr. Unger was presented the Middleton Award "for outstanding achievement in medical research" for his research concerning the metabolic function of glucagon and its relationship to diabetes.

"Mr. South Texas of 1970" is **Dr. Leo G. Cigarroa** of Laredo. Unanimously named to the honor by the George Washington's Birthday Celebration Association, he is the first physician ever to receive the award. He was cited for his contributions in the field of education, philanthropy, and for contributions of his family through the Cigarroa Foundation.

New officers of the Texas Society of Internal Medicine, Inc., for 1970 are **Dr. James B. Morrison** of San Antonio, president; **Dr. Jay J. Welch** of Houston, president-elect; and **Dr. R. Vincent Murray, Jr.,** of Austin, secretary-treasurer-elect. **Dr. Thomas M. Runge** of Austin will serve the last year of his three-year term as secretary-treasurer. New members of the board of directors who will serve a three-year term are **Dr. John W. Chriss** of Corpus Christi, **Dr. Pierre P. Poole** of Brownsville, **Dr. William C. Levin** of Galveston, and **Dr. R. Andrew Jackson** of Houston.

San Antonio orthopedic surgeon **Dr. John J. Hinchey** was named president-elect of the American Academy of Orthopaedic Surgeons at its annual meeting in Chicago. Clinical professor of orthopedic surgery at The University of Texas Medical School at San Antonio and chief of the department of orthopedic surgery at Santa Rosa Medical Center, he has been secretary of the organization for the past three years.

Dr. Silas W. Grant of Hillsboro is the only physician who has been reappointed to the American Board of Family Practice Examination Committee for a second term. He will serve through 1970.

"I appreciate your assistance in the operating room—but when I do something brilliant, don't clap your hands and shout, 'One more time!' "

Recent Deaths

Dr. A. F. Reimers

Dr. Arthur Francis Reimers, 56, of Beaumont died Jan. 2, 1970, at a Beaumont hospital.

Born June 20, 1913, at Doniphan, Neb., Dr. Reimers was the son of Emil T. and Ella Werts Reimers. He was graduated from the University of Nebraska at Lincoln in 1936 and received his MD degree in 1943 from the University of Nebraska College of Medicine at Omaha. He interned at Baptist Hospital in New Orleans, and was a fellow in medicine at Tulane University School of Medicine. He served a residency at the Veterans Administration Hospital in New Orleans, and he has since practiced internal medicine in Beaumont.

A member of Jefferson County Medical Society, Texas Medical Association, and American Medical Association, Dr. Reimers also belonged to Beaumont Academy of Medicine, American College of Physicians, and American College of Surgeons. He was a member of the Beaumont Chamber of Commerce and the First Baptist Chuch and was a Rotarian.

Surviving Dr. Reimers are his wife, the former Martha Gaskin; his daughter, Mrs. Richard O. Bennett III, both of Beaumont; his son, John C. Reimers, a premedical student at Baylor University at Waco; two brothers, Dr. W. L. Reimers of Denver, Colo., and Ed Reimers of Ogallala, Neb.; and two sisters, Mrs. C. H. Jeppesen of Sidney, Neb., and Miss Gertrude Reimers of Axtell, Neb.

Dr. B. H. Griffin

Dr. Ben Harris Griffin, Frost, Tex., dermatologist, died Dec. 8, 1969, as the result of a long illness. He was 79.

Born Jan. 13, 1890, in Henderson, Tex., Dr. Griffin was the son of H. L.

and Sally Harris Griffin. He was graduated from Southwestern University at Georgetown and from The University of Texas School of Pharmacy at Galveston. He received his MD degree from Baylor College of Medicine, then located in Dallas, in 1921, and served an internship at Baylor Hospital in Dallas. He did postgraduate work at the Skin and Cancer Clinic at Bellevue Hospital Center in New York and then practiced dermatology in Dallas from 1922 until 1952, when he moved to Frost.

A Mason and a member of the Frost United Methodist Church, Dr. Griffin belonged to Navarro County Medical Society, Texas Medical Association, American Medical Association, and Texas Dermatological Society. He was elected to honorary membership in TMA in 1964. Also a member of Kappa Sigma social fraternity, he was a former president of and served for a number of years on the Frost school board.

Dr. Griffin is survived by his wife, the former Mildred Doyle, of Dallas; two sons, Ben H. Griffin, Jr., of Dallas and James Doyle Griffin of Detroit, Mich.; a sister, Mrs. Arch Wylie of Henderson; and a brother H. L. Griffin, Jr., of Redding, Calif.

Dr. E. Spier

Dr. Erich Spier, El Paso obstetrician and gynecologist, died Nov. 25, 1969, in El Paso. He was 74.

A native of Aachen, Germany, Dr. Spier was born April 18, 1895, the son of Emanuel and Minnie Rosenstock Spier. He attended the universities of Munich and Bonn in Germany and received his MD degree in 1920 from the University of Bonn Medical School. He interned in 1917-1918 at army base hospitals in Germany and served residencies in gynecology, obstetrics, and surgery from 1921 to 1926 at hospitals in Bonn and in Berlin. He also did postgraduate work in a Berlin hospital. In 1933 he came to the United States to avoid religious persecution in Germany. He spent a year in New York before deciding to move to El Paso in 1934 and establish his practice there. His son, Dr. Werner Spier, joined in his practice in 1962.

In 1946 Dr. Spier was awarded a fellowship in the International College of Surgeons at the 11th annual assembly of the United States chapter. He was a member of the American College of Obstetricians and Gynecologists, American Medical Association, Texas Medical Association, and was immediate past president of the El Paso County Medical Society. He was a member of the medical staffs at Hotel Dieu Sisters', Providence Memorial, Southwestern General, and R. E. Thomason General hospitals.

Survivors include his wife, the former Hanna Bonwit; a son, Dr. Werner Spier; a daughter, Mrs. Jane Bargman; a brother, Kurt Spier, all of El Paso; a sister, Mrs. Ilse Liebmann of London, England; and five grandchildren.

Dr. H. J. Eberle

Dr. Howard Joseph Eberle, 59, Corpus Christi orthopedic surgeon and former chief of staff at Spohn Hospital, died Nov. 6, 1969. He suffered a heart attack while quail hunting on a ranch west of Dinero, Tex.

The son of the late Frank J. and Caroline Margaret Scherer Eberle, Dr. Eberle was born in Ironton, Ohio, on Jan. 4, 1910, and soon moved with his family to Hereford, Tex., where he was raised. He was graduated in 1932 from The University of Texas at Austin with a BA degree, and he received his MD degree in 1936 from the UT Medical Branch at Galveston. He served internship at Gallinger Municipal Hospital in Washington, D. C., and Columbus City Hospital in Columbus, Ga.; and he entered his first medical practice at Heath Hospital and Clinic at Madisonville, Tex. From 1941 to 1945 he served in the US Navy Medical Corps and received a Purple Heart. When he was released to inactive duty in 1946, he had attained the rank of commander.

In 1946 Dr. Eberle moved to Corpus Christi and practiced surgery at the Y. C. Smith Clinic. He served his residency in orthopedic surgery from 1952 to 1955 at Boston City Hospital and Lehey Clinic in Boston, Mass., and at Shriners Hospital for Crippled Children in Springfield, Mass. He returned to Corpus Christi in 1955. A member of the staffs of Spohn Hospital, Memorial Medical Center, Ada Wilson Hospital of Physical Medicine and Rehabilitation, and the Driscoll Foundation Children's Hospital, he had served as chief of staff at Spohn and was president of the staff from 1966 to 1967. He was also a member of the advisory board from 1967 to 1968 and had served as chief of orthopedic services and on numerous committees at Spohn.

Dr. Eberle was a member of the American Academy of Orthopaedic Surgeons, American Medical Association, Texas Medical Association, Nueces County Medical Society, Western Orthopaedic Association, and Texas Orthopaedic Association. He was certified by the American Board of Orthopaedic Surgery.

Surviving Dr. Eberle are two sisters, Mrs. Genevieve E. Guseman of Hereford and Mrs. Virginia E. Ford of Canoga Park, Calif.; five nephews; and one niece.

Dr. E. A. Danford

Corpus Christi pediatrician for the past 30 years, Dr. Edwin A. Danford, 59, died Nov. 16, 1969, at a ranch near Kerrville, Tex., after apparently suffering a heart attack.

Born in Chesapeake, Ohio, on Dec. 9, 1909, Dr. Danford was the son of Mr. and Mrs. G. R. Danford. He attended Marshall College and Peabody College and was graduated in 1936 from the University of Cincinnati College of Medicine. He served internship at Cincinnati General Hospital from 1936 to 1937 and residency at Children's Hospital in Cincinnati from 1937 to 1939, where he specialized in pediatrics.

A member of the Ayers Street Church of Christ, Dr. Danford belonged to Nueces County Medical Society, Texas Medical Association, and American Medical Association. He was a member of Corpus Christi Pediatric Society and Texas Pediatric Society. He and his wife had ranching and farming interests in South Texas.

Dr. Danford's survivors include his wife, the former Wilba Walton, of Corpus Christi; his parents of Chesapeake, Ohio; two brothers, M. C. Danford and Paul Russell Danford, both of Corpus Christi; and four sisters, Mrs. Ernest Nance of Chesapeake, Ohio; Mrs. Paul Dillon of Ashville, Ohio; Mrs. I. Smith of Huntington, W. Va.; and Mrs. Don Pyles of Detroit, Mich.

DR. SPIER

DR. EBERLE

DR. DANFORD

Dr. V. Vermooten

Dr. Vincent Vermooten, 72, Dallas urologist died on Nov. 11, 1969. He had practiced in Dallas since 1946 and was on the staff of Baylor University Medical Center; St. Paul, Parkland Memorial, and Gaston Episcopal hospitals; and Children's Medical Center. He was also a consulting urologist for the Veterans Administration Hospital and clinical professor of urology at The University of Texas Southwestern Medical School at Dallas.

Born on Oct. 18, 1897, in Belfast, Union of South Africa, he was the son of James F. and Susan Davis Vermooten of Cape Province, South Africa. He earned a BA degree in 1918, and an MA degree in 1919 from the University of Cape Town, South Africa. He was graduated from Johns Hopkins University School of Medicine in Baltimore, Md., in 1923 with an MD degree. He served an internship at Johns Hopkins Hospital from 1923 to 1924. He served a residency in surgery and surgical pathology from 1924 to 1925 and a surgery, orthopedics, and urology residency from 1925 to 1927 at Yale-New Haven Hospital, New Haven, Conn., and a urology residency from 1927 to 1928 at Peter Bent Brigham Hospital in Boston.

Dr. Vermooten was an instructor and then assistant professor at Yale University School of Medicine at New Haven from 1928 to 1933. He then moved to Johannesburg, South Africa, where he was in practice until 1941 when he returned to New Haven. He served in the US Army Medical Corps as a lieutenant colonel during World War II. From 1942 to 1946 he was in command of the Department of Urology at Brooke General Hospital at Fort Sam Houston, Tex. In 1946 he moved to Dallas.

A member of Dallas County Medical Society, Texas and American Medical associations, Dr. Vermooten also belonged to American College of Surgeons, American Urological Association, Society of Sigma Psi, Pan Pacific Surgical Association, and was a charter member of the Society of Nuclear Medicine. He did research work on ureteral transplantation and was later instrumental in the development of radioactive cobalt and phosphorous therapy for the treatment of cancer. He also authored numerous articles for medical publications. In addition to medical organizations, Dr. Vermooten was a member of the Photographic Society of America, Dallas Camera Club, and the National Parks Board of South Africa.

Dr. Vermooten is survived by his wife, Esther Robins Vermooten of Dallas; a daughter, Mrs. Priscilla Baldwin of Makawao, Maui, Hawaii; a son, Vincent H. Vermooten of Crown Point, Ind.; a brother, Dr. Ian Vermooten; and two sisters, Mrs. Justine Kahts and Mrs. Edith Bergh, all of South Africa.

Dr. G. D. Garcia

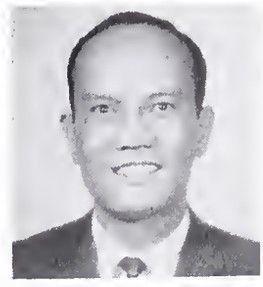
Dr. Generoso D. Garcia, 37, Orange, Tex., physician, died Nov. 22, 1969, in a Houston hospital. Cause of death was hemorrhaging and postnecrotic cirrhosis of the liver.

Born on Aug. 11, 1932, in Manila, Philippines, Dr. Garcia was the son of Aurelio and Generosa Dionisio Garcia. He was graduated from the University of Santo Tomas at Manila in 1951 and from the Faculty of Medicine and Surgery University of Santo Tomas with an MD degree in 1956. He interned at the University of Santo Tomas Charity Hospital and affiliated hospitals in 1956 and served a residency in internal medicine through the Baylor College of Medicine affiliated hospitals residency program in Houston in 1960. He was a fellow in hematology at The University of Texas M. D. Anderson Hospital and Tumor Institute in 1961 and was a fellow in pulmonary diseases at Jefferson Davis Hospital in 1962, both located in Houston. He was also clinic director of the tuberculosis division of Jefferson Davis Hospital.

Dr. Garcia was clinic director of the Lubbock City-County Outpatient Clinic, consultant to the Veterans Administration Outpatient Clinic, and staff member of St. Mary of the Plains and Methodist hospitals for five and a half years in Lubbock and then served on the medical staff of the Big Spring Veterans Administration Hospital. He had practiced medicine in Orange for the past two years.

Recipient of a "Community Leader of America" award from the editorial board of Community Leaders of America, Dr. Garcia was a member of Orange County Medical Society, Texas Medical Association, American Medical Association, American College of Chest Physicians, American Thoracic Society, and Postgraduate Medical Assembly of South Texas. He had become a naturalized citizen of the United States in 1964.

Surviving Dr. Garcia are his wife, the former Crystal M. Bridges; two sons, Thomas P. and Gene Paul; two daughters, Julie R. and Michelle, all of Orange; and three brothers, Ben, Titos, and Philip Garcia, all of Manila.



DR. GARCIA

Dr. C. H. Hendry

Dr. Cullen H. Hendry of Houston, retired eye, ear, nose, and throat specialist, died Nov. 2, 1969, in a Houston hospital. He was 78.

The son of John L. and Alice Sedgwick Hendry, Dr. Hendry was born April 4, 1891, at Soochow, China. He was graduated from Southwestern University at Georgetown with a BA degree in 1910, and he received his MD degree in 1917 from The University of Texas Medical Branch at Galveston. He interned at Harper Hospital in Detroit, Mich., and did postgraduate work at Peking Union Medical College in Peking, China, in 1922 and at New York Eye and Ear Infirmary in 1926. He practiced medicine in Soochow, China, from 1919 to 1925; at Stamford, Tex., from 1926 to 1928; and at Beaumont, Tex., from 1928 until he retired in 1958 and moved to Houston. During World War I he served with the US Army Medical Corps as a first lieutenant.

A fellow of the American College of Surgeons, Dr. Hendry was a member of Alpha Kappa Kappa medical fraternity, Harris County Medical Society, Texas Medical Association, American Medical Association, Texas Ophthalmological Association and Texas Otolaryngological Association. He belonged to the Methodist Church and was a Rotarian.

Preceded in death by his wife, the former Ethel Elrod, Dr. Hendry is survived by a son, H. L. Hendry of Oklahoma City; a daughter, Mrs. David G. Morrison of Houston; a sister, Mrs. A. G. Fegert of Chicago; and five grandchildren.

Dr. J. W. Geibel, Jr.

Dr. John William Geibel, Jr., Dallas internist, died Oct. 29, 1969, in Dallas. He was 45.

A partner in the Dallas Medical & Surgical Clinic-Hospital, Dr. Geibel was an assistant professor at The University of Texas Southwestern Medical School at Dallas and was a staff member at Baylor University Medical Center, Parkland Memorial Hospital, and Presbyterian Hospital of Dallas.

The son of Mr. and Mrs. John W. Geibel of Roanoke, Va., Dr. Geibel was born May 4, 1924, in Cleveland, Ohio. He attended College of Wooster at Wooster, Ohio; Clemson University at Clemson, S.C.; and the University of Maryland at College Park. He received his MD degree in 1949 from Duke University School of Medicine at Durham,

N.C. He interned at Duke University Medical Center and at Massachusetts Memorial Hospital at Boston. In 1951 he served a residency in medicine at Veterans Administration Hospital at Boston, and in 1952 he served a residency in pathology at the same hospital. He was senior resident in medicine at New England Medical Center Hospital at Boston in 1955, when he moved to Dallas. During World War II he served in the US Army. He was a first lieutenant in the US Army Medical Corps during the Korean War and was stationed at the US Army Hospital at Fort Devens in Massachusetts from 1952 to 1954.

Dr. Geibel's memberships included the Texas Medical Association, American Medical Association, Dallas County Medical Society, Dallas Academy of Internal Medicine, Dallas Internists Club, and Dallas Heart Association.

Survivors include his wife, the former Lucy Chamberlain; one son, Laurence W. Geibel; and two daughters, Leslie Geibel and Laura Geibel, all of Dallas; his parents; and a sister, Mrs. Nancy Wylie of Swarthmore, Pa.

Dr. D. S. Kellogg

Retired Army colonel, Dr. Douglas Sheldon Kellogg, died Oct. 20, 1969, in San Antonio. Cause of death was myocardial infarction. He was 70.

The son of Fred B. and Gertrude Sheldon Kellogg, Dr. Kellogg was born in Minneapolis, Minn., on May 3, 1899. He received a BS degree from the University of Illinois in 1923 and an MD degree from the University of Illinois College of Medicine at Chicago in 1925. After serving an internship from 1924 to 1925 at Seattle General Hospital, Seattle, Wash., he served a radiology residency at Letterman General Hospital in San Francisco, Calif., from 1926 to 1927. Postgraduate study in surgery, roentgenology, and military medicine was done at US Army Medical School at Walter Reed General Hospital in Washington, D.C., in 1926. He was also graduated from Medical Field Service School at Carlisle, Pa., in 1926.

After entering the US Army in 1925, Dr. Kellogg served in hospitals in Washington, D.C.; Hawaii; Fort Sam Houston, Tex.; El Paso, Tex.; New Guinea; Denver; and Europe. He was also the author of numerous articles on radiology. In 1955, Dr. Kellogg retired from the Army and in 1960, began private practice in San Antonio.

A member of Bexar County Medical Society, Dr. Kellogg was also a member of Texas and American Medical associations and American Roentgen Ray Society. He was a fellow and diplomate of the American College of Radiology. He also belonged to the Association of Military Surgeons of the US, Retired Officers Association, Phi Rho Sigma medical fraternity, and the Christian Church.

Dr. Kellogg is survived by his wife, Juanita W. Bower Kellogg; a son, Dr. Douglas S. Kellogg, Jr., of Atlanta, Ga.; a sister, Mrs. Mae Hewitt of San Antonio; and three grandchildren.

DR. KELLOGG

DR. SCHAUER

Dr. C. W. Schauer

San Antonio physician, Dr. Charles William Schauer, died Oct. 6, 1969, in San Antonio, of coronary occlusion with myocardial infarction. He was 52.

Dr. Schauer was graduated from Southwestern University at Georgetown in 1939 with a bachelor of science degree and from Louisiana State University at New Orleans in 1941 with a master of science degree. He then was chemistry instructor at The University of Texas at Austin and instructor and research fellow in chemistry at Louisiana State University at Baton Rouge in 1942. From 1942 to 1944, Dr. Schauer served as organic research chemist for Dow Chemical Company in Texas City. In 1948, he was graduated from The University of Texas Medical Branch at Galveston with an MD degree. Dr. Schauer moved in 1949 to San Antonio, where he was on the staff of Southwest Texas Methodist, Baptist Memorial, Lutheran General hospitals, and Santa Rosa Medical Center, in addition to serving as a consultant to the Texas Rehabilitation Agency. He served in the US Army from 1954 to 1956.

Dr. Schauer was a member of Bexar County Medical Society, Texas Medical Association, and American Medical Association. He also belonged to Oxford United Methodist Church in San Antonio and Theta Kappa Psi medical fraternity.

Born Dec. 2, 1916, in Mason, Tex., he was the son of W. F. and Medora Lehmberg Schauer. He is survived by his wife, Faye Schauer; a daughter, Medora; and four sons, Charles, Billy, Steve, and Mark, all of San Antonio.

Dr. E. M. Cowart

Houston orthopedic surgeon Dr. Edmund M. Cowart, 70, died Oct. 14, 1969, in a Houston hospital.

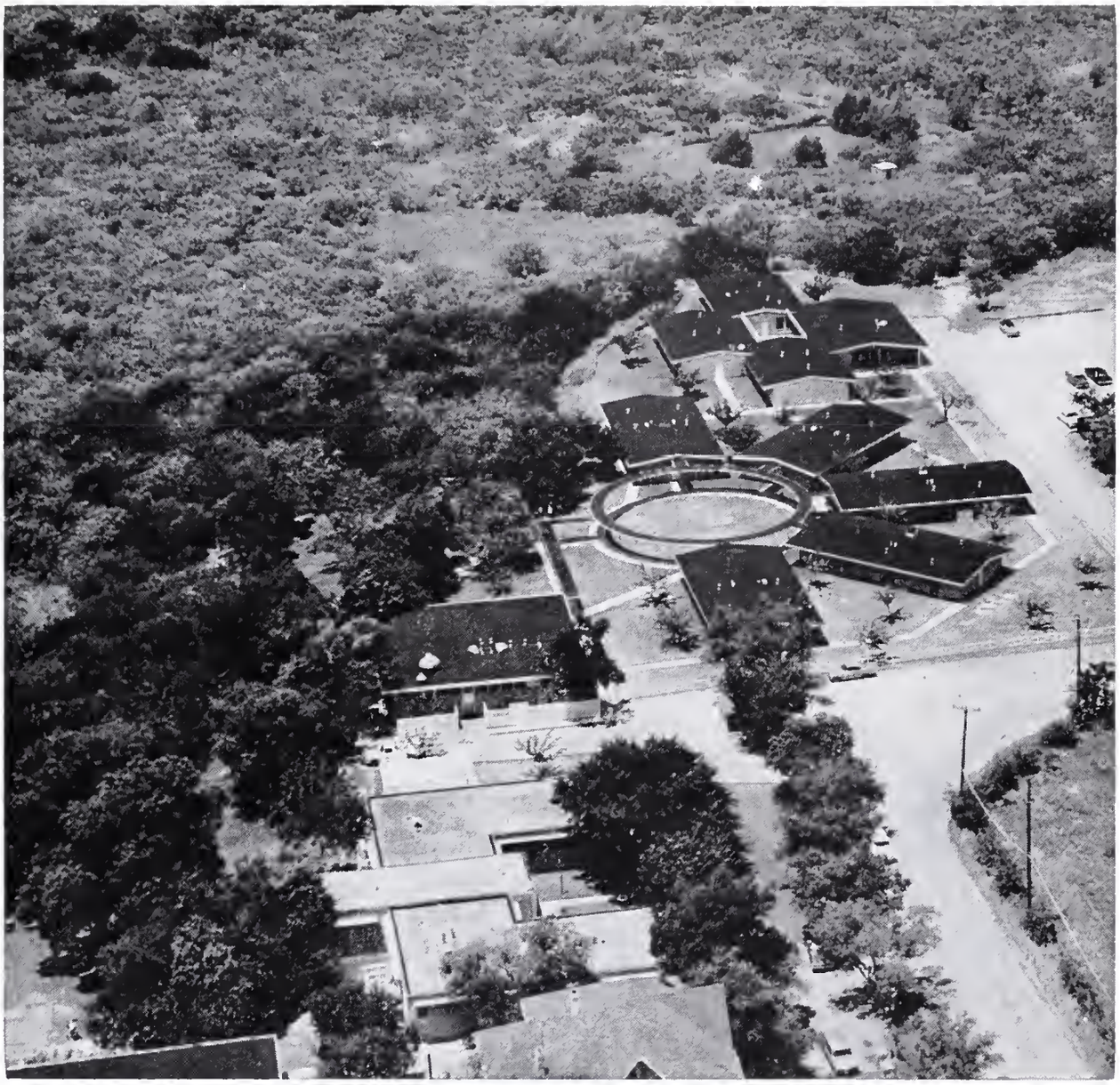
The son of Edmund M. and Mary Lee Horton Cowart, Dr. Cowart was born Sept. 27, 1899, in Bond, Miss. He was graduated from the University of Mississippi with a BS degree in 1920 and received his MD degree in 1922 from the University of Pennsylvania School of Medicine at Philadelphia. He interned at Touro Infirmary in New Orleans from 1922 to 1923. He served a residency in surgery at New York Society for the Relief of the Ruptured and Crippled in New York City from 1927 to 1928 and a residency in orthopedic surgery from 1928 to 1931 at Children's Hospital, University of Iowa. From 1930 to 1931 he was also an instructor in orthopedic surgery at the University of Iowa College of Medicine at Iowa City.

Dr. Cowart practiced general medicine in Tampico, Mex., from 1924 to 1925 and in Bristow, Okla., from 1925 to 1927. Since 1931 he had practiced in Houston, with the exception of the years 1943 to 1946 when he served in the US Army in the European Theatre of World War II and attained the rank of lieutenant colonel.

Elected to fellowship in the American College of Surgeons in 1934 and certified by the American Board of Orthopaedic Surgery in 1937, Dr. Cowart was a member of American Academy of Orthopaedic Surgeons, Houston Orthopaedic Club, Texas Orthopaedic Association, Houston Surgical Society, and Texas Surgical Society. He also belonged to American Medical Association, Texas Medical Association, and Harris County Medical Society. He was a member of the Methodist Church.

Surviving Dr. Cowart are his wife, the former Marcelle Smith; two daughters, Kathryn Cowart and Mary Cowart; a son, Edmund M. Cowart, Jr., all of Houston; and two brothers, Dr. O. H. Cowart of Waco and J. W. Cowart of Pasadena.

DR. COWART



BEVERLY HILLS HOSPITAL
BEVERLY HILLS CLINIC

PSYCHIATRY
INPATIENT – OUTPATIENT

Multiple-approach treatment of thinking disorders. Established diagnostic procedures available. Secluded in-town location convenient to the medical community.

Psychiatry

Joseph L. Knapp, M.D. Fred H. Jordan, M.D.
Jackson H. Speegle, M.D. Joseph H. Lindsay, M.D.
Jack R. Tomlinson, M.D.

Psychology

Traudl E. Jordan-Diener, Ph.D. R. A. Mitchell, M.S. David K. Fooshee, M.S.

1353 North Westmoreland Avenue Dallas, Texas 75211 214 331-8331

before and after surgery

Berocca®

TABLETS
high potency B-complex and C
for nutritional support

AVAILABLE ONLY ON Rx

contains water-soluble vitamins only

b.i.d. dosage

good patient acceptance

no odor, and virtually no aftertaste

Each Berocca Tablet contains:

Thiamine mononitrate	15 mg
Riboflavin	15 mg
Pyridoxine HCl	5 mg
Niacinamide	100 mg
Calcium pantothenate	20 mg
Cyanocobalamin	5 mcg
Folic acid	0.5 mg
Ascorbic acid	500 mg

Usual dosage is one tablet b.i.d.

Indications: Nutritional supplementation in conditions in which water-soluble vitamins are required prophylactically or therapeutically.

Warning: Not intended for treatment of pernicious anemia or other primary or secondary anemias. Neurologic involvement may develop or progress, despite temporary remission of anemia, in patients with pernicious anemia who receive more than 0.1 mg of folic acid per day and who are inadequately treated with vitamin B_{12}.

Dosage: 1 or 2 tablets daily, as indicated by clinical need.

Available: In bottles of 100.

ROCHE

Roche
LABORATORIES

Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

The concert was just underway,
When to the conductor's dismay
Cramps and diarrhea,
Did so quickly appear,
The maestro no longer could stay.

Because diarrhea with cramping, nausea, and painful straining can strike at the most inopportune time, it takes a comprehensive agent to treat the total diarrheal syndrome and help get the patient back on the job. That's why so many physicians rely on Donnagel, especially during the fall and winter months when "flu" and viral gastroenteritis usually hit their peak.

Donnagel is much more than just a simple kaolin-pectin combination. It also contains the belladonna alkaloids to calm GI hypermotility and help relieve the distressing discomforts which so often accompany diarrhea. Certainly it's less expensive and more convenient than taking two medications. And the dosage is lower too. Available in the handy 4-oz. plastic bottle at pharmacies everywhere on your prescription or recommendation.

For Diarrhea and its Discomforts

Donnagel®

Each fluid ounce contains: Kaolin, 6 Gm.; Pectin, 142.8 mg.; Hyoscyamine sulfate, 0.1037 mg.; Atropine sulfate, 0.0194 mg.; Hyoscine hydrobromide, 0.0065 mg.; Sodium benzoate (preservative), 60 mg.; Alcohol, 3.8%.

A·H·ROBINS A. H. Robins Company, 1407 Cummings Drive, Richmond, Va. 23220

PHOTO BY VICTO

Robitussin
4 FL OZ
Robitussin-DM
Robitussin A-C
Robitussin-PE
4 FL OZ.
AH ROBINS
Robitussin-DM
Cough Calmers

CLEAR THE TRACT!

THERE'S A ROBITUSSIN FOR EVERY COUGHING NEED

All the Robitussins contain gylceryl guaiacolate, an outstanding expectorant agent that greatly increases the output of lower respiratory tract fluid. Increased RTF volume exerts a demulcent effect on the tracheobronchial mucosa, promotes ciliary action, and makes thick, inspissated mucus less viscid and easier to raise.

For coughs of colds and "flu"
ROBITUSSIN®
Each 5 cc. contains:
Glyceryl guaiacolate . . 100.0 mg.
Alcohol, 3.5%

Non-narcotic for 6-8 hr. cough control
ROBITUSSIN-DM®
Each 5 cc. contains:
Glyceryl guaiacolate . . 100.0 mg.
Dextromethorphan hydrobromide . . . . 15.0 mg.
Alcohol, 1.4%

For unproductive allergic coughs
ROBITUSSIN A-C®
Each 5 cc. contains:
Glyceryl guaiacolate . . 100.0 mg.
Pheniramine maleate . . 7.5 mg.
Codeine phosphate . . . 10.0 mg.
(warning: may be habit forming)
Alcohol, 3.5%

Clears sinuses and nasal stuffiness as it relieves cough
ROBITUSSIN-PE®
Each 5 cc. contains:
Glyceryl guaiacolate . . 100.0 mg.
Phenylephrine hydrochloride. . . . . 10.0 mg.
Alcohol, 1.4%

Robitussin-DM in solid form for "coughs on the go"
COUGH CALMERS™
Each Cough Calmer contains:
Glyceryl guaiacolate . . 50.0 mg.
Dextromethorphan hydrobromide . . . . 7.5 mg.

Use this handy guide to pick the right formulation for each coughing need

	Robitussin	Robitussin-DM	Robitussin A-C	Robitussin-PE	Cough Calmers
Expectorant	●	●	●	●	●
Demulcent	●	●	●	●	●
Cough Suppressant		●	●		●
Antihistamine			●		
Long-Acting (6-8 hours)		●			●
Nasal, Sinus Decongestant				●	
Non-narcotic	●	●		●	●

A·H·ROBINS A. H. Robins Company, Richmond, Va. 23220

Starlite Village Clinic

Center Point, Texas

Ph.: ME 4-2426

- - - A specialized clinic dedicated to the physical, mental, and spiritual treatment of men and women suffering from alcoholic and similar disturbances.

F. E. Seale, M.D.
Medical Director

Bland Seale
Administrator

RADIOLOGY ASSOCIATES OF FORT WORTH

John S. Alexander, M.D., M.A.C.R.
Robert J. Atcheson, M.D., M.A.C.R.
Douglas E. Bibby, M.D., F.A.C.R.
James W. Buice, M.D., F.A.C.R.
Richard C. Gasser, M.D., M.A.C.R.
James A. Holland, M.D., M.A.C.R.
Paul W. Mathews, Jr., M.D., M.A.C.R.
Preston W. Nash, M.D., M.A.C.R.
Rolland F. Oakes, M.D., M.A.C.R.
Norman L. Presley, M.D., M.A.C.R.
Sanford Reitman, M.D., M.A.C.R.
Gomer W. Roberts, M.D., M.A.C.R.
Herman C. Sehested, M.D., F.A.C.R.
Glenn A. Stokdyk, M.D., M.A.C.R.
C. H. Tseng, M.D., M.A.C.R.
Claude Williams, M.D., M.A.C.R.

DIPLOMATES OF THE AMERICAN BOARD OF RADIOLOGY

Offices:

100 Medical Tower Bldg. — 336-8681
1217 West Cannon — 336-8627
900 W. Randol Mill Rd., Arlington, Texas 76010 — 277-7681

TRAVIS CLINIC ASSOCIATION AND THE NAN TRAVIS MEMORIAL HOSPITAL

JACKSONVILLE, TEXAS

STAFF

General Surgery:
L. L. Travis, M.D.
J. S. O'Hare, M.D.
R. K. Willms, M.D.

Orthopedic Surgery:
E. L. Mahon, Jr., M.D.

Urology:
H. F. Rives, M.D.

Pathology:
Harbert Davenport, Jr., M.D.

Internal Medicine:
J. T. Boyd, M.D.
F. H. Verheyden, M.D.
J. T. Scogin, M.D.
J. H. Pesnell, M.D.
Mary A. Bone, M.D.

Obstetrics and Gynecology:
J. C. Rucker, M.D.
J. D. Crawford, M.D.

Ophthalmology:
Fred Haberle, M.D.

Pediatrics:
M. L. Gray, M.D.

Radiology and Radioactive Isotopes:
L. W. Ralston, M.D.

William J. Fowler
Administrator of Nan Travis Memorial Hospital

J. G. Casey
Business Manager of Travis Clinic

MEDICAL ARTS CLINIC

Box 841
Corsicana, Texas

PEDIATRICS
JOHN W. GRIFFIN, M.D., F.A.A.P.*
JAMES E. SPEIER, M.D.
INTERNAL MEDICINE
ROBERT D. BONE, M.D., F.A.C.P.*
JAMES F. WITTEN, M.D., F.A.C.P.*
CHARLES I. BILTZ, M.D.*
OBSTETRICS & GYNECOLOGY
KELLY PAUL BURKHART, M.D., F.A.C.O.G.*
DERMATOLOGY
JOSEPH M. GLICKSMAN, M.D.
BUSINESS MANAGER
OWEN G. ELLIOTT, M.G.M.A.
SURGERY
LOUIS E. GIBSON, M.D., F.A.C.S.*
E. SCOTT MIDDLETON, M.D.
OPHTHALMOLOGY
ROBERT D. MERTZ, M.D., F.A.A.O.O.*
EAR, NOSE, THROAT
PHILLIP M. AWTREY, M.D.,* F.A.A.O.O.
DENTISTRY
ROBERT A. LANG, D.D.S.

*Diplomate of the American Board

PHYSICIANS' DIRECTORY

DIRECTORY RATES & DATA: Space is available to TMA members at $8.00 per column inch and must run six months. New listings are limited to those specialties recognized by the American Medical Association. A discount of 5% is allowed for six month's advance payment. Mail copy to Advertising Assistant, TEXAS MEDICINE, 1801 North Lamar Blvd., Austin, Texas 78701. Deadline is 20th of the month preceding publication month.

Allergy

DRS. FEIN AND KAMIN
Allergy and Immunology

Bernard T. Fein, M.D., F.A.C.A.
Fellow
American Academy of Allergy
216 Medical Prof. Bldg.
CA 6-7671

Peter B. Kamin, M.D., F.A.A.P.
Diplomate
Sub-Board Pediatric Allergy
San Antonio, Texas
CA 7-6331

HOUSTON ALLERGY CLINIC
CLINICAL ALLERGY AND IMMUNOLOGY
RICHARD L. ETTER, M.D., F.A.C.A., F.A.A.A.
RICHARD H. JACKSON, M.D., F.A.C.A.
WARREN J. RAYMER, M.D., F.A.C.A.
RAMON GARRIDO, M.D.
(Certified American Board of Pediatrics)
Suite 156, Hermann Professional Building
6410 Fannin St., Houston, Texas 77025
JA 6-3281

V. E. FRIEDEWALD, M.D., F.A.C.P.
Diplomate American Boards of Internal Medicine and Allergy
ALLERGY

2203 West Tennessee Midland, Texas 79701
MU 2-5385

McGOVERN ALLERGY CLINIC
Diagnosis and Treatment of Allergic Diseases
John P. McGovern, M.D.
Orville C. Thomas, M.D.
Charles D. Haunschild, M.D.
Theodore J. Haywood, M.D.
Joseph T. Queng, M.D.
James A. Murray, M.D.
*Hermann Gregory, M.D.
Certified American Boards of Pediatrics and Allergy
6655 Travis Street Houston, Texas 77025 JA 8-5591
*Military Leave of Absence

HARRIS HOSEN, M.D., F.A.A.Pd.
Clinical Allergy and Immunology

2649 Procter Street Port Arthur, Texas

ALLERGY CLINIC
Saul Grossman, M.D., F.A.C.A.
Allergy-Dermatology
W. A. Crozier, M.D., F.A.C.A.
Allergy-Immunology
TU 2-3487

2530 Morgan Corpus Christi, Texas

STUART A. MASON, M.D.
Allergic Diseases

921 Eighth Avenue Fort Worth, Texas 76104

Phone: 336-1574 If no answer: 924-4231

Cardiovascular Disease

GUS SCHREIBER, M.D., F.A.C.C.

24-Hour Reception and Interpretation of Telephone-Transmitted Electrocardiograms. Matching Electrocardiographs, Transmitters, and Tape Recorders Leased to Institutions.

1430 Medical Arts Building Dallas, Texas 75201
Telephone 214 748-3715

Clinics

THE CLINIC-HOSPITAL OF SAN ANGELO
224-234 West Beauregard Avenue
SAN ANGELO, TEXAS

R. M. Finks, M.D., Pediatrics
M. D. Knight, M.D., Surgery
W. H. Brauns, M.D., Internal Medicine
Roy E. Moon, M.D., Obstetrics and Gynecology
Chas. F. Engelking, M.D., Ear, Nose and Throat
R. A. Morse, M.D., Internal Medicine
Ralph R. Chase, M.D., Pediatrics
Tom R. Hunter, M.D., Surgery
Dale W. Hayter, M.D., Ophthalmology
O. Sterling Gillis III, M.D., Obstetrics and Gynecology
Consultant in Pathology—Lloyd R. Hershberger, M.D.
Consultants in Radiology—John E. Ballard, M.D., John G. Bolen, M.D., William T. Gordon, M.D.
Robert P. Gordon, C.P.A., Administrator

THE FORT WORTH CLINIC
1221 West Lancaster Avenue
Fort Worth, Texas

John M. Church, M.D.
T. J. Coleman, M.D.
O. M. Phillips, M.D.
Robert L. Sewell, M.D.
John H. Sewell, M.D.
C. K. Holsapple, M.D.
Wm. L. Asper, Bus. Mgr.

FIFTH AVENUE CLINIC
650 Fifth Avenue
Fort Worth, Texas

MEDICINE
Sidney E. Stout, M.D.
Frank L. Bynum, M.D.
Ed Etier, Jr., M.D.

GENERAL PRACTICE
Donald S. Gibbs, M.D.

RADIOLOGY
Otto H. Grunow, M.D.

THOMAS-SPANN CLINIC
& THOMAS-SPANN HOSPITAL, INC.
1546 S. Brownlee Corpus Christi, Texas 78404
Telephone 884-3861

SURGERY
R. Gayle Spann, M.D., F.A.C.S.
J. Houston Thomas, M.D.
OPHTHALMOLOGY
L. David Wright, M.D., F.A.C.S.
GENERAL PRACTICE
Travis B. Phelps, M.D.
T. D. Harvey, M.D.
H. R. Rose, M.D.
C. L. Vernor, M.D.
ORTHOPEDICS
Carlos M. Yanez, M.D.
INTERNAL MEDICINE
William E. Morris, M.D.
Gerald A. Reeves, M.D.
Pruett Moore, Jr., M.D.
RADIOLOGY
Crysup Sory, M.D.
ADMINISTRATOR
B. J. Clark
DIRECTOR OF NURSES
Clinic - Pat Parker
Hospital - Mrs. Joyce Pettit

RUGELEY AND BLASINGAME CLINIC
Wharton, Texas

2100 North Fulton Street 713 LE 2-1700

INTERNAL MEDICINE
R. D. Little, M.D.
D. W. Samuelson, M.D.

GENERAL PRACTICE
C. E. Woodson, M.D.

PEDIATRICS
F. W. Kolle, M.D.

NEUROPSYCHIATRY
R. R. Gleason, Jr., M.D.

DERMATOLOGY & SKIN CANCER
J. S. Stell, M.D.

GENERAL & THORACIC SURGERY
R. E. Goelzer, M.D.

GENERAL SURGERY
R. B. Caraway, Jr., M.D.

UROLOGY
H. Z. Fretz, M.D.
C. M. Collins, M.D.

OBSTETRICS & GYNECOLOGY
D. M. Voulgaris, M.D.
H. E. Secor, M.D.

OPHTHALMOLOGY
V.A. Black, M.D.

OTOLARYNGOLOGY
J. L. Holcomb, M.D.

DENTISTRY
C. J. Shumbera, D.D.S.
J. R. Kieler, Jr., D.D.S.

PATHOLOGY—CONSULTANT
H. M. Perches, M.D.

ANESTHESIOLOGY—CONSULTANT
C. G. Spears, M.D.

RADIOLOGY—CONSULTANT
L. D. O'Gorman, M.D.

ADMINISTRATION
C. H. "Ham" Rugeley
Malcolm D. Rugeley

THE CHESTER CLINIC & THE JOHN BUIST CHESTER HOSPITAL
3330 S. Lancaster Rd., Dallas, Texas
376-5411

John B. Chester, M.D., F.A.C.S., Orthopedic Surgery
Gene W. Rogers, M.D., General Surgery
Douglas M. Hardy, M.D., Obstetrics & Gynecology
Ervin R. Miller, M.D., Cardiovascular Diseases
Ralph C. Disch, M.D., F.A.C.S., D.A.B.S., General Surgery
Catherine P. Chester, M.D., Infants and Children
Doyle L. Sharp, M.D., General Surgery
R. M. Flasdick, M.D., Diagnosis and Internal Medicine
Ben E. Moore, B.S., M.D., Pediatrics
A. P. Larson, B.S., M.S., M.D., F.A.C.S., A.A.O.S.
Garrett, W. Maxwell, M.D., General Practice
Amado E. Dominquez, M.D., Diagnosis & Internal Medicine
H. A. Mueller, M.D., Consultant in Radiology
Gerard Noteboom, M.D., Consultant in Pathology
Geneva Bratton, R.N., Superintendent of Nurses
E. B. Morgan, Administrator

LANCASTER OFFICE – LANCASTER, TEXAS
Phone 227-2151

David E. Krebs, M.D., Pediatrics & Medicine
Charles W. Waldrop, M.D., General Practice
Miles W. Davis, M.D., General Practice

COUNTRY CLUB CORNERS OFFICE
7140 Baytree 224-1181

R. B. Curry, M.D., General Practice
Herbert M. Hinckley, M.D., General Practice

BEELER-MANSKE CLINIC
9th Avenue N. at 5th Street N.
Texas City, Texas 77590
AC 713, WI 8-8521

Obstetrics & Gynecology
G. W. Beeler, M.D.

Internal Medicine
W. T. Matlage, M.D.
C. M. Maruri, M.D.

General Surgery
B. W. Hink, M.D., F.A.C.S.

General Practice
J. H. Cochrane, M.D.
J. W. O'Bryant, M.D.
O. O. Smith, M.D.

Clinic Manager
Stan M. Sheppard

Complete X-ray, Physical Therapy and Laboratory Facilities

MALONE and HOGAN CLINIC
901 Main Street Phone 267-6361
Big Spring, Texas 79720

Ophthalmology and Otolaryngology
P. W. Malone, M.D., F.A.C.S.
J. W. Tipton, M.D.

General Surgery
J. E. Hogan, M.D., F.A.C.S.
C. B. Marcum, Jr., M.D., F.A.C.S.

Orthopedic Surgery
P. H. Rhymes, M.D.

Internal Medicine
J. H. Burnett, Jr., M.D.
W. A. Riley, M.D.
R. S. Griffin, M.D.
R. T. Torp, M.D.

Obstetrics and Gynecology
M. A. Porter, M.D.

Pediatrics
J. M. Woodall, M.D.
M. W. Talbot, Jr., M.D., F.A.A.P

Radiology
W. R. Cashion, M.D.

Urology
G. F. Dillon, M.D.

Consultants in Pathology
Jarrett E. Williams, M.D.
B. B. Trotter, M.D.

Business Manager
R. L. Heith

DIAGNOSTIC CLINIC OF HOUSTON
6448 Fannin, Houston, Texas 77025 (713) 526-2051

Internal Medicine and Diagnosis

Cardiovascular Disease
Thomas J. Fatherree
Hugh F. Arnold, M.D.
Hugh H. Hanson, M.D.
Michael B. Raine, M.D.
Michael A. Modelski, M.D.
Sigmund W. Friedland, M.D.

Endocrinology and Metabolic Diseases
H. Leland Kaplan, M.D.
Thomas G. Vandivier, M.D.
Charles H. Gregory, M.D.
R. Frederick Gregory, M.D.

Endocrinology, Metabolic Diseases and Director of Clinical Research
Raymond L. Gregory, M.D.

Geriatrics
Frederick G. Dorsey, M.D.

Gastroenterology
Dolph L. Curb, M.D.
W. Tom Arnold, M.D.
Belton G. Griffin, M.D.
Frederick R. Lummis, Jr., M.D.
Dean C. Solcher, M.D.

Hematology
Edmund N. Gouldin, M.D.
George W. Conrad, Jr., M.D.

Hypertension and Renal Diseases
K. Ronald Bingman, M.D.
R. Robert Durrett, M.D.

Infectious Diseases
Lewie L. Travis, Jr., M.D.
Jack L. Reddin, M.D.

Internal Medicine
Jeffrey Zatorski, M.D.

Neurology
Donald J. Russell, M.D.

Oncology
Lester L. Hoaglin, Jr., M.D.
Peter Sullivan, M.D.

Pathology
Jack P. Abbott, M.D.
Paul B. Radelat, M.D.

Pulmonary Disease
William M. Donohue, M.D.
Joel E. Reed, M.D.
Gene R. Lindley, M.D.

Radiology and Nuclear Medicine
William L. Hinds, M.D.
Charles P. Eldridge, Jr., M.D.
David D. Lawrence, M.D.
Charles A. Spain, M.D.

Rheumatology
John E. Norris, M.D.

Administration
C. G. Mercy, Administrator
Robert B. Hall, Assistant Administrator

Laboratory:
Clinical Pathology
Cytology

Nuclear Medicine
Isotope uptake, Gammagram and Therapy

Roentgenology

PROCEDURES:

Bronchoscopy:
Pulmonary Functions

Cardiac Catheterization

Electrocardiography-Phonocardiography

Esophagoscopy

Gastroscopy

Proctosigmoidoscopy

CONSULTATION BY APPOINTMENT

THE LORIMER CLINIC
901 West Leuda Street
Fort Worth, Texas 76104
335-4333

SURGERY
W. S. Lorimer, Jr., M.D., F.A.C.S.
R. J. Turner, III, M.D., F.A.C.S.

INTERNAL MEDICINE
W. W. Moorman, M.D., F.A.C.P.
D. W. Johnston, M.D. F.A.C.P.
Stephen Eppstein, M.D.
A. R. Daniell, M.D.

Mrs. Evelyn Farr, Business Manager

THE AUSTIN DIAGNOSTIC CLINIC
801 West 34th Street, Austin, Texas 78705 452-9292

INTERNAL MEDICINE

HENRY RENFERT, JR., M.D.
Endocrinology

VIRGIL B. LAWLIS, M.D.
Gastroenterology

LEONARD J. SAYERS, M.D.
Hematology

HOMER R. GOEHRS, M.D.
Rheumatology

JOHN P. VINEYARD, JR., M.D.
Pulmonary and Infectious Disease

JOHN M. TYLER, M.D.
Cardiology

WALTER D. ROBERTS, M.D.
Internal Medicine

TERRY M. COLLIER, M.D.
Internal Medicine

ROBERT F. ANDERSON, M.D.
Cardiology

DENNIS E. WELCH, M.D.
Oncology

CHARLES E. FELGER, M.D.
Gastroenterology

JACK W. MONCRIEF, M.D.
Nephrology

NEUROLOGY AND ELECTROENCEPHALOGRAPHY
J. DOUGLAS HUDSON, M.D. PETER W. WERNER, M.D.

RADIOLOGY AND NUCLEAR MEDICINE
JOSEPH H. LAWSON, M.D. BETHEA W. BRINDLEY, M.D.

ADMINISTRATION
JAMES R. JEPSON

CLINIC OF THE SOUTHWEST
6437 High Star at Hillcroft
Houston, Texas 77036 PR 4-7671

INTERNAL MEDICINE
William C. Franklin, M.D.
Arthur B. Conde, M.D.

OBSTETRICS & GYNECOLOGY
Joy L. Deere, M.D.
Loren B. Goss, M.D.

PEDIATRICS
John R. Dunn, Jr., M.D.
Blanca S. Azios, M.D.

PHYSICAL THERAPY
Richard D. Tinsley, R.P.T.

GENERAL SURGERY
Harvey B. Koch, M.D.

UROLOGY
Glen E. Lewis, M.D.

DENTISTRY
Burley G. Ingram, D.D.S.

RADIOLOGY
Neil B. Longley, M.D.
Richard E. Schuette, M.D.

BUSINESS MANAGER
C. C. Walker

Colon and Rectal Surgery

MALCOLM McNATT, M.D., F.A.C.S.
Diplomate of the American Board of Colon and Rectal Surgery
Proctology
Colon and Rectal Surgery
710 Medical Arts Bldg. RIverside 2-2858
Dallas, Texas

ALVIN BALDWIN, JR., M.D., F.A.C.S.
Practice Limited to
Diseases and Surgery of the Colon and Rectum
714 Doctors Building 3707 Gaston Avenue
Dallas, Texas
Off. Tel. 824-2573 Res. Tel. 361-4500

HUGH C. WELSH, M.D.
Proctology and Abdominal Surgery
2715 Fannin Street Houston, Texas

J. WADE HARRIS, M.D., F.A.C.S.
JOHN E. COGAN, M.D., F.A.C.S.
Surgery of the Rectum and Colon
406 Hermann Professional Bldg.
Houston, Texas

C. D. L. CROMAR, M.D.
Surgery of the Rectum and Colon
617 South Tatar Street
Pasadena, Texas 77502

Dermatology

ROGER W. MANAR, M.D.
DERMATOLOGY
SUPERFICIAL X-RAY THERAPY
1400 Eighth Street Wichita Falls, Texas

BEDFORD SHELMIRE, M.D.
BEDFORD SHELMIRE, JR., M.D.
DAVID S. SHELMIRE, M.D.
Dermatology
1410 Medical Arts Bldg. Dallas, Texas

DRS. PIPKIN, RESSMANN & RICHARDSON
J. LEWIS PIPKIN, M.D.
ARTHUR C. RESSMANN, M.D.
A. W. RICHARDSON, M.D.
DERMATOLOGY
X-Ray and Radium in The Treatment of Skin Malignancies
714 Medical Arts Bldg. San Antonio, Texas

EVERETT R. SEALE, M.D.
Dermatology
Treatment of Skin Malignancies
1217 Hermann Professional Bldg. Houston, Texas

J. GILMORE BRAU, M.D.
DERMATOLOGY—SYPHILOLOGY
X-RAY and RADIUM THERAPY
Hours 9 to 1 — 3 to 5
3817 Brown Street Dallas, Texas

J. FRANKLIN CAMPBELL, M.D.
EDMUND N. WALSH, M.D.
Dermatology and Syphilology, and Treatment of Skin Cancer
Radium and X-Ray Therapy
1410 Pruitt Street Fort Worth, Texas

Leslie M. Smith, M.D. H. D. Garrett, M.D.
John C. Wilkinson, M.D.
DRS. SMITH, GARRETT & WILKINSON
Dermatology and Syphilology
X-Ray and Radium in the Treatment of Skin Malignancies
Medical Center, 1501 Arizona El Paso, Texas

WALTER B. MANTOOTH, JR., M.D.
JOE M. LEHMAN, M.D.
ROBERT LEHMAN, M.D.
Dermatology, Syphilology, and Cancer of the Skin
3801 19th St., Suite 500 Lubbock, Texas

MARVIN E. CHERNOSKY, M.D.
DERMATOLOGY AND SYPHILOLOGY
703 Hermann Professional Building
Phone JA 6-3733 Houston, Texas

THOMAS L. SHIELDS, M.D.
Dermatology and Syphilology
X-Ray Therapy in the
Treatment of Skin Malignancies
Hours 9 to 1 — 3 to 5
800 Fifth Ave. Fort Worth, Texas

DAVID R. WEAKLEY, M.D., F.A.C.P.
Dermatology
Treatment of Skin Malignancies
8548 Northwest Plaza Drive Dallas, Texas
315 North Shiloh Road Garland, Texas

M. A. (Mac) HAIRSTON, JR., M.D.
DERMATOLOGY
HAIR TRANSPLANTATION & DERMOPLANING
Memorial City Professional Bldg., 902 Frostwood, Suite 184
(Between Memorial & Katy Fwy.)
Phone: 464-6369 Houston, Texas 77024

JOHN B. McMASTER, JR., M.D.
Dermatology
222-2147
Dermabrasion & Chemosurgery
416 M & S Tower San Antonio, Texas 78205

Eye, Ear, Nose, Throat

M. Ray Harrington, M.D. Lloyd F. Ritchey, M.D.
Jack Blum, M.D.
Ophthalmology and Otolaryngology
8215 Westchester
Suite 135
Dallas, Texas

Drs. Canon, Watkins, Anderson, Nalle and Ellsasser
Eye, Ear, Nose and Throat, Broncho-Esophagology and Allergy
R. T. Canon, M.D., F.A.C.S. M. D. Watkins, M.D., F.A.C.S., A.I.C.S.
Wm. F. Anderson, M.D., DAB Oph., F.A.C.S. Ernest Nalle, Jr., M.D. DAB Oto., F.A.C.S., F.I.C.S.
M. G. Ellsasser, M.D., DAB Oph.
West Texas Clinic 1312 Main Lubbock, Texas

W. HUBERT SEALE, M.D.
Eye, Ear, Nose & Throat
HUBERT JAMES SEALE, M.D.
Disease & Surgery of the Eye
OR 3-3751
1321 Hickory St. Abilene, Texas

Gastroenterology

JAMES J. GORMAN, M.D., F.A.C.P.
Gastroenterology
Diagnosis Gastroscopy
1111 El Paso National Bank Bldg.
El Paso, Texas 79901

MILFORD O. ROUSE, M.D.
announces limitation of practice to consultation in hospitals. His office is now at Dallas Chamber of Commerce in Community Health Focus program. Records of his patients are with Cecil O. Patterson, M.D., and Daniel Polter, M.D., 1414 Medical Arts Building, Dallas, 742-6144.

CECIL O. PATTERSON, M.D.
GASTROENTEROLOGY, GASTROSCOPY
ESOPHAGOSCOPY
1414 Medical Arts Building
Dallas, Texas
742-6141

DRS. BAILEY, DOUGLAS AND FISHER
3434 Swiss Avenue, Suite 303, Dallas, Texas
Diseases of the Digestive System
Herbert A. Bailey, M.D. F. Clark Douglas, M.D.
John W. Fisher, M.D.

W. CROCKETT CHEARS, JR., M.D.
GASTROENTEROLOGY
GASTROSCOPY & ESOPHAGOSCOPY
1027 Medical Arts Building
Telephone 748-4975 Dallas, Texas

General Surgery

J. PEYTON BARNES, M.D., F.A.C.S.
Surgery
1000 St. Joseph Professional Bldg.
Houston, Texas 77002

L. GONZALEZ CIGARROA, M.D., F.A.C.S.
Diplomate American Board of Surgery
Practice limited to
SURGERY
1502 Logan Ave. Laredo, Texas

BURT B. SMITH, M.D.
SURGERY
Emphasizing Breast, Thyroid and Gastro-Intestinal Surgery
728 Hermann Professional Building
Phone 523-8323 Houston, Texas 77025

ADOLPH F. KAUFFMANN, M.D., F.A.C.S.
Diplomate American Board of Surgery
GENERAL SURGERY
707 Fifth Ave. Fort Worth, Texas
Phone 332-7597

BRYAN V. WILLIAMS, M.D., F.A.C.S.
Diplomate American Board of Surgery
GENERAL SURGERY
1506 St. Joseph Professional Bldg.
Houston, Texas 77002
227-5505

Internal Medicine

JOHN A. WIGGINS, JR., M.D.
Diseases of the Chest
Bronchoscopy
1105 Pennsylvania Ave. Fort Worth, Texas

HENRY N. GEMOETS, M.D., F.A.C.P., F.C.C.P.
Internal Medicine and Diseases of the Chest and Heart
THOMAS H. GEMOETS, M.D.
Internal Medicine and Diagnosis
1003 Memorial Professional Building
1010 Louisiana Houston, Texas 77002 222-7224

AS NEAR AS YOUR MAILBOX OR TELEPHONE!
TMA MEMORIAL LIBRARY
1801 North Lamar Blvd.
Austin, Texas 78701
512 477-6704

Neurology/Psychiatry

HAUSER CLINIC

Psychiatry, Neurology, and Electroencephalography

Section of Psychiatry
*Abe Hauser, M.D.
*Robert I. Hauser, M.D.
Wayne F. Keller, M.D.
Ronald J. Hauser, M.D.
Barry M. Brown, M.D.
*Harris M. Hauser, M.D.

Section of Neurology
*Harris M. Hauser, M.D.
*Gerald Ratinov, M.D.
Robert M. Gordon, M.D.
*Abe Hauser, M.D.

Section of Social Work
Ethel Feinsilver, M.S.

Section of Psychology
Robert Langston, Ph.D.
Consultant
Joanne Borba, M.A.

Administrator
Gordon D. Keller

808 Memorial Professional Building
Houston, Texas 77002
224-5041

*Diplomate, American Board of Psychiatry and Neurology

Perry C. Talkington, M.D.
Charles L. Bloss, M.D.
Howard M. Burkett, M.D.
Jerry M. Lewis, M.D.
James K. Peden, M.D.
Ward G. Dixon, M.D.
Claude L. Jackson, M.D.
E. Clay Griffith, M.D.
Dode M. Hanke, M.D.
Doyle I. Carson, M.D.
Thomas H. Allison, M.D.
Stanley L. Seaton, M.D.
Maurice S. Green, M.D.
Joe W. King, M.D.
Keith H. Johansen, M.D.
Charles G. Markward, M.D.

practice limited to
PSYCHIATRY

4645 Samuell Blvd., Dallas, Texas
Timberlawn Sanitarium
4600 Samuell Blvd., Dallas, Texas
381-7181

STEPHEN WEISZ, M.D.
Practice Limited to
NEUROLOGY and PSYCHIATRY
1637 Medical Arts Bldg. Dallas, Texas
747-5183

ALEX K. MUNSON, M.D.
Child Psychiatry
KERBEY LANE EVALUATION
AND TREATMENT CENTER
3400 Kerbey Lane Austin, Texas 78703
Office Hours by Appointment
AC 512-454-8718

THE FORT WORTH
NEUROPSYCHIATRIC CENTER
*Bernard J. Dolenz, M.D. *Herbert G. Rush, M.D.
1066 W. Magnolia Avenue 336-5469
Fort Worth, Texas 76104
*Diplomates American Board of Psychiatry and Neurology

HOUSTON ASSOCIATES
IN
PSYCHIATRY AND NEUROLOGY
Houston, Texas

C. A. Iannucci, M.D.
Joe C. A. Eckhardt, Jr., M.D.
Alfred H. Vogt, M.D.
George M. Stevens, M.D.
Jules Bohnn, M.D.
Leroy Androes, M.D.
A. R. Martinez, Ph.D.
Ruth Searls, M.S.W.
Diana Sheer, M.S.W.
Dan DeShazo, M.S.W.
Beth Bowman, M.A.

Comprehensive Neuropsychiatric
Evaluation and Treatment
Electroencephalography

1021 Hermann Prof. Bldg. 529-5721
6812 Staffordshire 748-3780

CHAPMAN ISHAM, M.D.
Diplomate American Board of Psychiatry
Child Psychiatry and Marriage Counseling
Hypnotherapy for Smoking and Obesity
3701 21st Street Lubbock, Texas 79410
795-4023

MEDICAL NEUROLOGY AND
ELECTROENCEPHALOGRAPHY
205 Swiss Avenue Medical Building
3434 Swiss

Dallas, Texas 75204 827-3610

Sheff D. Olinger, M.D. Joseph S. Jenike, M.D.
Charles W. Barrier, M.D.

Hours by Appointment Only

DANIEL J. JOUBERT, M.D.
Diplomate American Board of Psychiatry and Neurology
PSYCHIATRY
1900 N. Oregon St. 915-532-4737 El Paso, Texas 79902
303 University Towers

Pasadena Neuropsychiatric Clinic Association
Robert E. Hazlewood, M.D. Richard M. Orr, M.D.
Practice Limited
to
Neurology and Psychiatry
Office Hours by Appointment
First Pasadena State Bank Building
1001 E. Southmore, Suite 1103
Pasadena, Texas 77502 Telephone 473-7646

LABORATORY OF ELECTROENCEPHALOGRAPHY
Jean M. B. Moure, M.D.
Diplomate American Board of Electroencephalography
522-1037
275 Hermann Prof. Bldg. Houston, Tex. 77025

Neurological Surgery

JAMES GREENWOOD, JR., M.D.
Neurosurgery
1117 Hermann Professional Bldg., Houston, Texas 77025
Office: 528-5373 Residence: 528-4038

Morris Sanders, M.D. Jack I. Woolf, M.D.
DRS. WOOLF AND SANDERS
Diplomate American Board of Neurological Surgery
Locke Medical Building, 6011 Harry Hines Blvd.
Dallas, Texas 631-1500

JACK STERN, M.D.
GARY C. HUTCHISON, M.D.
Neurological Surgery
Suite 826, Locke Medical Building
6011 Harry Hines Blvd., Dallas, Texas 75235
631-1822

Casey E. Patterson, M.D. Tom M. Nash, M.D.
Charles W. Simpson, M.D. James E. Bland, M.D.
DRS. NASH, PATTERSON & SIMPSON, ASSN.
Neurological Surgery
637-0420
Suite 557 - Locke Medical Building, 6011 Harry Hines Blvd.
Dallas, Texas 75235

ALBERT D'ERRICO, M.D.
Neurological Surgery
3707 Gaston Avenue Dallas, Texas 75246
Telephone 824-2543

RONALD SMITH, M.D.
Neurological Surgery
901 South Lake Fort Worth, Texas
Telephone 336-0551

GLENN R. CHERRY, M.D., F.A.C.S.
R. GORDON LONG, M.D.
Diplomate American Board of Neurological Surgery
712 North Washington
826-7060 Dallas, Texas

ROBT. C. L. ROBERTSON, M.D., F.A.C.S.
JOSEPH W. ROBERTSON, M.D.
Neurological Surgery
2210 Maroneal Houston, Texas 77025
523-3684

WILLIAM J. NELSON, M.D.
Certified by the American Board of Neurological Surgery
Suite 300
University Towers
915-542-0643
1900 N. Oregon St. El Paso, Texas 79902

CHARLES A. BORNE, JR., M.D.
Neurological Surgery
Suite 834, Sealy-Smith Professional Building
Galveston, Texas 77550
200 University Boulevard 713-763-1688

Nuclear Medicine

HERBERT C. ALLEN, JR., M.D.
Practice Limited to
NUCLEAR MEDICINE
526-1501
100 Hermann Professional Bldg.
Houston, Texas 77025

Ophthalmology

HOUSTON EYE ASSOCIATES
1121 Hermann Professional Building
Houston, Texas 77025
Phone 526-7261
(AC 713)
Richard S. Ruiz, M.D., F.A.C.S.
Charles E. Russo, M.D. Robert H. Stewart, M.D.
Malcolm L. Mazow, M.D. Robert B. Wilkins, M.D.

DRS. MURPHY, ALPAR, TAYLOR & HOWELL
OPHTHALMOLOGY
Weldon O. Murphy, M.D.
John J. Alpar, M.D.
Coleman Taylor, M.D.
J. Franklin Howell, Jr., M.D.
Diplomates of the American Board of Ophthalmology
2300 West 7th Avenue Amarillo, Texas

ALBERT VAISER, M.D.
WILLIAM B. SNYDER, M.D.
Diseases and Surgery of the Retina
318 Medical Arts Building
Dallas, Texas 748-0958

LIEVEN J. VAN RIET, M.D.
OPHTHALMOLOGY
Medical Surgical
224-0654
Saint Joseph Professional Building
Houston, Texas 77002

BERT C. BRYAN, M.D.
Surgery and Diseases of the Eye
1314 Medical Arts Building
747-7474 Dallas, Texas 747-2481

W. REX HAWKINS, M.D.
Detachment of the Retina
Diabetic Retinopathy
250 Hermann Professional Building
Houston, Texas 529-6727

Harold E. Caplan, M.D.
Jed Lee Howard, M.D.
R. Larry Brenner, M.D.
Ophthalmology

3320 Plainview	Seabrook Professional Bldg.
Pasadena, Texas	2622 NASA Road 1
713 - 944-5700	Seabrook, Texas
	713 - 877-2571

DAVID R. STAGER, M.D.
PEDIATRIC OPHTHALMOLOGY
8226 Douglas Ave.
Dallas, Texas 75225

ARTHUR M. CLEMENTS, M.D.
Surgery and Diseases of the Eye
(214) 341-3407
Northlake Professional Building
8535 Ferndale Road Dallas, Texas 75238

Orthopedic Surgery

H. H. Beckering, M.D. George Truett James, M.D.
L. Ray Lawson, M.D. Robert D. Vandermeer, M.D.
W. B. CARRELL MEMORIAL CLINIC
2828 Lemmon Ave. Dallas, Texas

FORT WORTH BONE & JOINT CLINIC
918 8th Avenue — Fort Worth, Texas
Louis J. Levy, M.D. Cuvier P. Lipscomb, M.D.
Henry C. McDonald, Jr., M.D. Fred W. Sanders, M.D.

Ralph E. Donnell, M.D. F. Carlton Hodges, M.D.
ORTHOPEDIC ASSOCIATES
Diplomates American Board of Orthopedic Surgery
1133 N. 19th St. Abilene, Texas 79601

HOUSTON ORTHOPEDIC CLINIC
Joseph Barnhart, M.D. Donald T. Lazarz, M.D.
1817 Dryden Road Phone: 529-4389
Houston, Texas

LUBBOCK ORTHOPEDIC SURGERY CLINIC
ROYCE C. LEWIS, JR., M.D.
KENNETH C. SCHOLZ, D.D.S., M.D.
RAY E. SANTOS, M.D.
3702 21st St., Suite 9 806-763-8281
Lubbock, Texas 79410

THE EL PASO
ORTHOPEDIC SURGERY GROUP
Louis W. Breck, M.D. Oren H. Ellis, M.D.
W. Compere Basom, M.D. Wellington J. Pindar, M.D.
Morton H. Leonard, M.D.* Donald A. Shearer, Admstr.
Special attention to surgery of the hand
1220 N. Stanton St. Tel. 533-7465 El Paso, Texas 79902

B. C. HALLEY, JR., M.D.
DAVID R. WEBB, JR., M.D.
Orthopaedic Surgery
3909 Worth at Washington 821-1417
Dallas, Texas 75246

RUSS B. GRAHAM, M.D., F.A.C.S.
3607 Gaston Avenue
Dallas, Texas 75246
ORTHOPEDIC SURGERY
Telephone
824-7883

THE ORTHOPEDIC GROUP OF RICHARDSON
Charles E. Graham, M.D.
M. Gayle Glidewell, M.D.
212 South Cottonwood Suite D
Richardson, Texas 75080
ORTHOPEDIC SURGERY
231-6396

L. LEE LANKFORD, M.D.
Diplomate American Board of Orthopedic Surgery
HAND SURGERY AND
UPPER EXTREMITY RECONSTRUCTIVE SURGERY
3707 Gaston Ave. Area Code 214
Dallas, Texas 75246 823-5351

THE ARLINGTON ORTHOPEDIC GROUP
H. W. Bendel, Jr., M.D. E. E. Rising, Jr., M.D.
C. Poindexter, M.D.
Diplomates American Board of Orthopaedic Surgery
801 West Randol Mill Road 817 - 261-8284
Arlington, Texas 76010

THE BOSWELL-EVANS ORTHOPAEDIC CLINIC
George M. Boswell, Jr., M.D., F.A.C.S. James P. Evans, M.D.
Lewis R. Thompson, M.D.
Gerald W. Schofield, M.D.
4849 W. Lawther Dr. 348-8300 Dallas, Texas 75218

Otolaryngology

TOM BARR, M.D.
Ear, Nose, and Throat,
Diseases of Larynx, and
Laryngeal Surgery
Medical Arts Building Dallas, Texas

HERBERT H. HARRIS, M.D., F.A.C.S., F.I.C.S.
Oto-Laryngology Broncho-Esophagology
and Laryngeal Surgery
907 Hermann Professional Bldg. Houston, Texas

MARVIN G. SHEPARD, M.D., F.A.C.S.
Practice limited to Otology and Otological Surgery
Medical Tower Building
712 N. Washington
Suite 514
Dallas, Texas Hours By Appt.

W. P. ANTHONY, M.D.

Otology

662 So. Henderson Fort Worth, Texas 76104

DONALD N. MATHESON, M.D., F.A.C.S.
Diplomate American Board of Otolaryngology
800 Fifth Avenue, Phone 336-7133
Fort Worth, Texas

Pathology

MARVIN D. BELL, A.B., M.D.

Clinical Pathology

1109 Medical Arts Bldg. Dallas, Texas

A. B. CAIRNS, M.D.
GERARD NOTEBOOM, M.D.
MARC GARZA, M.D.
RONALD E. BUCHANAN, M.D.
WADE M. BRANNAN, M.D.
Diplomates American Board of Pathology
1105 N. Bishop Methodist Hospital
Dallas, Texas Dallas, Texas

FORT WORTH MEDICAL LABORATORIES
John J. Andujar, M.D.
Dorothy Patras, M.D.
1404 Pennsylvania Ave. (817) 336-7137
P. O. Box 1118 Fort Worth, Texas 76101

BROWN & ASSOCIATES MEDICAL LABORATORY
Tissue Pathology, Exfoliative Cytology, Hematology, Serology, Clinical Chemistry, Bacteriology, Parasitology, Serum Protein Electrophoresis and Hemoglobin Electrophoresis
Wilson G. Brown, M.D. George V. Miller, M.D.
Walter G. Olin, M.D. John R. Thomas, M.D.
S. J. Skinner, M.D. Joe B. Haden, M.D.
Diplomates American Board of Pathology
165 Hermann Professional Bldg., 526-4031
Houston, Texas
"Mailing Containers on Request"
"Office Pickup Service in Houston"

DR. PREUSS PATHOLOGY LABORATORY
Exfoliative Cytology
and Surgical Pathology
FRED S. PREUSS, M.D., F.C.A.P.
3607 Gaston Avenue, Room 305
Dallas, Texas 75226
Telephone: 823-6912
Specimen containers on request

NUCLEAR MEDICINE LABORATORIES OF TEXAS
6411 South Main Street
Texas Medical Center
Houston, Texas 77025
Completely equipped radioisotope laboratory for diagnostic radioactive tests in:
Hematology, Thyroidology, Endocrinology, Gastroenterology, Cardiology, Neurology, Neuro-Surgery, Urology, Ophthalmology and Obstetrics-Gynecology
Herbert C. Allen, Jr., M.D., Director
526-1501

John H. Childers, M.D. E. H. Valentine, M.D.
R. R. Rember, M.D. W. L. Crofford, M.D.
E. P. Jenevein, M.D.
MEDICAL LABORATORY SERVICE OF DALLAS
Clinical Pathology Surgical Pathology
Diagnostic Radioisotopes Exfoliative Cytology
6011 Harry Hines Boulevard Dallas, Texas 75235
637-0210
(Mailing containers available upon request)

PRUITT MEDICAL LABORATORIES
Jack Pruitt, M.D.
Diplomate, American Board of Pathology
Tissue Pathology, Exfoliative Cytology, Clinical Pathology, Medicolegal Consultation.
P. O. Box 160 Lufkin, Texas 75901
Phone 634-4453

WACO CLINICAL PATHOLOGY LABORATORY
K. P. Wittstruck, M.D., F.C.A.P.
Walter Krohn, M.D., F.C.A.P.
Clinical Pathology Exfoliative Cytology
Surgical Pathology Medicolegal Consultation
Mailing containers on request
2112 Washington Avenue 756-7226
P.O. Box 3160 Waco, Texas 76707

GEORGE J. RACE, M.D. AND ASSOCIATES PATHOLOGISTS
George J. Race, M.D., Ph.D. William B. Kingsley, M.D.
Gwendolyn Crass, M.D. Norman G. P. Helgeson, M.D.
Marie L. Shaw, M.D. H. Richard Pascoe, M.D.
Surgical Pathology and Cytology Consultation
421 Medical Tower Building
712 North Washington, Dallas, Texas 75246
Telephone AC 214, 824-1258

Physical Medicine and Rehabilitation

TEXAS REHABILITATION HOSPITAL OF GONZALES
WARM SPRINGS FOUNDATION, INC.
P.O. BOX 58, GONZALES, TEXAS 78629
Facilities for physical restoration.
Physical Therapy, Occupational Therapy, Speech Therapy, Recreational Therapy, School from first grade through twelfth grade.
ROBERT M. IZARD, JR., M.D. LYNN SMITH, SR.
Medical Director Administrator

Plastic Surgery

THOMAS D. CRONIN, M.D., F.A.C.S.
RAYMOND O. BRAUER, M.D.
THOMAS M. BIGGS, M.D.
Diplomates American Board of Plastic Surgery
PLASTIC SURGERY
5419 Caroline Street 523-8131 Houston, Texas 77004

WILLARD C. SELLMAN, JR., M.D.
Plastic, Maxillo-Facial and Hand Surgery
530 Locke Medical Building
6011 Harry Hines Blvd.
Dallas, Texas 75235 637-4770

BROMLEY SMITH FREEMAN, M.D., F.A.C.S.
Diplomate American Boards of Surgery and Plastic Surgery
PLASTIC AND RECONSTRUCTIVE SURGERY
Tumors of the Head and Neck
1810 The Medical Towers — Tel. 529-3579
Houston, Texas 77025 — Res. 782-1628

JOHN B. PATTERSON, M.D., F.A.C.S.
Diplomate American Board
PLASTIC SURGERY
612 Doctors Building — Fort Worth, Texas
336-0356

SIMON FREDRICKS, M.D., F.A.C.S.
Diplomate American Board of Plastic Surgery

Houston Office	*Pasadena Office*
1103 Medical Towers	904½ E. Southmore
Houston, Texas 77025	Pasadena, Texas 77502
523-5575	473-5488

DAVID A. GRANT, M.D., F.A.C.S.
Diplomate American Boards of Surgery and Plastic Surgery
PLASTIC & RECONSTRUCTIVE SURGERY
COSMETIC SURGERY
800 Fifth Avenue
Fort Worth, Texas 76104
335-4751

CARL R. COERS, III, M.D.
Diplomate American Board of Plastic Surgery
PLASTIC, RECONSTRUCTIVE & HAND SURGERY
800 Fifth Avenue
Fort Worth, Texas 76104
335-4751

MARCUS L. FINLEY, M.D.
PLASTIC, RECONSTRUCTIVE AND HAND SURGERY
1115A Pennsylvania Avenue
Fort Worth, Texas 76104
Telephone 335-6439

VALENTIN GRACIA, M.D.
F.A.C.S., F.I.C.S., D.A.B.
AESTHETIC SURGERY—BURNS
1001 West Rosedale
Fort Worth, Texas 76104
Phone 336-0446

FRANCIS A. MORRIS, JR., M.D.
WILLIAM E. BARNES, M.D.
Diplomates American Board of Plastic Surgery
Plastic, Reconstructive and Hand Surgery
3100 Red River — 476-9149 — Austin, Texas

Plastic Surgery
JOHN R. HILL, M.D., F.A.C.S.
Diplomate, American Board of Plastic Surgery
Practice limited to Plastic, Reconstructive and Hand Surgery
Medical Center Office: 272 Hermann Prof. Bldg. Houston, Texas 77025 528-2481
Spring Branch Office: 9320 Westview Houston, Texas 77055 528-2481

E. FRANK DUNTON, M.D., F.A.C.S.
Plastic & Reconstructive Surgery and Surgery of the Hand
Telephone 824-7290 — Suite 104, 3434 Swiss Avenue, Dallas, Texas

W. W. SCHUESSLER, M.D., F.A.C.S.
Diplomate of American Board of Plastic Surgery
Plastic, Reconstructive & Maxillo-Facial Surgery
Telephone 533-6362 — Suite 4-C Medical Center, 1501 Arizona Avenue, El Paso, Texas 79902

Radiology

AMARILLO RADIOLOGICAL GROUP
Practice Limited to Radiology
ROYAL WERTZ, M.D., F.A.C.R.
WILBUR Q. BUDD, M.D., D.A.B.R.
800 Rusk Street
Amarillo, Texas 79106 — 373-8324

J. R. MAXFIELD, JR., M.D., M.A.C.R.
JACK G. S. MAXFIELD, M.D., M.A.C.R.
Radiological Center
Including Radioisotopes
2711 Oak Lawn, Dallas — 526-6661

MAURICE C. ARCHER, M.D., M.A.C.R.
MARY L. KILLINGSWORTH, M.D., M.A.C.R.
Diplomates of the American Board of Radiology
800 Fifth Avenue, Fort Worth, Texas — Doctors Building 332-3401

DRS. CARLSON AND BAREKMAN
Glenn D. Carlson, M.D., F.A.C.R.
William H. Barekman, M.D., D.A.B.R.
Agnes M. Guthrie, M.D., D.A.B.R.
X-RAY DIAGNOSIS
X-RAY AND RADIUM THERAPY
RADIOISOTOPES
1221 Medical Arts Bldg.....741-3621
6011 Harry Hines Blvd.....631-7070
3607 Gaston Ave.....823-9961
DALLAS, TEXAS

Harvey M. Lowry, M.D., F.A.C.R.
James R. Gish, M.D., D.A.B.R.
Edward A. Sheldon, M.D., D.A.B.R.
James P. Wills, M.D.
RADIOLOGY

109 Doctors Bldg.	838-4543
502 Goodhue Bldg.	838-2224
Baptist Hospital	833-6421

Beaumont, Texas

JAMES L. CLIFFORD, M.D., D.A.B.R.
Cobalt 60 Rotational Therapy
X-Ray and Radium Therapy
X-Ray Diagnosis
Radioisotopes
845 Clarksville St. — 784-4624 — Paris, Texas

DOCTORS McCONNELL, RIDINGS AND FULLER
208 Locke Medical Building — Telephone 637-0774
6011 Harry Hines Boulevard
Dallas, Texas 75235
R. W. McConnell, M.D.
Practice Limited to Nuclear Medicine
G. Ray Ridings, M.D.
D. E. Fuller, M.D.
Practice Limited to Radiation Therapy

Thoracic Surgery

Donald L. Paulson, M.D. Harold C. Urschel, Jr., M.D.
DRS. PAULSON AND URSCHEL
Thoracic and Cardiovascular Surgery
3810 Swiss Ave. 824-2503
Dallas, Texas

THORACIC AND CARDIOVASCULAR SURGERY
James O. McBride, M.D., F.A.C.S.
662 South Henderson, Suite A
P. O. Box 1407
Fort Worth, Texas 76102
332-7454 738-4594

Charles T. Meadows, M.D.
Diplomate, American Board of Thoracic Surgery
Thoracic and Cardiovascular Surgery
Broncho-esophagology
The Professional Building
673-8184
1101 North 19th Abilene, Texas

LeROY J. KLEINSASSER, M.D., F.A.C.S.
Diplomate American Board of Surgery &
The Board of Thoracic Surgery
CARDIOVASCULAR and
PERIPHERAL VASCULAR SURGERY
The Doctors Bldg., 3707 Gaston Ave.
Dallas 10, Texas

Robert R. Shaw, M.D. John L. Kee, Jr., M.D.
DRS. SHAW AND KEE
THORACIC SURGERY
The Doctors Building 3707 Gaston Avenue
Dallas, Texas 75246
826-5184

WILLIAM W. TAYLOR, M.D.
Diplomate Board of Thoracic Surgery
Thoracic, Cardiac, and Vascular Surgery
804 Locke Med. Bldg. 6011 Harry Hines Blvd.
Dallas, Texas 75235 637-4833

ELLIOTT MENDENHALL, JR., M.D., F.A.C.S.
Thoracic, Cardiac, and Vascular Surgery
Diplomate American Board of Surgery and
Board of Thoracic Surgery
598 Westwood, Suite 204 677-2221
Abilene, Texas 79603

ALLAN L. GRAHAM, M.D.
Diplomate American Board of Surgery and
Board of Thoracic Surgery
Cardiovascular and Peripheral Vascular Surgery
502 Doctors Building 800 Fifth Avenue
Fort Worth, Texas 332-7879

Urology

CECIL M. CRIGLER, M.D., F.A.C.S.
Practice limited to
UROLOGY
1519 Hermann Professional Bldg., Houston, Texas

JO C. ALEXANDER, M.D.
KARL B. KING, M.D. FOSTER FUQUA, M.D.
ELGIN W. WARE, JR., M.D.
GEORGE E. HURT, JR., M.D.
EUGENE R. TODD, M.D.
DONALD E. JOHNSON, M.D.
Urology
3707 Gaston Avenue Dallas, Texas

THE UROLOGY CLINIC
1415 Pennsylvania Ave., Fort Worth, Texas 76104
Dolphus E. Compere, M.D., M.S., F.A.C.S.
Diplomate of American Board of Urology
Grant F. Begley, A.B., M.D.
Diplomate of American Board of Urology
Hugh Lamensdorf, M.D.

H. M. GIBSON, JR., M.D., F.A.C.S.
(Certified by American Board of Urology)
Practice limited to
UROLOGY
512 University Towers Bldg. 1900 North Oregon St.
El Paso, Texas Ph. 532-8130 & 533-4765

MARVIN GREER RAPE, M.D.
Diplomate of American Board of Urology
NEWTON F. McDONALD, M.D.
Diplomate of American Board of Urology
Practice Limited to
UROLOGY
1703 St. Joseph Professional Bldg., 2000 Crawford
Houston, Texas 77002

JOHN B. TRIBLE, M.D.
Practice Limited to
UROLOGY
1209-10 Medical Arts Bldg.
222-7521 Houston, Texas 77002

ERWIN C. WINKEL, M.D.
practice limited to
UROLOGY
Northwest Professional Center 681-0343
2925 West T.C. Jester Blvd. Houston, Texas

THE UROLOGY CLINIC
1010 Louisiana, Houston, Texas 77002
227-1414
JAMES S. BOREN, M.D.
ROBERT I. COX, M.D.
Diplomates American Board of Urology

Richard H. Harrison III, M.D. John M. Baird, M.D.
F.A.C.S., D.A.B.U.
DRS. HARRISON AND BAIRD
UROLOGY
2721 Osler Blvd. 823-0011 Bryan, Texas 77801

JOHN F. COLLINS, JR., M.D.
Urology
Doctor's Park 1400 Crescent
Denton, Texas 76201 (817) 387-3828

103rd Annual Session of the
Texas Medical Association
April 30-May 3, 1970 Dallas

CLASSIFIED ADS

Physicians Wanted

WANTED—A GENERAL PRACTITIONER, but would consider internist; to become salaried associate to a six man clinic group who operate an accredited hospital under same roof with clinic in a central Texas town of 10,000; would be on salaried basis for two years as associate and then become owner-partner. Please reply to Charles A. Garrett, M.D., 215 Craig Street, Hillsboro, Texas.

WANTED—M.D.'s to do general practice with surgery, Houston area. Present doctors netting $4,000 to $8,000 monthly after six months practice. No investment required. Send resume to Ad-179, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

ORTHOPEDIC SURGEON AND TWO GP's needed by 19 doctor group. 100-bed fully accredited hospital. Salary open. Full partnership in one year. For additional details, write John B. Chester, M.D., 3330 South Lancaster Road, Dallas, Texas 75216.

GENERAL PRACTITIONER NEEDED to assume well-established practice in Milford, Texas. The community's only doctor recently suffered a heart attack and has moved. An eight room small clinic owned by the City is available rent free. Income limited only by interest and ability. Good school and churches. Twelve and 17 miles from two first-class hospitals, 48 miles south of Dallas, 48 miles north of Waco. Contact C. O. Miller, P.O. Box 546, Milford, Texas 76670, area code 214, 493-2511.

DERMATOLOGIST, EENT AND GENERAL PRACTITIONER WANTED to associate with clinic with five physicians, two dentists, one orthodontist. Also complete laboratory and x-ray facilities. Write John G. Compton, Jr., M.D., Medical Center Clinic, Waxahachie, Texas 75165.

INTERNIST, board certified or eligible to join four internists in 15-doctor, multi-specialty clinic in West Texas city of 35,000. Life and malpractice insurance, disability and retirement programs provided. Modern clinic building adjacent to accredited hospital. Starting salary $25,000. Contact Jack H. Burnett, Jr., M.D., Malone and Hogan Clinic, 901 Main Street, Big Spring, Texas 79720.

EXCELLENT OPPORTUNITY FOR PHYSICIANS in Carrizo Springs, Texas. Office space available in new professional building adjacent to hospital and nursing home. Excellent schools and housing in city. One general practitioner needed. For information write or call C. W. Vandervoort, 500 North 1st Street, Carrizo Springs, Texas 78834. Phone 876-2550.

UROLOGIST, board certified or eligible, to associate with a progressive and expanding multispecialty group in West Texas. Many fringe benefits including retirement program. No investment required. Adjoining accredited hospital. City population 35,000. Contact Ad-236, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

RADIOLOGIST, board certified or eligible, to associate with a progressive and expanding multispecialty group in West Texas. Many fringe benefits including retirement program. No investment required. Adjoining accredited hospital. City population 35,000. Contact Ad-236, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

PEDIATRICIAN, board certified or eligible, to associate with a progressive and expanding multispecialty group in West Texas. Many fringe benefits including retirement program. No investment required. Adjoining accredited hospital. City population 35,000. Contact Ad-236, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

ORTHOPEDIC SURGEON, PEDIATRICIAN, OBSTETRICIAN AND TWO GENERAL PRACTITIONERS needed by 19 doctor-group. Salary open. Full partnership in one year. 100-bed fully accredited hospital. Many fringe benefits including tax-sheltered retirement plan. For additional details write Chester Clinic and Hospital Association, 3330 South Lancaster Road, Dallas, Texas 75216, Attn: John B. Chester, M.D.

DISTRICT AND EMERGENCY ROOM PHYSICIANS—The Amarillo Hospital District has positions open for District and Emergency Room physicians. We operate a 275-bed general hospital and a 100-bed adult psychiatric hospital. Compensation is open and may be engaged on a retainer or contractual basis. Contact: Mr. Don Pipes, Personnel Director, Northwest Texas Hospital, P.O. Box 1110, Amarillo, Texas 79105.

WANTED GENERAL SURGEON as an associate with GP in small town in Central Texas. Have privately owned combination clinic and hospital. Beginning salary $4,000 per month or may rent space and be on own. Dr. M. A. Childress, Goldthwaite, Texas 76844. Phone 648-2212.

PHYSICIANS NEEDED: Staff physicians, general practitioners and/or board certified specialists, for staff of Travis State School. Fringe benefits include 40 hour work week, vacation and sick leave. Present and projected salary increases make positions attractive. Contact Medical Director, Travis State School, P.O. Box 430, Austin, Texas 78767.

GENERAL PRACTITIONER OR GP-SURGEON WANTED in East Texas community of Crockett (Houston County). Office space available for solo practice or association with other physicians in area—106-bed new hospital. Center for industry, farming, livestock, and forestry operations. Excellent schools, churches, and recreational facilities available. For additional information contact Houston County Development Foundation, P.O. Box 307, Crockett, Texas 75835, area code 713, 544-2359.

GENERAL PRACTITIONER NEEDED for North Central Texas community of 1600 located only 50 miles north of Dallas in the growing Sherman-Denison Metropolitan Area. Strong agricultural economy is balanced with fast growing area industry. Modern office space available in building occupied on one side by dentist. For full details, contact Ned Culp, D.D.S., P.O. Box 308, Howe, Texas 75059.

INTERNIST WANTED FOR CROUP PRACTICE on percentage basis with guarantee of $30,000 income per annum. Prefer someone familiar with Southwest. Please reply to Ad-264, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

FAMILY PRACTITIONERS, INTERNISTS, AND PEDIATRICIANS—you are needed in growing progressive West Texas city which received "Look" magazine's 1969 "All-America City" award. New magnesium plant. New junior college. Excellent school system. Well-equipped ultra-modern AHAJC accredited hospital. Third ranking oil producing county in state. Small town living with big city medical facilities. Write Carl A. Dillaha, M.D., Cogdell Center, Snyder, Texas 79549.

GENERAL PRACTITIONER NEEDED to associate with well-established physician in Dallas area. Contact: Ben Capote, M.D., 308 NW 2nd, Grand Prairie, Texas 75050.

PRIVATE INDIVIDUAL PRACTICE—$30,000 guaranteed first year with little or no practice expense. Second year potential unlimited. Maximum leisure time with family. Suburban medical center with lovely residential area five minutes away. Sanford Smith, Northshore Medical Center, AC 713, 453-5454, P.O. Box 9836, Houston, Texas 77015.

PSYCHIATRIC RESIDENCY in approved three year program. Effective connections with universities, medical schools, private clinics, and community centers. Outstanding faculty, and programs. Stipends with Texas license, $13,000, $14,000 and $15,000 per year. NIMH grants available. For full information write: Anthony P. Rousos, M.D., Director of Training, Austin State Hospital, Austin, Texas 78751.

INDUSTRIAL MEDICAL CLINIC LOCATED IN DALLAS NEEDS A GENERAL PRACTITIONER. First year salary guaranteed and is based upon experience with future percentage partnership. Please reply to Charles E. Cook, M.D., 426 Medical Arts Building, 1719 Pacific Avenue, telephone 747-3712, or 650 Locke Medical Building, 6011 Harry Hines Blvd., telephone 638-2730.

PSYCHIATRIC RESIDENCY: Progressive State Hospital, five year career program, affiliated with Southwestern Medical School in Dallas, starting July 1. Five year salary in excess of $80,000, plus other liberal benefits. Contact Luis M. Cowley, M.D., Superintendent, Terrell State Hospital, P.O. Box 70, Terrell, Texas 75160. An equal opportunity employer.

WANTED: GENERAL PRACTITIONER, INTERNIST, OR PEDIATRICIAN to join medical staff of Abilene State School. Base annual salary $20,000 with supplement of $1000-$3000 if board certified and working full-time in that capacity. Forty-hour week, excellent vacation/sick plan and about 11 holidays a year. Good life and hospitalization plan, Social Security and excellent State Retirement Coverage. Lovely community of 110,000 friendly people in West Central Texas. Texas license required. Contact Superintendent L. W. Cain, P.O. Box 451, Abilene, Texas 79604.

WANTED: CENERAL PRACTITIONER, INTERNIST, OR PEDIATRICIAN to join professional association in East Texas town of 15,000. Good benefits. Hospital nearby. Excellent schools and churches. For full details, contact: William W. Rugeley, Manager, Huntsville Medical and Dental Clinic Association, 1433 16th Street, Huntsville, Texas 77340.

NEEDED: OBSTETRICIAN/GYNECOLOGISTS. Yettie Kersting Hospital is fully accredited county owned hospital with 45 beds. Located in county seat of Liberty County, Texas. City population approximately 9,000, with county population of approximately 25,000. Nine general practitioners on the active medical staff. For additional information write Mrs. Elizabeth Youngblood, Administrator, Yettie Kersting Memorial Hospital, 1353 North Travis, Liberty, Texas 77575.

WANTED: LOCUM TENENS to do general medicine (no OB or surgery). Advise of time available. Salary open. Send medical curriculum vitae and references to Monroe Albert, M.D., 3118 Clark Avenue, San Antonio, Texas 78210.

WANTED: ASSOCIATE to associate with doctor doing internal medicine and cardiology. Equal time off. Salary for six months, then percentage on yearly sliding scale. Send medical curriculum vitae and references to Monroe Albert, M.D., 3118 Clark Avenue, San Antonio, Texas 78210.

WANTED: PARTNERSHIP to buy part, half or full interest in clinic building and practice of 21 years in metropolitan city in South Central Texas, consisting primarily of internal medicine. Large annual gross. Fair appraisal made of both before price placed on same. Send medical curriculum vitae to Ad-265, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

GENERAL PRACTITIONER to take over large, solo practice in GP and surgery. Present MD to move in June due to progressive family allergies. Recently built office, 3-bedroom, 2½ bath home, and mobile home on lake lot for sale, lease, or rent with option to buy part or all. Town of 9,000 in Lower Rio Grande Valley of Texas. 26-bed hospital, 50-bed nursing home, good schools, churches, hunting, fishing, boating, golf, near Mexico and Gulf of Mexico. Excellent opportunity for young, energetic MD. Should gross in excess of $60,000 first or second year. Offer not open to limited practitioner or semi-retired. Gene E. Bennack, M.D., 505 South 10th Street, Raymondville, Texas 78580. Phone 689-2188.

ASSOCIATE RADIOLOGIST WANTED. Expanding hospital to 200 beds. Salary open. Contact B. R. Pugh, DeTar Hospital, 506 East San Antonio, Victoria, Texas, 77901. Phone AC 512, 575-7441.

PATHOLOGY RESIDENCIES AND INTERNSHIPS available in 600-bed general hospital. Fully approved four year program in anatomical and clinical pathology. Average annual specimens and tests—348,587. Interns—$6300; residents—$8100 up. Board and laundry. Charles B. Mitchell, M.D., Director of Laboratories, Harris Hospital, 1300 West Cannon, Fort Worth, Texas 76104.

QUALIFIED TEXAS LICENSED PHYSICIAN for full-time emergency room work with group of five men. Salary $33,000 or guarantee $27,500, plus participating percentage. Forty-two hours average week, one month vacation, plus leaves to 30 days if desired. Send particulars to P.O. Box 6117, Corpus Christi, Texas 78411 or call AC 512, 991-6790.

INTERNIST-CARDIOLOGIST NEEDED. Office complete. Growing industrial area. County population 75,000. 205 bed fully accredited hospital with 10 bed ICU unit newly completed and fully equipped for CCU. No other internist in town. Excellent opportunity. Beautiful, friendly community. Camping, boating, fishing and hunting. Near Houston. Write Mrs. G. D. Carcia, 1915 Greenbriar Avenue, Orange, Texas 77630.

CLASSIFIED AD RATES & DATA: Classified Advertising sells for $6.00 per issue for 50 words or less, payable in advance. Ad numbers can be substituted for formal addresses upon request at no extra cost. Name and address of ad number listings can not be given out unless specific permission to do so has been given. The advertising office will not contact ad number holders except by mail. Copy deadline is the 20th of the month preceding publication. Send copy to Advertising Assistant, TEXAS MEDICINE, 1801 North Lamar Blvd., Austin, Texas 78701.

WANTED: MD TO DO GENERAL PRACTICE AND SURGERY. Presently a two member practice, one MD leaving. Starting guarantee $2000 monthly. No investment required. New hospital and clinic in the planning phase. Contact Dr. D. V. Rodgers, Blackwell Hospital and Clinic, Gorman, Texas 76454.

Situations Wanted

MD SEEKS OPENING in state, federal, insurance, industrial, college or relief work. Experienced in private practice and industrial and institutional work. Part time or locum tenens. Please reply to Ad-195, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

GP-SURGEON completing military service summer 1970 looking for partnership in small or medium sized town. Prefer 2 or 3 man GP group. Have completed GP residency and will do OB and surgery. Reply to Ad-266, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

ORTHOPEDIC SURGEON with extensive experience. Presently, chief of active service in a Texas hospital. Desires association with established surgeon or group. Prefer Central or East Texas. Reply to Ad-267, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

BOARD CERTIFIED SURGEON seeks location in Texas. No military obligations. Available immediately. Please reply to Ad-268, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

OPHTHALMOLOGIST—BOARD CERTIFIED age 33, leaving service in August 1970 desires position in the Dallas-Fort Worth area. Interested in association with one or more ophthalmologists but would also consider solo or multi-specialty group. Contact Major Gerry Tuveson, 30th Field Hospital, APO New York 09178.

GENERAL PRACTITIONER SEEKS LOCUM TENENS. Long experience in hospital emergency room and small town practice. For further information contact H. S. Cohen, M.D., 1415 Calle Del Ranchero, N.E., Albuquerque, New Mexico 87106.

SEEKING LOCATION AS ASSISTANT OR ASSOCIATE HOSPITAL ADMINISTRATOR: Degree of Master in Hospital Administration from St. Louis University. Three years with the United States Air Force Medical Corps. Will be separated from the Air Force and will be available by June 30, 1970. A complete resume is available by writing to 1Lt. Michael J. Lawler, 5010th USAF Hospital, APO Seattle 98737.

For Sale or For Rent

MEDICAL OFFICE FOR RENT: Prime location in North Dallas. Completely partitioned and available for immediate occupancy. Call area code 214, 363-6415 or 363-2770, or write Dr. Robert Londeree, 6140 Sherry Lane, Dallas, Texas 75225.

PRACTICE AND EQUIPMENT AVAILABLE. Recently vacated, completely equipped 1800 square foot medical clinic after 17 years practice, suburban Dallas. Excellent opportunity and facilities for two to three physicians to share. Area's steady and rapid growth creates urgent need for general practitioners, pediatricians, internists. Graduated rent until established. Inquire Allen Maurice Fain, M.D., 8303 Marvin Love Freeway, Dallas, Texas 75216.

AVAILABLE—Office suite designed for obstetrician or general practitioner in doctors building. Richardson, Texas. For additional information call AC 214, 363-2001, Dallas.

HOMESTEAD

CHILD PLACEMENT AGENCY

and

HOMESTEAD MATERNITY HOME

1250 W. Rosedale

335-5942 **336-7905**

Fort Worth, Texas

Licensed Adoption Service and Private, Confidential maternity care provided unwed expectant mothers. Obstetrical services by a Diplomate of THE AMERICAN BOARD. Also pediatric care furnished by a licentiate of THE AMERICAN BOARD.

FOR SALE: A used stationary hip type whirlpool with rotating chair —in excellent condition. Contact Austin Bone & Joint Clinic, 1011 East 32nd Street, Austin, Texas 78705, AC 512, 477-6341.

OFFICES AVAILABLE—Highly prosperous suburb, Houston, Texas. New office suites available with established physicians. Area needs otolaryngology, orthopedics, pediatrics, general practice, obstetrics and gynecology. For information call HO 4-1557 or write James E. Cook, M.D., 9320 Westview, Houston, Texas 77055. All new physicians in this area have been successful in very short period of time.

Miscellaneous

ATTENTION! Any member interested in entering into the development of 10.5 acres of choice land on Lake Livingston please contact Dr. Frank A. Vickers, Box 35, Huntsville, Texas 77340. More information will be mailed to you. Also call AC 713, 295-6441; 9:00 a.m. to 5:00 p.m., 295-7937 after 5:00 p.m. Participation limited to physician and dentist members only.

WANTED: PHARMACY LOCATION in clinic with 18 or more doctors. Contact Robert Grantham, Jr., P.O. Box 13350, Houston, Texas 77019.

SOUTHWEST REGIONAL POISON CONTROL CENTER AND TOXICOLOGY LABORATORY. Free toxicological consultation and information on medicinal and commercial products is available by phone when your patients are poisoned. Center is open 24 hours each day, 7 days a week, with professionally trained staff present. Call area code 713, 765-1420. Toxicological analyses performed by prearrangement with Dr. Nash, AC 713, 765-2408, University of Texas Medical Branch, Galveston, Texas 77550. Supported by PHS-CPF-69-21.

Milk from lactating patients with breast cancer, patients with a history of treated breast cancer and patients with a history of breast cancer in their immediate family is needed for special studies by physicians at The University of Texas M. D. Anderson Hospital and Tumor Institute at Houston. Doctors who might be interested in having the milk from their patients considered for the study should write to:

Dr. Gabriel Seman, Department of Virology
The University of Texas at Houston
M. D. Anderson Hospital and Tumor Institute
Houston, Texas 77025

or call collect (713) 526-5411, Ext. 383

ONCOLOGY

Oscar L. Morphis, M.D., F.A.C.R.
Radiation Therapy
Radium Therapy

R. P. O'Bannon, M.D., F.A.C.R.
Radiation Therapy

Norris Gilfillan, M.D., F.A.C.S.
Chemotherapy

Tom B. Bond, M.D., F.A.C.R.
Consultant

Jack M. Morgan, M.S., F.A.C.R.
Consultant-Physicist

1550 West Rosedale, Suite 620 Fort Worth 336-2028

ADVERTISING INDEX

American College of Cardiology
Ausculatation, Phono-cardiography, and Pulse Tracings—A Workshop 34

Arch Laboratories
Dicarbosil 34

Beverly Hills Hospital and Clinic 129

Blue Cross-Blue Shield of Texas 7

The Brown Pharmaceutical Company
Android 38
Cerebro-Nicin 38

The Brown Schools 13

Burroughs Wellcome & Company, Inc.
Empirin Compound with Codeine 39

Campbell Soup Company 83

Casualty Indemnity Exchange
Malpractice Insurance 37

Conal Pharmaceuticals, Inc.
Urised 57-58

Dallas Medical & Surgical Clinic and Hospital 2nd Cover

Francis Hospitels Incorporated
Convalescent Care 52

Geigy Pharmaceuticals
Butazolidin alka 40-41

Highland Hospital 50

Hoechst Pharmaceutical Co.
Doxidan 8

Homestead Child Placement 146

Humco Laboratory
Vasomist 59

Hynson, Westcott and Dunning, Inc.
Lutrexin 51

Mead Johnson Laboratories
K-Lyte 14-15
Mucomyst-10 54-55
Vasodilan 26-27

Kelsey-Seybold Clinic 48

The Killgore Children's Psychiatric Center and Hospital, Inc. 3rd Cover

King's Daughters Clinic Back Cover

Lederle Laboratories
Achrocidin 16
Achromycin V 56
Achrostatin V 50
Declostatin 87

Eli Lilly and Company
Ilosone 18

The Martin X-Ray and Radium Clinic 124

Medical Arts Clinic, Corsicana 134

The Medical Protective Company
Professional Liability Insurance 124

The National Drug Company
AVC 30
Quinamm 29
Tepanil Ten-tab 118

Oncology—Fort Worth 146

Parke, Davis & Company
Benylin Expectorant 12
Thera-Combex H-P 11

William P. Poythress & Company, Inc.
Uro-Phosphate 9

T. Rowe Price Growth Stock Fund, Inc. 34

The Prudential Insurance Company of America
TMA Group Insurance Plan 108

Radiology Associates of Fort Worth 134

A. H. Robins Company
Ambar #2 Extentabs 10
Dimetapp Extentabs 86
Donnagel 131
Phenaphen with Codeine 36
Robitussin 132-133

Roche Laboratories
Berocca 53, 130
Valium 35

Sandoz Pharmaceuticals
Mellaril 42

Scott and White Clinic Back Cover

G. D. Searle & Company
Lomotil 84-85

Smith Kline & French Laboratories
Darbid 17
Dyazide 148

Starlite Village Clinic 134

Surgical Mechanical Research, Inc.
Medical and Dental Equipment 59

Terrell's Laboratories and Medical Group 1

Texas Medical Association
1970 Annual Session 25, 119-122
Drug Abuse Program 28
Orient Adventure 32

Timberlawn Psychiatric Hospital 48

Torbett, Hutchings, Smith Memorial Hospital 2nd Cover

Travis Clinic and Nan Travis Memorial Hospital 134

Turner's Clinical & X-Ray Laboratories 124

The University of Texas M. D. Anderson Hospital and Tumor Institute
Department of Virology 146

Wichita Falls Clinic-Hospital 34

Physicians' Directory 135-144

Classified Advertisements 145-146

ADVERTISING RATES & DATA: Available on request from the Advertising Director, Texas Medicine. Advertising plates should be sent directly to the printer. Space reservations, copy and proofs should be sent to the Advertising Director. Represented nationally by the State Medical Journal Advertising Bureau, Inc., 510 North Dearborn Street, Chicago, Ill. 60610.

ADVERTISING & BUSINESS OFFICES: Texas Medical Association, 1801 North Lamar Blvd., Austin 78701; Telephone: 512-477-6704.

PRINTING OFFICES: Texas Medicine, c/o Stafford-Lowdon Company, 1114 West Daggett, Fort Worth 76104.

---

in cardiac edema

Dyazide®

Trademark

Each capsule contains 50 mg. of Dyrenium® (brand of triamterene) and 25 mg. of hydrochlorothiazide.

gets the water out

spares the potassium

Before prescribing, see complete prescribing information in SK&F literature or *PDR*.

Contraindications: Pre-existing elevated serum potassium. Hypersensitivity to either component. Continued use in progressive renal or hepatic dysfunction or developing hyperkalemia.

Warnings: **Do not use dietary potassium supplements or potassium salts unless hypokalemia develops or dietary potassium intake is markedly impaired.** Enteric-coated potassium salts may cause small bowel stenosis with or without ulceration. Hyperkalemia (>5.4 mEq/L) has been reported, in 4% of patients under 60 years, in 12% of patients over 60 years, and in less than 8% of patients overall. Rarely, cases have been associated with cardiac irregularities. Accordingly, **check serum potassium and BUN during therapy, particularly in patients with suspected or confirmed renal or hepatic insufficiency (e.g., certain elderly or diabetics). If hyperkalemia develops, substitute a thiazide alone. If spironolactone is used concomitantly with 'Dyazide', check serum potassium frequently**—their combined use can cause potassium retention and sometimes hyperkalemia. Two deaths have been reported in patients on such combined therapy (in one, recommended dosage was exceeded; in the other, serum electrolytes were not properly monitored). Observe regularly for possible blood dyscrasias, liver damage or other idiosyncratic reactions. Blood dyscrasias have been reported in patients receiving Dyrenium (triamterene, SK&F). Rarely, leukopenia, thrombocytopenia, agranulocytosis, and aplastic anemia have been reported with the thiazides. Watch for signs of impending coma in acutely ill cirrhotics. Thiazides are reported to cross the placental barrier and appear in breast milk; thus adverse reactions which have occurred in adults may occur in the fetus or newborn infant. Rarely, thrombocytopenia or pancreatitis has developed in newborn infants whose mothers had received thiazides during pregnancy. When used during pregnancy or in women who might bear children, weigh potential benefits against possible hazards to fetus.

Precautions: Do periodic serum electrolyte determinations. Do periodic blood studies in cirrhotics with splenomegaly. Antihypertensive effects may be enhanced in postsympathectomy patients. The following may occur: hyperuricemia and gout, reversible nitrogen retention, decreasing alkali reserve with possible metabolic·acidosis, hyperglycemia and glycosuria (diabetic insulin requirements may be altered), digitalis intoxication (in hypokalemia). Use cautiously in surgical patients. Adjust dose of antihypertensive agents given concomitantly.

Adverse Reactions: Muscle cramps, weakness, dizziness, headache, dry mouth; anaphylaxis; rash, urticaria, photosensitivity, purpura, other dermatological conditions; nausea and vomiting (may indicate electrolyte imbalance), diarrhea, constipation, other gastrointestinal disturbances. Rarely, necrotizing vasculitis, altered carbohydrate metabolism, hyperbilirubinemia, paresthesias, icterus, pancreatitis, and xanthopsia have occurred with thiazides alone.

Supplied: Bottles of 100 capsules.

SK&F

Smith Kline & French Laboratories

MARCH 1970

TEXAS MEDICINE

U. C. SAN FRANCISCO
MEDICAL CENTER LIBRARY
APR 13 1970

ANNUAL SESSION PROGRAM

HYSTEROSALPINGOGRAPHY

EYE EMERGENCIES

Torbett, Hutchings, Smith Memorial Hospital
And The Torbett Clinic

306 Coleman Street
Post Office Box 60

Marlin, Texas

Telephone: WE 6-3561

GENERAL SURGERY
Howard O. Smith, M.D., F.A.C.S.
D. R. Swetland, M.D., F.A.C.S.
Howard L. Smith, M.D., F.A.C.S.

INTERNAL MEDICINE
W. F. McKinley, Jr., M.D.
James S. Bussell, M.D.
C. G. Brown, M.D.

EYE, EAR, NOSE AND THROAT
S. W. Hughes, M.D.

ALLERGY
Walter S. Smith, M.D.*

OBSTETRICS AND PEDIATRICS
M. A. Davison, M.D., F.A.C.O.G.
W. L. Reese, M.D., F.A.C.O.G.

RADIOLOGY
J. M. Brown, M.D., F.A.C.R.

PATHOLOGY
W. W. Klatt, M.D.
Ronald E. Henderson, Jr., M.D.
Kent Smith, M.D.

UROLOGY
Howard O. Smith, M.D., F.A.C.S.

DENTISTRY
B. E. Latimer, D.D.S.

NEUROPSYCHIATRY
S. B. Morrison, M.D.

DERMATOLOGY
Maurice C. Barnes, M.D., D.A.B.D.

Administrator:
J. D. Norris, Jr.

Superintendent of Nurses:
Ruby Lowrance, R.N.

Howard O. Smith, M.D., FACS, Chairman of the Board of Trustees, of Torbett, Hutchings, Smith Memorial Hospital and the Torbett Clinic which opened January, 1963. The original hospital was founded by Dr. J. W. Torbett, Sr., in 1898.

The Torbett Clinic and Memorial Hospital continues to utilize the Marlin Hot Mineral Water and other forms of physical therapy as an adjunct in the treatment of arthritis and allied rheumatic conditions.

*Expired 4-24-69.

THE DALLAS MEDICAL & SURGICAL CLINIC AND HOSPITAL

4105 Live Oak Street

DALLAS, TEXAS

Telephone TA 3-4151

*Geo. M. Underwood, M.D., F.A.C.P., Diagnosis & Gastroenterology, D.A.B. Internal Medicine & Gastroenterology
P. E. Luecke, Sr., M.D., F.A.A.P., Pediatrics Diplomate American Board Pediatrics
*G. A. Davidson, B.S., M.D., Dermatology
*Wm. H. Potts, B.A., F.A.C.P., Internal Medicine
*Ozro T. Woods, M.D., Surgery, Emphasizing Tumors
Richard M. Smith, M.D., F.A.C.P., Diagnosis & Internal Medicine
J. Wilbur Bourland, Jr., M.D., Obstetrics & Gynecology
Harry M. Spence, M.D., D.A.B.U., F.A.C.S., Urology
Wells M. Wade, D.D.S., Dental Surgery
Halcuit Moore, M.D., F.A.A.P., Pediatrics Diplomate American Board Pediatrics
John B. Bourland, M.D., Gynecology & Obstetrics Diplomate American Board OB-GYN
Raymond W. Burford, M.D., D.A.B.R., Radiology
Henry G. Montgomery, M.D., F.A.C.S., D.A.B.S., Surgery
Edwin M. Cleveland, M.D., Internal Medicine
John B. Allen, M.D., Internal Medicine Diplomate American Board Internal Medicine
R. M. Burnside, M.D., D.A.B.O., Ophthalmology
Adam D. Green, M.D., Surgery
Morris E. Magers, M.D., Internal Medicine Diplomate American Board Internal Medicine
B. Celia Slaughter, M.D., F.A.A.P., Pediatrics Diplomate American Board Pediatrics
D. W. Shuster, M.D., D.A.B.O., Otolaryngology and Otologic Surgery
P. E. Luecke, Jr., M.D., Pediatrics, F.A.A.P., Diplomate American Board Pediatrics
Channing Woods, M.D., Internal Medicine
William W. Hoffman, M.D., D.A.B.U., F.A.C.S., Urology
James M. Copps, M.D., D.A.B.O., Ophthalmology
Joe B. Caldwell, M.D., D.A.B.R., Radiology
Terry D. Allen, M.D., D.A.B.U., Urology
J. Boyd Hollabaugh, D.D.S., General Dentistry
George P. Fosmire, M.D., F.A.C.S., D.A.B.S., General Surgery
Richard C. Stone, M.D., Internal Medicine and Gastroenterology
Daniel L. Maddox, D.D.S., General Dentistry
William N. New, M.D., Dermatology
Donald A. Sutherland, M.D., Internal Medicine (Hematology)
John R. Woodward, M.D., Obstetrics & Gynecology, Diplomate American Board OB-GYN
Masashi Kawasaki, M.D., D.A.B.O., Otolaryngology, Tumor and Reconstructive Surgery of the Head and Neck
Miss Billye J. Norris, R.N., Director of Nurses
C. H. Rosamond, Administrator
Arthur L. Cook, Business Manager

*Inactive status

TERRELL'S LABORATORIES

T. C. TERRELL, M.D., F.C.A.P., F.A.C.P., DIRECTOR
JOHN S. TERRELL, M.D., F.A.A.P., ASSISTANT DIRECTOR

FORT WORTH, TEXAS

211 Medical Arts Building

DEPARTMENT OF PATHOLOGY
T. C. Terrell, M.D., F.C.A.P., F.A.C.P.
May Owen, M.D., F.C.A.P., F.A.C.P.
Alexander A. Kosinski, M.D., F.C.A.P., F.A.C.P.
Joan Windmiller, M.D., F.A.A.P.

DEPARTMENT OF RADIOLOGY
H. W. Banker, M.D., D.A.B.R., M.A.C.R.
Ernest E. Holt, M.D., D.A.B.R., M.A.C.R.
James C. Moore, M.D., D.A.B.R., M.A.C.R.

DEPARTMENT OF CHEMISTRY
LaMonte A. Tucker, Ph.D.

DEPARTMENT OF BACTERIOLOGY & MYCOLOGY
Robert F. Devlin, Ph.D.

CONSULTING & ANALYTICAL SERVICES

PATHOLOGY, FORENSIC PATHOLOGY & VETERINARY PATHOLOGY: Histology, Cytology.
CLINICAL PATHOLOGY: Serology, Bacteriology & Mycology, Parasitology, Hematology.
INDUSTRIAL & CLINICAL CHEMISTRY: Radioassay, SMA-12 survey and other Automated Procedures. Hormone Chemistry, Chromatography, Electrophoresis, Immunochemistry.
TOXICOLOGY: Drugs, Water, Foods & Biological materials.
MANUFACTURING DEPARTMENT: Allergenic Extracts and Treatment Sets, Mounting Media, Specifically Prepared Reagents and Stains for Laboratory Use.

TERRELL MEDICAL GROUP

FORT WORTH, TEXAS

210 Medical Arts Building

INTERNAL MEDICINE Diagnosis, Allergy, Cardiology	T. C. Terrell, M.D., F.C.A.P., F.A.C.P. Elizabeth A. Taylor, M.D.
NEUROPSYCHIATRY Electroencephalography	Henry G. Gardiner, Jr., M.D.
PEDIATRICS Pediatric Hematology Adolescent Medicine & Pediatric Consultation	Joan Windmiller, M.D., F.A.A.P. John S. Terrell, M.D., F.A.A.P.
CLINICAL PSYCHOLOGY	Michael W. Wheeler, Ph.D.

Administrator: Arthur Fuston

TEXAS MEDICINE

VOLUME 66 NUMBER 3 MARCH 1970

SCIENTIFIC ARTICLES

The first five scientific articles in this issue are from Hermann Hospital in Houston. A. Pidd Miller of the Hermann Hospital staff is guest editor.

44 Dangers and Contraindications to Hysterosalpingography

Byron B. Holt, a graduate of The University of Texas Medical Branch, Galveston, and former resident in obstetrics and gynecology at Hermann Hospital, Houston, is now in private practice in Houston. His coauthor, J. T. Armstrong, is chief of Hermann Hospital's Department of Gynecology.

46 Percutaneous Subclavian Vein Catheterization in Children

Donald R. Butts is senior surgery resident at Hermann Hospital in Houston, and in 1968-1969 he received the Violet H. Keiller Award as outstanding house physician. Dr. Butts is a graduate of The University of Texas Medical Branch, Galveston. His coauthor, Henry Goodwin Glass, is associate chief of surgery and vice chief of staff, Hermann Hospital.

49 Roentgenographic Diagnosis

John D. Reeve is director of the Department of Radiology at Hermann Hospital in Houston.

50 Management of Ocular Emergencies

Elizabeth S. Crawford and Robert B. Gillett are associated with the Department of Ophthalmology, Hermann Hospital, Houston.

52 Carcinoma in Situ in Adenomatous Polyps of Vermiform Appendix

Wilson G. Brown is director of laboratories at Hermann Hospital, Houston. His coauthor, Enrique Van Santen, was formerly a resident in pathology there; he is now a major in the US Army, serving at McDonald Army Hospital, Fort Eustis, Va. Dr. Brown is a diplomate of the American Board of Pathology (Anatomic Pathology, Clinical Pathology) and a member of numerous professional organizations.

54 Familial Endocrine Adenomatosis

Hylmar E. Karbach, Jr, FACS, practices general surgery in New Braunfels and is clinical assistant professor of surgery at The University of Texas Medical School at San Antonio. He is a diplomate of the American Board of Surgery and a member of several professional societies. His coauthor, D. Leo Galindo, is director of the Laboratory of Pathology, San Antonio, and clinical professor of pathology at The University of Texas Medical School.

HOLT

BUTTS

KARBACH

WOLMA

KIEFER

CURB

HALEY

64 Mesenteric Artery Occlusion; Recognition and Management of Intestinal Ischemic Syndromes

Fred J. Wolma is professor and chief, Division of General Surgery, and professor of thoracic and cardiovascular surgery, The University of Texas Medical Branch, Galveston. His coauthor, James A. Allums, is resident in thoracic and cardiovascular surgery. Dr. Wolma is a diplomate of the American Board of Surgery and a fellow of the American College of Surgeons, and holds membership in several other professional organizations.

68 Regional Enteritis; Diagnosis and Management

Everett D. Kiefer is chairman emeritus of the Department of Gastroenterology, Lahey Clinic, Laconia, NH. He is a diplomate of the American Board of Internal Medicine (Gastroenterology), and a member of the American Gastroenterological Association. Dr. Kiefer also has served as chairman of the AMA Section on Gastroenterology and Proctology.

72 Complete Transection of Duodenum by Blunt Trauma

James W. Nixon, FACS, is a diplomate of the American Boards of Surgery and Thoracic Surgery, and a fellow of the American College of Chest Physicians and of the Royal Society of Medicine. Specializing in surgery, he practices in San Antonio.

79 Postgastrectomy Recurrent Peptic Ulcer

Dolph L. Curb is associated with The Diagnostic Clinic of Houston. He is a diplomate of the American Board of Internal Medicine (Gastroenterology) and a member of the American Gastroenterological Association and other professional groups. Dr. Curb's nonmedical interests include photography, rocks, and stamps.

82 Clinicopathological Conference

Participants in this CPC from The University of Texas (Southwestern) Medical School and Parkland Memorial Hospital, Dallas, are Robert Haley, junior medical student and former extern in pathology; Spencer Shropshire, fellow in internal medicine; Omkar N. Markand, assistant professor of neurology; J. Richard Crout, associate professor of pharmacology and internal medicine; Norman M. Kaplan, associate professor of internal medicine; and Edwin H. Eigenbrodt, associate professor of pathology and guest editor for this series. Anthony N. D'Agostino, associate professor of pathology, reviewed the autopsy and the presentation of pathologic findings.

EDITORIALS

17 Emphasis on Family Medicine Renews Basic Concept
M. L. Ross

18 Organizations Promote Our Competence
W. S. Lorimer, Jr

21 Our Hostile Man-Made Environment
Charles Max Cole

DEPARTMENTS

4 Association and Late News

27 Highlights of Coming Meetings

33 Continuing Education Courses

95 News

97 TMA Annual Session Housing Information

101 Medicine in Literature

102 Mad Medics Plus Three Jazz It Up For Own Fun and Others' Profit

104 Pamphlets

104 Personals

104 Recent Deaths

P-1-P-84 Complete Annual Session Program

ON THE COVER

From trumpeting out the sounds of Dixieland for their own enjoyment to playing for audiences throughout Texas, the Mad Medics Plus Three have come a long way since their first rehearsal several years ago in Wichita Falls. And en route they have lured to dance floors with the irresistible rhythms of jazz those who haven't danced since they last did the Charleston or heard Guy Lombardo as well as those who grew up between the twist and the frug. Read more about the accomplishments of these four physicians and three businessmen on pp. 102-103—and don't miss the fun when they perform "Saturday Night at the Fairmont" in Dallas during this year's Annual Session.

NEXT MONTH

April's issue will be devoted to children, and will include articles on sex education, high-risk infants and underachievers, childhood depression, emotional education, nutritional rickets, chemotherapy for childhood rhabdomyosarcoma, ulcer of ileum in a premature infant, pediatric gynecology, and labor, delivery, and perinatal death.

Also, issues coming before the TMA House of Delegates will be delineated, and one editorial will center on rising rates for professional liability insurance.

PUBLICATION INFORMATION

Texas Medicine is published monthly by the Texas Medical Association.

Editorial and Business Offices: 1801 N. Lamar Blvd., Austin, Texas 78701; Telephone: Area Code 512 477-6704.

Second Class Postage paid at Austin, Texas, with additional entry at Fort Worth, Texas, under Act of March 3, 1879.

Subscription communications should be sent to the Business Offices, $3 per year for members; $6 for nonmembers; $8 for foreign; $3 for medical students; single copy, $1.

Contributions, previously unpublished, are welcomed for review; suggestions for preparation are available from the Editorial Offices. News and other items should be sent to the Editorial Offices by the 10th of the month preceding the month of publication. All contributions are sent at the owner's risk.

Printing Offices: c/o Stafford-Lowdon Company, 1114 West Daggett, Fort Worth 76104.

ASSOCIATION & LATE NEWS

Scheduled Cutback in Medicaid Reimbursals Under Title XIX Avoided; Governor Transfers Funds From Medical Schools to Welfare Department

A 20% cut in reimbursing providers of services under Medicaid as well as reductions in assistance to families with dependent children was averted last month when Governor Preston Smith made additional funds available to the State Department of Public Welfare.

Governor Smith transferred $13.5 million that had originally been appropriated by the 1969 Legislature for the development of The University of Texas Medical School at Houston and the Texas Tech University Medical School at Lubbock to the welfare department's use in administering the Title XIX program in Texas for the remainder of the current fiscal year.

From the $10 million that was appropriated last year to each of the two new medical schools, $6 million was made available by the UT Medical School at Houston and $7.5 million, by the Texas Tech University Medical School. The remaining funds, however, are expected to support financially the schools' development during the current biennium; and members of the House and Senate will have an opportunity to replace the transferred funds when the 62nd Legislature convenes next January. The preparation of architectural plans for the permanent medical school building at Houston will continue without delay, and the first class of medical students will still be admitted to that institution in September, 1970. The developmental stages of Texas Tech's medical school will also be uninterrupted as a result of the transfer.

Although the proposed cutback, which had been scheduled to become effective April 1 and which had previously drawn concern from TMA officials and members, was avoided, TMA President Dr. Charles Max Cole said in a letter to Governor Smith that it seemed evident that the Medicaid program must be redesigned in order to avoid possibly grave financial problems in the future. He assured the Governor of the full cooperation and support of the Texas Medical Association in re-evaluating the entire Medicaid program with the objective of developing a fiscally sound and effective plan for its administration.

Governor Smith was also officially commended by the President and representatives of the Texas Medical Association for bringing about what they feel will be an effective solution to the acute financial problems which confront the State Department of Public Welfare at this time.

Leaders of the Texas Medical Association have already met twice and will continue to meet with the State Department of Public Welfare and Blue Cross-Blue Shield of Texas, fiscal intermediary for the Medicaid program in this state, to explore various ways in which savings can be realized and state and federal funds can be used as effectively as possible. Several approaches are being studied; and the possibility of deductibles, coinsurance features, and limitation of benefits is being evaluated. However, Dr. Cole cautioned that efforts to bring about immediate reductions in expenditures have been hampered by specific provisions and regulations in the federal law.

Texas MDs Oppose New HEW Regulation

Officers and members of the Texas Medical Association have recently protested the regulation proposed by the US Department of Health, Education, and Welfare relating to methods of administration in cases of fraud in the rendering of medical services under Title XIX of the Social Security Act.

Effective April 1 if invoked, HEW's Social and Rehabilitation Service regulation 40-14 will require that the following statement be imprinted in bold face type above the claimant's signature on all provider claim forms:

> This is to certify that the foregoing information is true, accurate, and complete.
>
> I understand that payment and satisfaction of this claim will be from federal and state funds, and that any false claims, statements, or documents, or concealment of a material fact, may be prosecuted under application of federal or state laws.

The Texas Medical Association maintains that this proposal is unnecessary and uncalled for. TMA members already must pledge their adherence to the Principles of Medical Ethics, a pledge which precludes fraudulent activities and violations of which can result in loss or suspension of medical society

membership. Similarly, all physicians who practice in Texas are subject to the provisions of the Medical Practice Act, under which fraudulent practice is grounds for revocation of license. In addition, false or fraudulent claims already may be prosecuted under federal law.

Furthermore, because only a few cases charging fraud in the rendering of medical services have ever been filed against its members, TMA feels that it is unnecessary to admonish or warn the great majority of Texas physicians by requiring them to sign a claim form containing the statements proposed by HEW. Many TMA members view such a requirement as a direct implication by HEW that physicians should be suspect. As a result, the regulation could adversely affect some 460,000 Texas residents who are beneficiaries of the Medicaid program, since physicians may choose to withdraw from the Title XIX program rather than to sign the restrictive form.

In an effort to encourage the Department of Health, Education, and Welfare to rescind the proposed regulation in the interest of enhancing rather than reducing physician participation in the Medicaid program in Texas, TMA President Dr. Charles Max Cole has sent to the administrator of HEW's Social and Rehabilitation Service and to Texas Senators and Congressmen a letter citing the Association's objections. Other states have been urged to make known their opposition to the regulation.

TMA Trustees Approve Agreement for Libraries

The Texas Medical Association's Board of Trustees has approved the participation of TMA's Memorial Library in an agreement for resource libraries of the South Central Regional Medical Program. The region comprises ten libraries in Texas, New Mexico, Oklahoma, Arkansas, and Louisiana.

The agreement is designed to make it possible for these resource libraries to receive federal funds under the Regional Medical Library Grant Program with which to build their collections and to offer improved services.

Since Memorial Library is financially supported by TMA members and the Texas Medical Association does not plan to submit an application for such federal funds, TMA had originally requested that, rather than sign the formal agreement, it be allowed to submit a statement to the South Central Regional Medical Program reiterating that TMA would continue to cooperate and work with all medical libraries in the region as it has in the past and that it would contribute to and be a part of the program. However, TMA representatives were then informed that a properly executed agreement is required for a resource library to participate in the program.

Therefore, although TMA's cooperation with the agreement will not affect the services or the financing of Memorial Library, according to Miss Pauline Duffield, librarian, the agreement should benefit other libraries participating in the program. Miss Duffield added that the Texas Medical Association can choose to withdraw from the program at any time.

RMP of Texas Directs Operation of 22 Projects

Regional Medical Program of Texas now has 22 programs in operation throughout the state. These projects are:

Health Careers Personnel Program, Bob Jobes, Assistant Director, Health Careers Program, Texas Hospital Association, $29,801: There will be 60 career assemblies for Negro and Latin-American high school students in various areas; these will test the effectiveness of using recognized personalities within the Negro and Latin-American communities in recruiting students to health careers.

A Beginning Program of Continuing Education for Occupational Therapists, Mrs. Cary Blalock, The University of Texas Medical Branch, Galveston, $24,000: A series of four two-day workshops for occupational therapists will be conducted by Mrs. Maybelle Stout, educational psychologist.

Development and Distribution of an Inter-Regional Cooperative Serial Control System in the South Central Library Region, C. Lee Jones, The University of Texas Medical Branch, Galveston, $28,000: Periodical holdings of Texas biomedical libraries and those of four other states will be compiled to provide a single document showing the location of any volume of any journal title held by any of the libraries.

Regional Rehabilitation Projects: (1) Coordinated Community Action, Wharton, Lewis A. Leavitt, M.D., Project Director, Baylor College of Medicine, $127,063: Two hospitals in the community are providing services, and more than 375 patients have received treatment.

(2) Coordinated Community Action, St. Elizabeth's Hospital, Houston, Lewis A. Leavitt, M.D., Project Director, Baylor College of Medicine, $160,000: Twelve community agencies support a comprehensive rehabilitation program for patients in a ghetto area.

(3) Coordinated Community Action, The University of Texas Southwestern Medical School, Dallas, and East Texas Treatment Center, Kilgore, Richard D. Burk, M.D., $74,620: The program provides comprehensive rehabilitation services for patients referred to the center in Kilgore.

(4) Demonstration of a Community Rehabilitation Center, Bihl Rehabilitation Center, New Braunfels, and The University of Texas Medical School at San Antonio, Arthur Grant, M.D., Project Director, $67,607: From Jan. 1 through mid-November, 1969, 191 patients were referred to the center.

Long Distance Telephonic Consultation, John S. Chapman, M.D., The University of Texas Southwestern Medical School, Dallas, $35,000: More than 500 specialists in the Dallas area serve as consultants on a rotating basis to provide telephone consultation for physicians within a 150-mile radius. In response to the positive reception of this

UNIT VALUES FOR TMA MEMBERS RETIREMENT PLAN AND TRUST

(As a service to participants in the TMA Members Retirement Plan and to physicians interested in enrolling in the program, comparative values for investment media are published regularly in *Texas Medicine*. Figures shown are the latest available at press deadline and are for comparison purposes only. Most daily newspapers list up-to-the-minute values on mutual funds.)

Investment Media	Original Price 9-30-68	Net Asset Value Per Share 1-31-70	Net Asset Value Per Share 1-31-70*
Mercantile National Bank Stock Fund	$10.25	$ 8.87	$ 8.87
Loomis-Sayles Capital Development Fund	14.20	10.23	10.54
T. Rowe Price Growth Stock Fund	25.93	23.60	24.54
Loomis-Sayles Mutual Fund	16.82	13.17	13.57
Stein Roe & Farnham Balanced Fund	23.34	18.25	18.80
Mercantile Bank Fixed Income Fund	10.00	8.96	8.96

*Adjusted to include dividends and distributions since 9-30-68.

project, the service territory is being expanded.

Stroke Demonstration Project, Scott Davenport, M.D., The University of Texas Southwestern Medical School and Presbyterian Hospital, Dallas, $240,499: Patients are now being admitted to the 22-bed stroke unit, which has a professional staff and provides continuing education programs for nurses and physicians.

Educational Media Instructional Program for Allied Health Educators, George M. Fleming, Ed.D., Baylor College of Medicine and Methodist Hospital, Houston, $17,500: The purpose is to inform and instruct hospital personnel and others in production and use of audiovisual media equipment and materials. A manual of media resources has been completed for participants in media institutes.

Area-Wide Total Respiratory Care, Daniel E. Jenkins, M.D., Baylor College of Medicine, $242,915: A medical advisory committee guides total care, including screening and treatment, in a 12-county area. A statistical method for computer analysis of screening tests has been developed, and model programs of care have been established at several Houston institutions to train physicians and other health personnel.

Extending Coronary Care Nursing Training to Community Hospitals, Levi Perry, M.D., St. Joseph Hospital, Houston, $84,000: St. Joseph and Riverside General Hospitals' physicians and staff members are pooling efforts to train 20 nurses from Riverside; they receive 120 hours of training at Riverside and 40 hours of clinical experience at St. Joseph. A two-bed coronary care unit is being installed at Riverside.

Helping Hospitals Organize and Strengthen Inhalation Therapy Patient Care Programs, George M. Fleming, Ed.D., Baylor College of Medicine and Methodist Hospital, Houston, $50,000: As a result of this cooperative effort to provide education in community hospitals, 29 hospitals have organized inhalation therapy departments, 11 are developing facilities, and 19 have strengthened existing ones.

State-Wide Cancer Registry System: Daniel J. Schneider, M.D., The University of Texas School of Public Health, Houston, $80,000: The purpose is to provide a centrally located and computerized registry of cancer patients that can provide physicians a more useful, accurate, and reliable means of assuring continuity of care. A pilot project has been initiated.

Expansion of Regional Maxillofacial Prosthetic Services, J. D. Robertson, D.M.D., The University of Texas Dental Branch, Houston; The University of Texas Southwestern Medical School, Dallas; Baylor University College of Dentistry; Parkland Memorial Hospital, $100,000: This will institute and integrate maxillofacial prosthetic services in the North Texas area, and will be offered to surgeons and radiologists to strengthen the total health care of the cancer patient. It will provide training for maxillofacial prosthodontists and technicians.

Medical Physics, Robert Shalek, Ph.D., M. D. Anderson Hospital, Houston, $49,584: A voluntary organization, Texas Regional Medical Physicists, has formed to increase and improve knowledge and performance of physicists associated with x-ray therapy and diagnosis. Already established are a regional station for calibration of radiation-measuring instruments, a mailing service for verification of dosimeter readings, and a network to provide assistance or actual calculation of necessary dose of x-ray therapy.

Eradication of Cervical Cancer in South Texas, John Simpson, M.D., The University of Texas Medical School at San Antonio, $90,000: In South Texas, 128 clinics have been established to provide cytological screening for cervical cancer. Some 163 cases of cancer have been detected and about 36,000 women have had screening tests.

Dial Access Telephonic Analysis Medical Consultation Service: Robert C. Hickey, M. D. Anderson Hospital, Houston, $16,500: A series of five- to six-minute medical lectures on cancer diagnosis and treatment is being recorded, covering some 70 subjects. They are to be made available to physicians via Wide Area Telephone Service.

Annual Clinical Conference, Robert C. Hickey, M. D. Anderson Hospital, Houston, $15,000: The first conference drew 391 physicians and others; proceedings are being published.

Regional Consultation Services—Radiotherapy, Gilbert H. Fletcher, M.D., M. D. Anderson Hospital, Houston, $60,000: Through use of consultants, an optimum cancer therapy program is to be developed and maintained in adequately equipped hospitals. Thus far, three hospitals are being served. Special projects are to develop improved treatment techniques and evaluate effectiveness of new equipment designs.

Medical Genetics, David Anderson, Ph.D., M. D. Anderson Hospital, Houston, $26,748: Lectures, exhibits, and movies are being held at symposia of the Texas Academy of General Practice to stress the role of genetic factors in many neoplasms; articles on the subject are appearing in *GP Press*, and there are plans for a medical genetics team to travel throughout the state for consultation about cases.

Reduce Complications Following Radiotherapy, Joe B. Drane, D.D.S., The University of Texas Dental Branch, Houston, $37,000: This project capitalizes on new, clinically proved research findings for the reduction of the incidence of complications following radiotherapy in treatment of head and neck cancer; it shows the need for cooperation between radiotherapists and dentists in patient care. Recent reports indicate that intensive preoperative management of gingivo-dental disease can reduce the complications following surgery, radiotherapy, or both, for oropharyngeal carcinoma.

Houston Hospital Creates Medical Information Aid

Physicians in all communities in the state have had available since March 1 a medical information service created by The University of Texas M. D. Anderson Hospital and Tumor Institute at Houston.

The "Dial Access" system consists of 100 pre-recorded medical lecture-consultations on various treatments, drugs, and techniques used to help the cancer patient. Recordings which range up to seven minutes in length are transmitted via telephone. Long distance calls for Texas physicians are toll-free.

"Dial Access serves as a consultative aid and is not intended to replace the intensive personal care of the attending physician," said Dr. Robert C. Hickey, executive vice president and director.

Presentations were recorded by physicians and medical investigators at the university cancer hospital, as well as by other Texas scientists. Recordings will be upgraded and expanded periodically as new information evolves and new subjects are requested. The Dial Access program operates as an extension of M. D. Anderson's Research Medical Library.

Dial Access was initiated after an extensive survey was made under the auspices of the Regional Medical Program of Texas. This survey indicated that Texas physicians are interested in utilizing a variety of methods to keep current on the latest diagnostic and therapeutic concepts in caring for the cancer patient. To help meet this need RMP supplied funds for playback equipment.

Physicians may obtain a list of topics and information on how to use the free service by writing to Dial Access, Office of the Director, The University of Texas M. D. Anderson Hospital and Tumor Institute, Texas Medical Center, Houston 77025.

How about some fringe benefits for me?

(for the hospital administrator; for the doctor)

In many companies, BLUE CROSS® and BLUE SHIELD® are a "fringe benefit." But — what do they do for the hospital? For the doctor?

Take a minute to think just how much of the credit burden — checking, approving, disapproving, collecting, *and non-collecting* — Blue Cross and Blue Shield have eliminated for hospitals and doctors of Texas, just in this past month — a total of around $8,813,314.

Quite a "fringe benefit," isn't it? Thank goodness — *"Everybody's swingin' to the Blues!"*

BLUE CROSS® and BLUE SHIELD®'

Hospital and Health Care Coverage
(GROUP HOSPITAL SERVICE, INC.)

Medical and Surgical Benefits
(GROUP LIFE & HEALTH INSURANCE COMPANY)

OF TEXAS

MAIN AT NORTH CENTRAL EXPRESSWAY ■ DALLAS, TEXAS 75222

® American Hospital Association
®' National Association of Blue Shield Plans

EVERY WOMAN WHO'S LOVED...
will appreciate this advice from you
Many women find they occasionally have excessive discharge, spotting and increased mucus secretion, which can result in unpleasant odor. Douching with StomAseptine cleanses, deodorizes, soothes and relieves itching . . . and helps prevent embarrassment. Your recommendation of a regular program of StomAseptine douching will do wonders for a woman's self-assurance and peace of mind.
STOMASEPTINE®
DOUCHE POWDER
cleanses internally
deodorizes thoroughly
StomAseptine provides sodium perborate, sodium bicarbonate, sodium chloride, sodium borate, menthol, thymol, eucalyptol, methyl salicylate and aromatics.
HARCLIFFE LABORATORIES, Inc.
423 Atlantic Avenue, Brooklyn, N.Y. 11217

EXPO '70
the year to see the ORIENT!

TEXAS MEDICAL ASSOCIATION
ORIENT ADVENTURE

Two fun-filled weeks in exotic and colorful Japan and Hong Kong. Our complete Orient Adventure costs much less than round trip tourist air fare, yet includes direct 707 private jet flights, deluxe hotels, gourmet meals, all the freedom of individual travel, plus many other exclusive features. The Orient Adventure is departing from Dallas and Houston on August 24 and August 30, 1970.

Space is strictly limited on this exciting adventure. To confirm reservations a $100 deposit per person is required. Join us. Send your deposit now to

Texas Medical Association
1801 North Lamar Blvd.
Austin, Texas 78701

$898.00

RETURN THIS COUPON NOW!

SEND TO: Texas Medical Association
1801 North Lamar Blvd.
Austin, Texas 78701

Enclosed is my check for $_____ ($100 per person)

NAME _____

ADDRESS _____

CITY _____ STATE _____

ZIP _____ PHONE _____

Mead Johnson–pharmaceuticals created for your specialized clinical needs

new 10% solution...
particularly convenient for home use

MUCOMYST®-10
(ACETYLCYSTEINE)

liquefies thick, viscid mucus in chronic bronchitis and emphysema

Mucomyst, as 20% acetylcysteine, has been used with safety and effectiveness in hospitals for over five years.

Now a new 10% solution, Mucomyst-10, offers you the choice of prescribing a lesser concentration whenever you feel this is desirable. It provides added convenience and simplicity, particularly for your patients using nebulizing units at home.

By including Mucomyst-10 in the home management regimen, you can provide full mucolytic benefits for many of your patients with chronic bronchitis and emphysema complicated by tenacious secretions.

Indications: Mucomyst has been demonstrated to be clinically effective as adjuvant therapy in a wide range of conditions in which thick, viscous mucus is a problem, including: postoperative atelectasis and pneumonia; chronic bronchopulmonary disease (emphysema, chronic bronchitis, asthma, and bronchiectasis); acute bronchopulmonary disease (pneumonia, bronchitis, and tracheobronchitis); tracheostomy care; facilitation of bronchial studies; maintenance of an open airway during anesthesia; and to help control pulmonary complications of cystic fibrosis. **Contraindications:** Mucomyst is contraindicated in those patients who are sensitive or who have developed a sensitivity to it. **Warnings: After proper administration of acetylcysteine, an increased volume of liquefied bronchial secretions may occur. When cough is inadequate, the open airway must be maintained by mechanical suction if necessary. When there is a large mechanical block due to foreign body or local accumulation, the airway should be cleared by endotracheal aspiration, with or without bronchoscopy. Asthmatics under treatment with Mucomyst should be watched carefully. If bronchospasm progresses, this medication should be immediately discontinued. Adverse Effects:** Adverse effects have included stomatitis, nausea and rhinorrhea. Sensitivity and sensitization to Mucomyst have been reported very rarely. A few susceptible patients, particularly asthmatics (see **Warnings**), may experience varying degrees of bronchospasm associated with the administration of nebulized acetylcysteine. Most patients with bronchospasm are quickly relieved by the use of a bronchodilator given by nebulization. **Administration & Dosage:** Mucomyst may be administered by nebulization into a tent, Croupette, face mask, or mouthpiece; or by direct instillation. **Mucomyst should not be placed directly into the chamber of a heated (hot-pot) nebulizer.** Complete details on dosage, administration, and compatibility are included in the package insert. Additional information may be obtained from Mead Johnson Laboratories. **Supplied: Mucomyst-10 (acetylcysteine)**, a sterile 10% solution, in vials of 10 ml. and 30 ml.; **Mucomyst (acetylcysteine)**, a sterile 20% solution, in vials of 10 ml. and 30 ml.

Mead Johnson
LABORATORIES

1969 MEAD JOHNSON & COMPANY • EVANSVILLE, INDIANA 47721 70469

YOUR TMA MEMBERSHIP SUPPORTS

THE MEMORIAL LIBRARY

The Texas Medical Association Memorial Library is one of the leading medical libraries in the country and is maintained for the use of TMA members. Built upon a collection of 45,000 bound medical volumes, the library also maintains an extensive reprint collection, receives over 1100 medical journals monthly, and owns over 400 professional and lay films. Tape recordings, including some Cassettes, from the current Audio-Digest Foundation editions are available on the subjects of general practice, surgery, internal medicine, pediatrics, obstetrics-gynecology, ophthalmology, anesthesiology, cardiology, and otolaryngology, as well as the AMA News Journal.

Complete informational service of all kinds is available—including scientific, socio-economic, and legislative subjects—from the library and other departments of your TMA. You may come by, write, telephone, or wire your requests, and materials will be mailed the same day, if possible. There is, of course, no charge.

TEXAS MEDICAL ASSOCIATION

1801 North Lamar Boulevard, Austin, Texas 78701
Phone 512 477-6704

Painful night leg cramps...

unwelcome bedfellow for any patient– including those with arthritis, diabetes or PVD

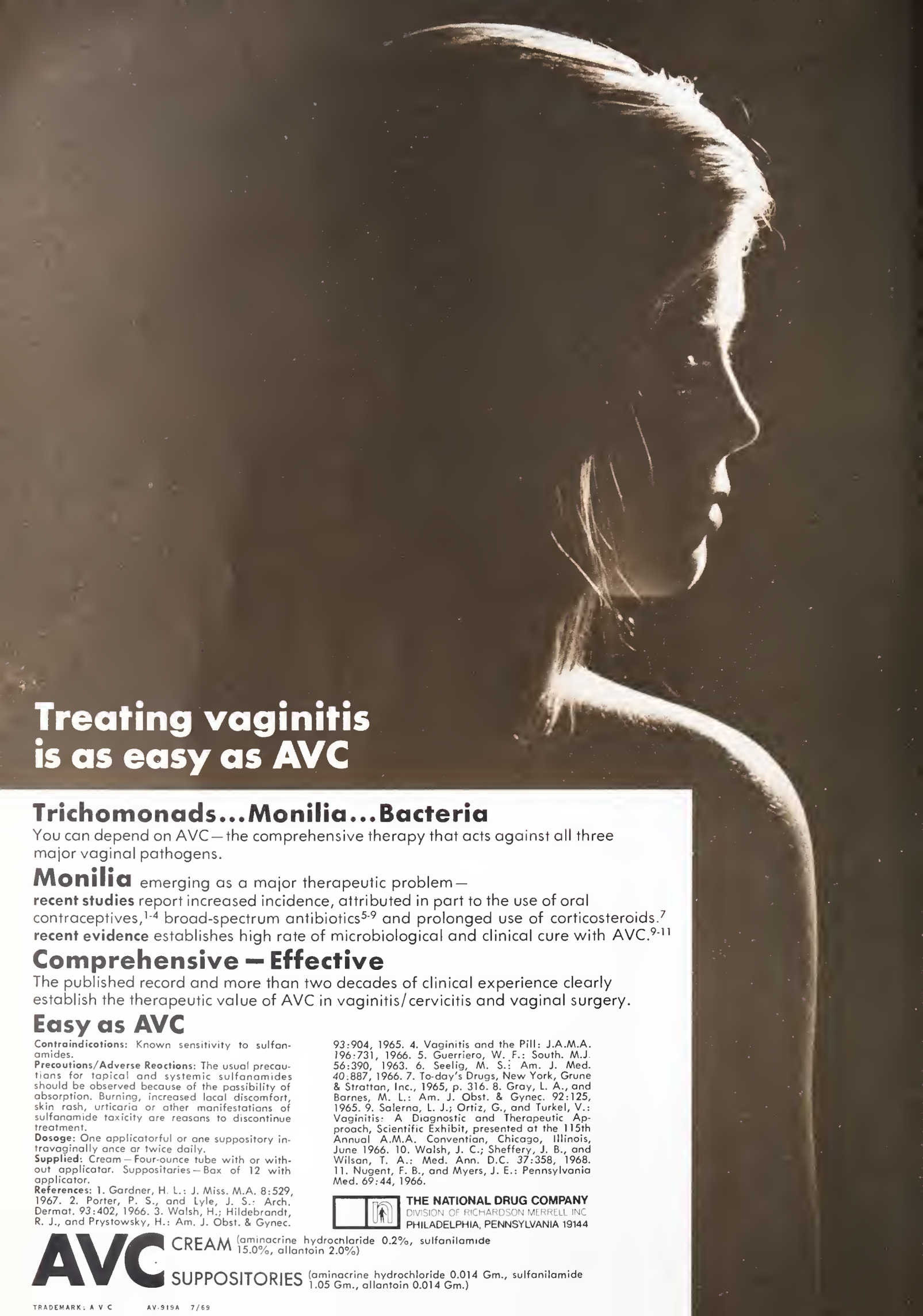
One thing patients can sleep without, particularly patients with chronic disease conditions such as arthritis, diabetes or PVD, is painful night leg cramps. Although seldom the presenting complaint, night leg cramps can tie your patients up in painful knots. Now, just one tablet of QUINAMM at bedtime can usually bring an end to shattered sleep and needless suffering. Your patients will sleep restfully—gratefully—with QUINAMM, specific therapy to prevent painful night leg cramps.

Prescribing Information—Composition: Each white, beveled, compressed tablet contains: Quinine sulfate, 260 mg., Aminophylline, 195 mg. **Indications:** For the prevention and treatment of nocturnal and recumbency leg muscle cramps, including those associated with arthritis, diabetes, varicose veins, thrombophlebitis, arteriosclerosis and static foot deformities. **Contraindications:** QUINAMM is contraindicated in pregnancy because of its quinine content. **Precautions/Adverse Reactions:** Aminophylline may produce intestinal cramps in some instances, and quinine may produce symptoms of cinchonism, such as tinnitus, dizziness, and gastrointestinal disturbance. Discontinue use if ringing in the ears, deafness, skin rash, or visual disturbances occur. **Dosage:** One tablet upon retiring. Where necessary, dosage may be increased to one tablet following the evening meal and one tablet upon retiring. **Supplied:** Bottles of 100 and 500 tablets.

THE NATIONAL DRUG COMPANY
DIVISION OF RICHARDSON-MERRELL INC.
PHILADELPHIA, PENNSYLVANIA 19144

Quinamm™
(quinine sulfate 260 mg., aminophylline 195 mg.)

Specific therapy for night leg cramps



Treating vaginitis is as easy as AVC

Trichomonads...Monilia...Bacteria

You can depend on AVC—the comprehensive therapy that acts against all three major vaginal pathogens.

Monilia emerging as a major therapeutic problem—
recent studies report increased incidence, attributed in part to the use of oral contraceptives,[1-4] broad-spectrum antibiotics[5-9] and prolonged use of corticosteroids.[7]
recent evidence establishes high rate of microbiological and clinical cure with AVC.[9-11]

Comprehensive—Effective

The published record and more than two decades of clinical experience clearly establish the therapeutic value of AVC in vaginitis/cervicitis and vaginal surgery.

Easy as AVC

Contraindicotions: Known sensitivity to sulfanamides.
Precoutions/Adverse Reoctions: The usual precautians for tapical and systemic sulfanamides should be observed because of the passibility of absorption. Burning, increased lacal discomfort, skin rash, urticaria or ather manifestatians of sulfanamide taxicity are reasans to discontinue treatment.
Dosoge: One applicatorful or ane suppository intravaginally ance ar twice daily.
Supplied: Cream—Four-ounce tube with or without applicatar. Suppositaries—Bax of 12 with applicator.

References: 1. Gardner, H. L.: J. Miss. M.A. 8:529, 1967. 2. Porter, P. S., and Lyle, J. S.: Arch. Dermat. 93:402, 1966. 3. Walsh, H.; Hildebrandt, R. J., and Prystowsky, H.: Am. J. Obst. & Gynec. 93:904, 1965. 4. Vaginitis and the Pill: J.A.M.A. 196:731, 1966. 5. Guerriero, W. F.: South. M.J. 56:390, 1963. 6. Seelig, M. S.: Am. J. Med. 40:887, 1966. 7. To-day's Drugs, New York, Grune & Strattan, Inc., 1965, p. 316. 8. Gray, L. A., and Barnes, M. L.: Am. J. Obst. & Gynec. 92:125, 1965. 9. Salerna, L. J.; Ortiz, G., and Turkel, V.: Vaginitis: A Diagnostic and Therapeutic Approach, Scientific Exhibit, presented at the 115th Annual A.M.A. Conventian, Chicago, Illinois, June 1966. 10. Walsh, J. C.; Sheffery, J. B., and Wilsan, T. A.: Med. Ann. D.C. 37:358, 1968. 11. Nugent, F. B., and Myers, J. E.: Pennsylvania Med. 69:44, 1966.

THE NATIONAL DRUG COMPANY
DIVISION OF RICHARDSON MERRELL INC
PHILADELPHIA, PENNSYLVANIA 19144

AVC CREAM (aminacrine hydrochloride 0.2%, sulfanilamide 15.0%, allantoin 2.0%)

SUPPOSITORIES (aminacrine hydrochloride 0.014 Gm., sulfanilamide 1.05 Gm., allantoin 0.014 Gm.)

TRADEMARK: A V C

AV-919A 7/69

THE KILLGORE CHILDREN'S PSYCHIATRIC CENTER AND HOSPITAL, INC.

Amarillo, Texas

DESIGNED FOR CHILDREN UNDER 18 WITH MENTAL AND EMOTIONAL DISORDERS

Inpatient, Outpatient, Partial Hospitalization Services

Diagnostic and treatment programs based on a dynamic approach

All forms of therapy except ECT

Rehabilitation in the form of special learning units available if case requires

Located in the sunny, dry and cool atmosphere of the Northern Texas Panhandle

Licensed by the Texas Department of Mental Health-Mental Retardation

Member of the Amarillo Regional Mental Health-Mental Retardation Center

Associated with several universities for graduate programs in mental health

For Information: Address your communications to —

Jaime Quintanilla, M.D., F.A.P.A., Medical Director

Killgore Children's Psychiatric Center and Hospital, Inc.

1200 Wallace Boulevard, Amarillo, Texas 79106

Each 5 cc. contain erythromycin estolate equivalent to 250 mg. erythromycin base.
When mixed as directed, each 5 cc. will contain erythromycin estolate equivalent to 125 mg. erythromycin base.
When mixed as directed, each cc. will contain erythromycin estolate equivalent to 100 mg. erythromycin base.
Each 5 cc. contain erythromycin estolate equivalent to 125 mg. erythromycin base.
Each tablet contains erythromycin estolate equivalent to 125 mg. erythromycin base.
Each Pulvule® contains erythromycin estolate equivalent to 125 mg. erythromycin base.
Each Pulvule contains erythromycin estolate equivalent to 250 mg. erythromycin base.
The many forms of Ilosone®
Erythromycin Estolate
Lilly
Additional information available upon request.
Eli Lilly and Company
Indianapolis, Indiana 46206
900761

TEXAS MEDICINE

VOLUME 66 NUMBER 3 MARCH 1970

Devoted to the interests of the medical profession and public health in Texas

BOARD OF PUBLICATION
Charles P. Hardwicke, MD, Austin
Chairman
James A. Hallmark, MD, Fort Worth
John M. Smith, Jr., MD, San Antonio
Vice Chairman
R. Harvey Bell, MD, Palestine
N. L. Barker, MD, Paris
C. W. Yates, MD, Rosenberg
Don G. Harrel, MD, Dallas

TMA OFFICERS
Charles Max Cole, MD, Dallas
President
C. Lincoln Williston, Austin
Executive Secretary

EDITORIAL AND BUSINESS OFFICES
1801 North Lamar Blvd., Austin
Telephone: 477-6704
Marilyn Baker, Managing Editor
Rae Vajgert, Assistant Managing Editor
Nancy Arthurs, Assistant Editor
Sharon Walker, Editorial Assistant
Judy Harris, Editorial Secretary
E. Maxwell Jones, Business Manager
Jon R. Hornaday, Advertising Director
Anne Shelnutt, Advertising Assistant

PRINTING OFFICES
c/o Stafford-Lowdon Company
1114 West Daggett, Fort Worth 76104

Subscriptions: $3 per year for members; $6 for nonmembers; $8 for foreign; $3 for medical students.
Single copy: $1.

right 1970 by The Texas Medical Association.
Owned and issued monthly by the Association.

Editorial

EMPHASIS ON FAMILY MEDICINE RENEWS BASIC CONCEPT

The concept of family medicine is not new; it has just been forgotten. Now, there is a tremendous emphasis on recalling and renewing this concept. We are waking up to the fact that something is lacking in 1970 medicine. In part, this is because there are too few 1970 models of primary physicians. If developed, they have the potential for coordinating, delivering, innovating, and applying the vast amount of material learned in the past 20 years about organic medicine, psychosomatic medicine, and the allied disciplines. This new emphasis is the foundation of the rapidly developing current national medical effort.

Analyze it! What does it say? It says that the average patient today knows more than he knew a few years ago and demands more adequate medical care than he is receiving. He knows that it is available and he wants it.

Governmental agencies respond directly to the voter constituency. Our medical profession knows the need and wants to fill it. Industry and the public are becoming aware of the benefits of applied preventive medicine. Private pay groups and other third-party pay groups are increasingly alarmed about the soaring costs of all facets of medical care. Therefore, without close cooperation, all sectors are arriving at an obvious conclusion—one which has been lost in the headlong rush toward research, specialization, and fragmentation—that adequate health care is not now available to an extremely large segment of our citizens.

After this brief analysis and conclusion, what do we hear? We hear nothing really new. Since medicine began, we have known that the health needs of the individual in his personal environment are really what medicine is all about. This zeroes in on the role of the family physician. Not for a moment do we advocate any lessened role for physicians in research and teaching. In fact, we urge increasing these activities as a basic part of the solution. We are simply urging a more efficient delivery of medical knowledge at the point of its practical application. Little knowledge is required to realize that this will again establish a firm connection between the products of research, academic teaching, and medical care delivery. A track is not complete without both ends and all intervening parts. Thus, the basis for a beginning effort in our current national medical effort is to produce more well-trained primary physicians.

Where does The University of Texas Medical Branch fit into this? Recently, a program involving a division of family practice has been established. The funding, planning, and staffing has a sound academic basis. Three levels of activity are involved: undergraduate, postgraduate residency programs, and continuing education. Also involved will be training above and beyond that which was usual for general practitioners of the past. All will be implemented within the University teaching complex, the community hospital, the physician's office, and satellite clinics.

A few specific features of this added training will be in (1) community orientation; (2) family orientation; (3) long-range solutions to long-range health problems, which means applied preventive medicine; (4) solutions to episodic problems; (5) management concepts applied to economics, personnel, and medical techniques; (6) increased use of paramedical and ancillary disciplines; (7) awareness of and participation in medical research; (8) exposure to various types of individual and group practices; (9) increasing awareness and clinical application of environmental factors affecting the community, family, and individual health; (10) perception and understanding of human values and interpersonal relationships; (11) organizing and structuring a meaningful method of personal continuing education; (12) understanding, as a student and physician, the best utilization of his own abilities; and (13) establishing his own life priorities and goals.

M. L. Ross, MD, Galveston.

ORGANIZATIONS PROMOTE OUR COMPETENCE

From medicine's elder statesmen, we readily and gratefully accept periodic reminders that no professional skill, no spectacular achievement, no list of honors or accolades from our colleagues must ever cause us to forget that warm human understanding is the heart and soul of medicine.

Last winter, at a meeting of the Student American Medical Association in Chicago, I heard a somewhat similar theme expressed, albeit less gently. Some of tomorrow's physicians were saying that our profession and also, of course, theirs, is, as it now operates, both deaf and blind to the needs of people, too bound up in self-interest, too selective in whom it will serve, too wrapped up in professionalism, and insensitive to the needs of society for the time in which we live.

When indignation recedes somewhat, if it ever does, we find that we cannot disagree completely. For example, we know there is a desperate need for more medical services among the disadvantaged. Probably we must agree that physicians need a more constant awareness of human needs. We might even concede, reluctantly, that we are victims of some undesirable side effects of professionalism. But we must part company with them when they renounce organizations of medicine as being irrelevant parts of the establishment which protect the status quo and impede change.

Although characteristically, the young are idealistic and highly sensitive to society's

ills and inequities, we would do well at least to listen. Are we irrelevant, insensitive, and self-seeking? Are we clinging for our own comfort and security to the status quo? Are we losing those qualities of human understanding and dedication to improving the lot of man which medicine's greatest leaders have always challenged us to retain and revere? And if we are not, why do they think we are? Are we being damned simply because we are considered a part of the Establishment? Or have we neglected to prove our relevance, our sensitivity, and our dedication to the improvement of health conditions wherever they are?

Practically every professional and educational institution in America needs to answer these questions, no matter who asks them. If we avoid them, we do ourselves as well as the young a disservice, for in answering we engage in a form of introspection that is vital to every organization if it is to remain vigorous and effective.

Many of us know firsthand how much our organizations have accomplished: They have helped elevate professional standards, kept alive the spirit of research, deepened our interest in the mysteries of human disease, and reminded us that our reach must always exceed our grasp, else we shall be no farther tomorrow than we are today. But is our progress visible to those who are watching us?

If we have disappointed our young colleagues, we must accept at least part of the blame. It is not enough to countercharge that they are rebellious, ignorant, inexperienced, unreasonable, and unrealistic. They are in fact intelligent, highly educated, sensitive, and aware, even if they are immature, inexperienced, and highly critical. To paraphrase the late Sen Robert Kennedy: They see things as they are and say, "Why?" They dream of things that never were and say, "Why not?"

The generation now emerging from our medical schools has little regard for values which we have assumed are simply passed from one generation to another. And yet, if these young people are to benefit fully from our rich heritage, we must communicate with them one way or another. We must share with them our commitments, our involvement, our confrontation with reality.

We know that example is superior to talk. We gain respect and pass on a valuable heritage when we show our young colleagues that professional competence is indeed a humane virtue, enabling the physician to give relief in addition to compassion and concern.

Medicine, even though fully conscious of the challenge, cannot possibly solve society's vast social, political, and economic ills, but it can contribute toward their solution primarily by increasing its competence.

This is the very thing our organizations have done—elevate standards, encourage research, deepen perception, and thereby increase their members' competence—to make it possible for medicine to accomplish what it has, to earn the status it now has, and to offer one of the great hopes of mankind for a better and more fruitful life. Organizations should serve as forums for the present and as strong and functional

links with the future. They should be attractive to new members, and welcome the young for their idealism, their freshness, their vigor, their disposition to grasp and to learn and to make a place for themselves.

We are in a position to thrust medicine farther forward than any other generation, and on a wider frontier. While these responsibilities are vested primarily in those who perform investigation, research, and teaching, they belong as well to the clinician, whose function is invaluable to the progress of medicine. Research and discovery come first, but they serve mankind only when they are available to the clinician who can put them to practical use.

All too often we rationalize our failures; to us, our accomplishments may seem to lack the drama of those of our contemporaries. We are then disposed to what I call the "ol' country boy" syndrome, in which the skillful physician refers to himself as "just an ol' country boy." The cardinal symptom is loss of self-esteem; the victim comes to believe that because he is out of the mainstream, he cannot presume to offer to share his experiences with his more spectacular colleagues. Too readily, he finds excuses for hiding his talents.

While it is true that most of us will work and live our lives and be forgotten, it is also true that big events are compounded of little ones, so all our contributions to each other grow and spread and sow themselves anew.

Medical organizations offer our greatest opportunity for intercommunication. In addition to the invaluable informal discussions during our meetings, there is the obligation and privilege of presenting well developed scientific papers. This is one of the most significant ways in which organizations have contributed to professional competence; nothing so tests the effectiveness of one's theories as gathering evidence, pondering it, explaining it, defending it, and passing it on for the critical appraisal of one's peers.

To those about to enter medicine, and to those whom complacency threatens, I say do not lose your self-esteem nor underestimate your potential because of the brighter success of others. Do not be disheartened by the seemingly interminable night of failure in pursuit of an elusive experiment or discovery. Do not be disillusioned nor embittered by a changing social order. Remain ever sensitive to the criticisms of youthful colleagues, who need help in finding the way to reach their goals and also in humanizing their training environment. Resist temptations by outside interests to forsake that to which we once dedicated ourselves—the service to mankind through medicine.

All of us have magnificent opportunities and obligations, for "unto whomsoever much is given, of him much is required."

W. S. Lorimer, Jr, MD, Fort Worth.

Condensed from Dr. Lorimer's Presidential Address to the Texas Surgical Society, Sept 29, 1969.

Our Hostile Man-Made Environment

For years we have been reading about, worrying about, and attempting to do something about water pollution, air pollution, food pollution, noise pollution, and radiation pollution of our environment. The present national administration is giving these problems top priority. The nature of the problem was put in sharp focus recently when Russell E. Train, chairman of President Nixon's new Council on Environmental Quality, stated that cleaning up our air, water, and soil may prove to be vastly more complex than landing men on the moon. At least we are about the job in earnest, however, and none too soon.

The term "people pollution" has been coined to emphasize the effects of overpopulation. For awhile we considered overpopulation in terms of food and famine, but even if technology solves the food problem, man threatens to destroy himself by the ill effects of overcrowding.

Overpopulation also has received the attention of the present administration, and recently HEW Secretary Finch suggested that two children should constitute an adequate family. Dr. Lee DuBridge, science advisor to President Nixon, stated recently that the greatest challenge of our time is in reducing the earth's population growth rate to zero.

Famine has been predicted for many areas of the earth if the population growth continues uncontrolled. In this country we are not so likely to face famine as we are to be plagued by a long list of physical and social ills as we crowd ourselves into high-density population belts.

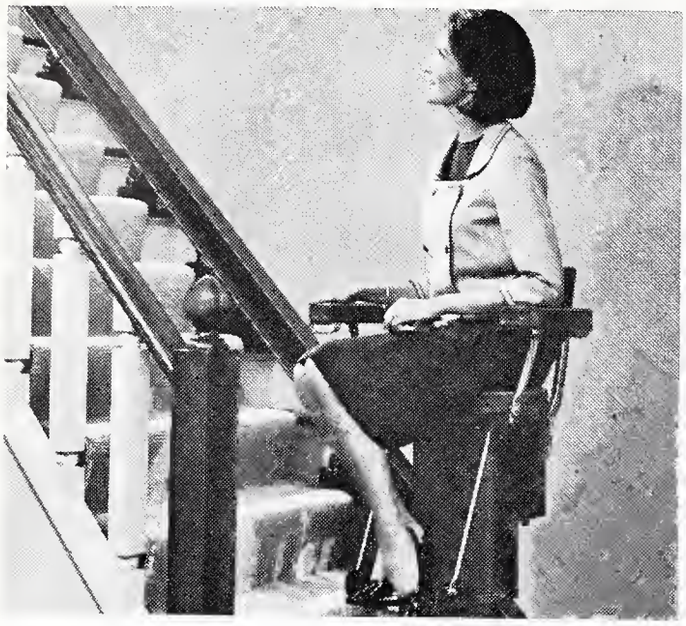
Voluntary contraception, at least thus far, does not seem to offer needed control even in our own enlightened country. We are beginning to hear serious proposals that would have been unmentionable a few years ago. As physicians, we will undoubtedly play a major role in the control measures adopted just as we do now in treating the ill effects of "people pollution." We would do well to inform ourselves on this subject to prepare for the role which we will inevitably play.

Max Cole, M.D.

Charles Max Cole, MD, President, Texas Medical Association.

WELCOLATOR

STAIRWAY ELEVATOR



Sit down and ride up! (or down) at the touch of a button. Ideal way to climb stairs. Like living in a one-story home. Comfortable, attractive styling. The Wecolator is superbly engineered, cog drive—no cables, completely safe and virtually maintenance free. Installed on any straight or curved stairway . . . in just a few hours.

Write or Call:

CUSTOM HOME ELEVATOR CO.

P. O. Box 13627 Dept. M
Ft. Worth, Texas 76118 ● A/C 817/281-8188

Taste!

Dicarbosil®
ANTACID

Your ulcer patients and others will love it. Specify DICARBOSIL 144's—144 tablets in 12 rolls.

ARCH LABORATORIES
319 South Fourth Street, St. Louis, Missouri 63102

THE FORT WORTH CLINICAL SYMPOSIUM

Announces Their Third 3 Day Symposium

The sponsors of the 1970 Fort Worth Clinical Symposium are: Tarrant County Academy of General Practice, Tarrant County Heart Association and Tarrant County Unit, American Cancer Society under the auspices of the Fort Worth Academy of Medicine.

APRIL 17, 18 & 19, 1970

FORT WORTH ACADEMY OF MEDICINE
3855 Tulsa Way, Fort Worth, Texas

FRIDAY, April 17, 1970

Sponsor: **Tarrant County Academy of General Practice**

Eugene R. Todd, M.D., Clin. Instr. Urology, The University of Texas Southwestern Medical School at Dallas, Dallas, Texas

PEDIATRIC UROLOGY; TRAUMA TO URINARY TRACT

James W. Smith, M.D., Asst. Prof. Internal Medicine, The University of Texas Southwestern Medical School at Dallas, Dallas, Texas

RENAL INFECTIONS; POST-PARTUM INFECTIONS

Robert H. Holland, M.D., Clin. Prof., Cardio-Thoracic Surgery, The University of Texas Southwestern Medical School at Dallas, Dallas, Texas

ATYPICAL TUBERCULOSIS; SURGICAL ASPECTS OF CHEST TRAUMA

SATURDAY, April 18, 1970

Sponsor: **Tarrant County Unit, American Cancer Society**

Subject of Symposium: Lung Cancer

Robert R. Shaw, M.D., Clinical Prof. of Thoracic Surgery, The University of Texas Southwestern Medical School at Dallas, Dallas, Texas

INVESTIGATION: WORK-UP, LOCATION, MANIFESTATIONS OF LUNG CANCER; SURGICAL TREATMENT

Vincent P. Collins, M.D., Radiotherapist, Rosewood Hospital, Former Chairman, Department of Radiology, Baylor Medical School, Houston, Texas

PLANNING OF THERAPY; RADIOTHERAPY

Frank Vellios, M.D., Prof. of Pathologist, The University of Texas Southwestern Medical School at Dallas, Dallas, Texas

TYPES OF LUNG CANCER; ENDOCRINE EFFECTS OF LUNG CANCER AND OTHER UNUSUAL EFFECTS OF 'THINGS' THAT HAPPEN WITH LUNG CANCER.

SUNDAY, April 19, 1970

Sponsor: **Tarrant County Heart Association**

Subject of Symposium: Seventeenth Annual Postgraduate Heart Symposium on Heart Disease

Michael V. Herman, M.D., Director of Clinical Services, Cardiovascular Division, Peter Bent Brigham Hospital, Boston, Massachusetts.

THE CURRENT STATUS OF CORONARY ARTHERIOGRAPHY IN THE EVALUATION OF THE PATIENT WITH CORONARY HEART DISEASE; THE TREATMENT OF ANGINA PECTORIS.

Arthur C. Beall, Jr., M.D., Associate Prof. of Surgery, Baylor College of Medicine, Texas Medical Center, Houston, Texas

SURGERY FOR CORONARY ARTERY DISEASE AND ITS COMPLICATIONS; RECENT ADVANCES IN THE SURGICAL THERAPY OF ACQUIRED VALVULARY HEART DISEASE.

Bob Hall, M.D., Chief of Cardiology, St. Luke's Hospital, Houston, Texas.

FLOPPY VALUE SYNDROME; DRUG INTOXICATION IN CARDIOLOGY.

Benylin®
EXPECTORANT

Each fluidounce contains: 80 mg. Benadryl® (diphenhydramine hydrochloride), Parke-Davis; 12 grains ammonium chloride; 5 grains sodium citrate; 2 grains chloroform; 1/10 grain menthol; and 5% alcohol. An antitussive and expectorant for control of coughs due to colds or of allergic origin, BENYLIN EXPECTORANT *is the leading cough preparation of its kind.* BENYLIN EXPECTORANT *tends to inhibit cough reflex ...soothes irritated throat membranes. And its not-too-sweet, pleasant raspberry flavor makes* BENYLIN EXPECTORANT *easy to take.*

PRECAUTIONS: *Persons who have become drowsy on this or other antihistamine-containing drugs, or whose tolerance is not known, should not drive vehicles or engage in other activities requiring keen response while using this preparation. Hypnotics, sedatives, or tranquilizers if used with* BENYLIN EXPECTORANT *should be prescribed with caution because of possible additive effect. Diphenhydramine has an atropine-like action which should be considered when prescribing* BENYLIN EXPECTORANT.

ADVERSE REACTIONS: *Side reactions may affect the nervous, gastrointestinal, and cardiovascular systems. Drowsiness, dizziness, dryness of the mouth, nausea, nervousness, palpitation, and blurring of vision have been reported. Allergic reactions may occur.*

PACKAGING: *Bottles of 4 oz., 16 oz., and 1 gal.*

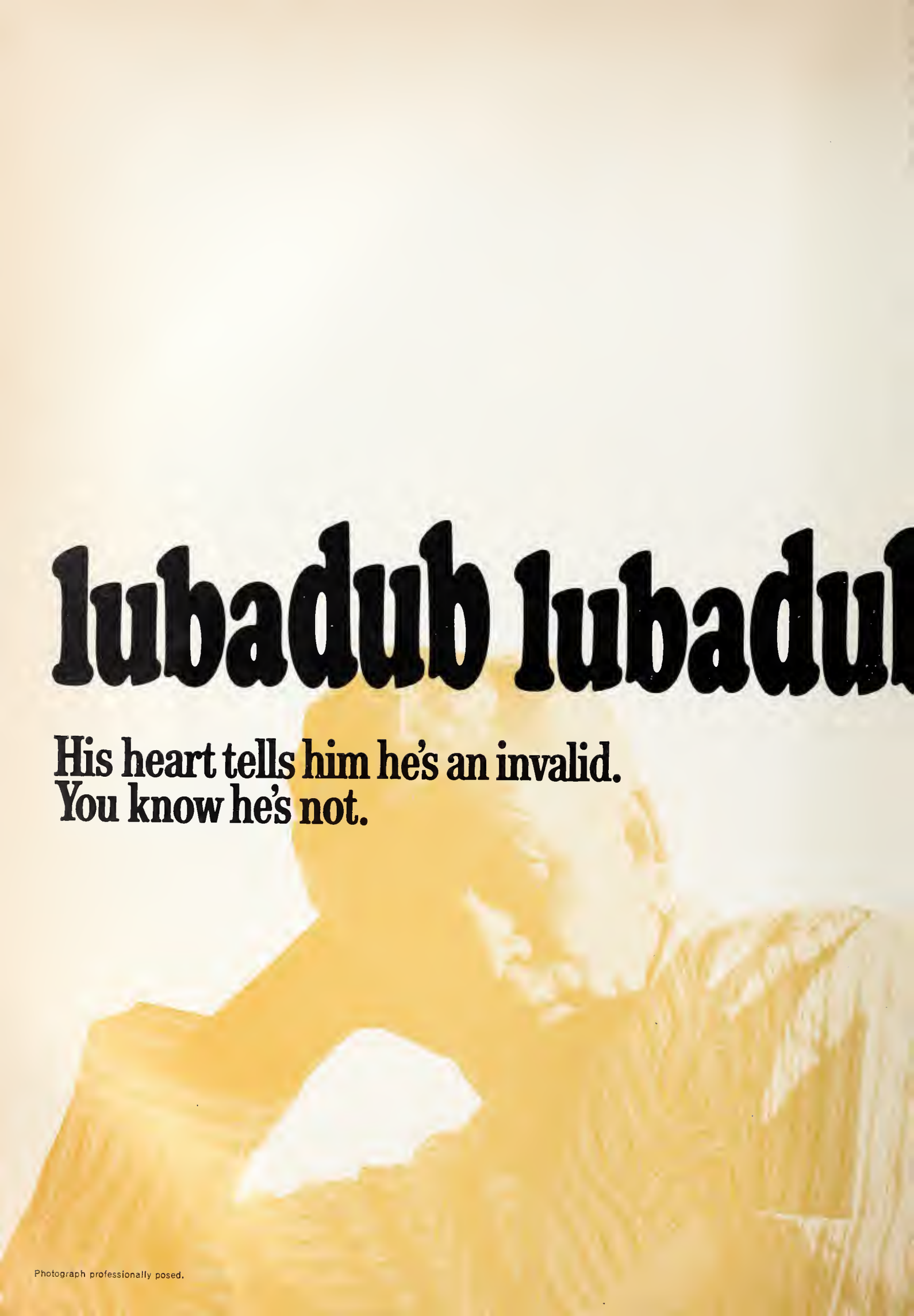
Parke, Davis & Company, Detroit, Michigan 48232

PARKE-DAVIS

50669

lubadub lubadub

His heart tells him he's an invalid.
You know he's not.



Photograph professionally posed.

Contraindications: History of sensitivity to meprobamate.

Important Precautions: Carefully supervise dose and amounts prescribed, especially for patients prone to overdose themselves. Excessive prolonged use has been reported to result in dependence or habituation in susceptible persons, as alcoholics, ex-addicts, and other severe psychoneurotics. After prolonged excessive dosage, reduce dosage gradually to avoid possibly severe withdrawal reactions. Abrupt discontinuance of excessive doses has sometimes resulted in epileptiform seizures.

Warn patients of possible reduced alcohol tolerance, with resultant slowing of reaction time and impairment of judgment and coordination.

Reduce dose if drowsiness, ataxia or visual disturbance occurs; if persistent, patients should not operate vehicles or dangerous machinery.

Side Effects include drowsiness, usually transient; if persistent and associated with ataxia, usually responds to dose reduction; occasionally concomitant CNS stimulants (amphetamine, mephentermine sulfate) are desirable. Allergic or idiosyncratic reactions are rare, but such reactions, sometimes severe, can develop in patients receiving only 1 to 4 doses who have had no previous contact with meprobamate. Previous history of allergy may or may not be related to incidence of reactions. Mild reactions are characterized by itchy urticarial or erythematous maculopapular rash, generalized or confined to groin. Acute nonthrombocytopenic purpura with cutaneous petechiae, ecchymoses, peripheral edema and fever have been reported. One fatal case of bullous dermatitis following intermittent use of meprobamate with prednisolone has been reported. If allergic reaction occurs, meprobamate should be stopped and not reinstituted. Severe reactions, observed very rarely, include angioneurotic edema, bronchial spasms, fever, fainting spells, hypotensive crises (1 fatal case), anaphylaxis, stomatitis and proctitis (1 case) and hyperthermia. Treat symptomatically as with epinephrine, antihistamine and possibly hydrocortisone. Aplastic anemia (1 fatal case), thrombocytopenic purpura, agranulocytosis and hemolytic anemia have occurred rarely, almost always in presence of known toxic agents. A few cases of leukopenia, usually transient, have been reported on continuous administration.

Meprobamate may sometimes precipitate grand mal attacks in patients susceptible to both grand and petit mal. Extremely large doses can produce rhythmic fast activity in the cortical pattern. Impairment of accommodation and visual acuity has been reported rarely. After excessive dosage for weeks or months, withdraw gradually (1 or 2 weeks) to avoid recurrence of pretreatment symptoms (insomnia, severe anxiety, anorexia). Abrupt discontinuance of excessive doses has sometimes resulted in vomiting, ataxia, tremors, muscle twitching and epileptiform seizures. Prescribe very cautiously and in small amounts for patients with suicidal tendencies. Suicidal attempts have resulted in coma, shock, vasomotor and respiratory collapse and anuria. Excessive doses have resulted in prompt sleep; reduction of blood pressure, pulse and respiratory rates to basal levels; and occasionally hyperventilation. Treat with immediate gastric lavage and appropriate symptomatic therapy. (CNS stimulants and pressor amines as indicated.) Doses above 2400 mg./day are not recommended.

Composition: Tablets, 200 mg. and 400 mg. meprobamate. Coated Tablets, WYSEALS® EQUANIL (meprobamate) 400 mg. (All tablets also available in REDIPAK® [strip pack], Wyeth.) Continuous-Release Capsules, EQUANIL L-A (meprobamate) 400 mg.

Wyeth Laboratories Philadelphia, Pa.

lubadubdub lubadu

Anxiety is expected in the cardiovascular patient. A little may even be desirable.

But when anxiety is exaggerated . . . when it interferes with sleep . . . when it aggravates cardiovascular symptoms, your help may be needed.

Naturally, you'll want to reassure the patient.

And perhaps prescribe Equanil (meprobamate) as adjunctive therapy. It helps relieve anxiety and tension specifically, yet gently.

Almost 15 years' use has shown that Equanil is usually well tolerated as well as effective. Side effects are generally limited to transient drowsiness; serious, therapy-interrupting side effects are rare.

Equanil®
(meprobamate) Wyeth®

Man in space, now fait accompli, re-emphasizes the importance of Uro-Phosphate therapy. Research into the effect of space travel on the astronaut reveals that weightlessness causes loss of bone calcium. As the bones are required to bear less and less of the weight of the body they lose calcium, increasing the calcium content of the urine. When physical activity is reduced, the acidity of the urine should be adjusted to keep increased calcium in solution . . . . a prophylaxis to prevent kidney or bladder calculi.

Uro-Phosphate®

NOW A SUGAR-COATED TABLET

Each tablet contains: METHENAMINE, *300 mg.;* SODIUM ACID PHOSPHATE, *500 mg.*

Uro-Phosphate gives comfort and protection when inactivity causes discomfort in the urinary function. It keeps calcium in solution, preventing calculi; it maintains clear, acid, sterile urine; it encourages complete voiding and lessens frequency when residual urine is present.

Uro-Phosphate contains sodium acid phosphate, a natural urinary acidifier. This component is fortified with methenamine which is inert until it reaches the acid urinary bladder. In this environment it releases a mild antiseptic keeping the urine sterile.

Uro-Phosphate is safe for continuous use. There are no contra-indications other than acidosis. It can be given in sufficient amount to keep the urine clear, acid and sterile. A heavy sugar coating protects its potency.

Dosage:

For protection of the inactive patient 1 or 2 tablets every 4 to 6 hours is usually sufficient to keep the urine clear, acid and sterile.

2 tablets on retiring will keep residual urine acid and sterile, contributing to comfort and rest.

A clinical supply will be sent to physicians and hospitals on request.

WILLIAM P. POYTHRESS & COMPANY, INC., RICHMOND, VIRGINIA 23217

Manufacturers of Ethical Pharmaceuticals

SEMINAR ON ALLERGY AND IMMUNOLOGY

A seminar on allergy and immunology will be presented April 10-12 at the Children's Medical Center in Dallas by the American College of Allergists, in cooperation with the department of pediatrics and the department of postgraduate education at The University of Texas Southwestern Medical School at Dallas, the Children's Medical Center, and the Texas Academy of General Practice. The first morning of the seminar, which is acceptable for 20 elective hours credit by the American Academy of General Practice, will be devoted to practical immunology pertaining to allergy; and the first afternoon sessions will cover pollens, molds, extract preparation, and skin tests. Allergy of the respiratory system, including pulmonary function tests, will be covered on the second morning; and hospital treatment of the severe asthmatic, drug allergy, and insect allergy will be discussed that afternoon. On the third day discussion will center on the relation of infection to allergy, allergies of the skin, and an overall consideration of the allergic patient.

Contact: Dr. John D. Gillaspie, American College of Allergists, 2141 14th St., Boulder, Colo. 80302, executive secretary and treasurer.

TEXAS SURGICAL SOCIETY

The Terrace Motor Hotel in Austin will be the site April 5-7 of a meeting of the Texas Surgical Society. Topics to be discussed include surgical results in 80 intracranial aneurysms, abdominal apoplexy, advances in the diagnosis and treatment of primary hyperparathyroidism, lateral unilobular thyroid, tumors of the parotid—primary and metastatic, the distal coronary bypass: changing concepts in coronary disease, pilonidal disease revisited, experiences with tracheal and bronchial resections, inadvertent hypothermia during surgery, early fasciotomy of extremities in pit viper snake bites, use of polypropylene mesh in the repair of direct inguinal hernias, operative cholangiography as a routine procedure, further experiences in the surgical treatment of chronic calcific pancreatitis, massive pancreatico-duodenal injuries, current results in the treatment of carcinoma of Vater's ampulla, retroanastomotic hernias after gastrojejunal anastomoses, and pseudo small-bowel obstruction.

Contact: Dr. Jesse E. Thompson, 3434 Swiss Ave., Dallas 75204, secretary.

OSLER SYMPOSIUM, SAMA MEETING

Physicians and scholars from all over the United States and Canada will gather at the Flagship Hotel in Galveston on April 21-22 for a symposium entitled "Humanism in Medicine: As Portrayed by the Life of Sir William Osler." Sponsored by The University of Texas Medical Branch, the program will include addresses by three former pupils of Osler, Drs. Wilder G. Penfield, Emile F. Holman, and Wilburt C. Davison; presentations by other humanist scholars and Oslerians; and a panel discussion about the future of humanism in medicine.

Immediately following the symposium will be the 1970 SAMA-UTMB National Student Research Forum, scheduled to take place April 23-25 on the campus of the UT Medical Branch. Designed to include presentations of papers on research in the areas of the basic and clinical sciences, the forum will include general sessions and addresses by guest speakers as well as a panel discussion on the subject, "A Moral and Scientific Study of Human Experimentation." A barbeque and mixer and an awards banquet will provide entertainment. Registration is $10.

Contact: Myles B. Knape, The University of Texas Medical Branch, Galveston 77550, director of information.

HIGHLIGHTS OF COMING MEETINGS

CURRENT MEETINGS IN TEXAS

AMERICAN COLLEGE OF RADIOLOGY's annual meeting will get under way March 31-April 4 at the Fairmont Hotel in Dallas. The general program will concern "Help! Where, From Whom, and How To Get It." Scientific lectures, reports, and exhibits; breakfasts, luncheons, cocktail parties, and banquets are scheduled. Registration fee for the sessions on March 31-April 2 is $55, and fee for sessions on April 3-4 is $15. Contact: William C. Stronach, 20 N. Wacker Dr., Chicago 60606, executive director.

AMERICAN PHYSICAL THERAPY ASSOCIATION, INC., TEXAS CHAPTER, COASTAL BEND DISTRICT, will sponsor its annual convention April 24-26 at the Holiday Inn-Emerald Beach Hotel in Corpus Christi. Among speakers' topics will be superstition and witchcraft, posterior tibial syndrome, and Parkinson's disease. A buffet cruise aboard the *Showboat* and a symposia dinner are planned. Contact: Mrs. Hilda F. McKethan, 4162 Monaco Dr., Corpus Christi 78411, chairman.

FORT WORTH CLINICAL SYMPOSIUM will take place April 17-19 at the Fort Worth Academy of Medicine headquarters. Sponsored by the Tarrant County Academy of General Practice, Tarrant County Heart Association, and Tarrant County Unit of the American Cancer Society and held under the auspices of the Fort Worth Academy of Medicine, the program on the first day will cover pediatric urology, trauma to urinary tract, renal infections, postpartum infections, typical tuberculosis, and surgical aspects of chest trauma. Lung cancer will be the topic for discussion on the second day. Investigation: work-up, location, manifestation of lung cancer; surgical treatment; planning of therapy; radiotherapy; types of lung cancer; endocrine effects of lung cancer; and other unusual effects of lung cancer will be considered. The 17th annual postgraduate symposium on heart disease will be held on the third day of the conference. The current status of coronary arteriography in the evaluation of the patient with coronary heart disease, the treatment of angina pectoris, surgery for coronary artery disease and its complications, recent advances in the surgical therapy of acquired valvular heart disease, floppy valve syndrome, and drug intoxication in cardiology will be covered. Contact: Dr. Jackson E. Cagle, Jr., 1500 S. Main St., Fort Worth 76109, chairman.

HOUSTON GROUP PSYCHOTHERAPY SOCIETY's Annual Institute is scheduled for March 21-22 in Houston. Dr. Emanuel K. Schwartz, coauthor of *Psychoanalysis in Groups*, will be the principal speaker. Two-hour sessions in groups of from eight to ten participants to be led by two experienced group psychotherapists will follow

Dr. Schwartz's lectures each day. A luncheon meeting is planned for Sunday, March 22. Contact: Dr. James C. Heald, 6436 Fannin, Houston 77025, president.

HOUSTON SOCIETY OF CLINICAL PATHOLOGISTS will hold its 10th Annual Pathology-Radiology Seminar March 28 at the Texas Children's Hospital Auditorium. To be conducted by Dr. Averill A. Liebow, professor of pathology, University of California at San Diego, and Richard Greenspan, professor of radiology, University of California Medical School at San Francisco, the seminar will cover "Pulmonary and Mediastinal Lesions." Slide sets, protocols, and prints of x-rays are available at $12.50 per set. Contact: Dr. Don B. Singer, Department of Pathology, Texas Children's Hospital, Houston 77025, chairman.

THE CHILDREN'S HOSPITAL EDUCATION AND RESEARCH FOUNDATION, INC., announces its Eighth Annual Teaching Conference, to be held April 4-5 at Children's Hospital, Santa Rosa Medical Center, San Antonio. Guest speakers are Dr. Sydney S. Gellis, pediatrician-in-chief, the Boston Floating Hospital for Infants and Children, and professor and chairman of the department of pediatrics, Tufts University School of Medicine; Dr. Herman Grossman, associate professor of radiology and pediatrics, the New York Hospital-Cornell University Medical Center; and Dr. Marc I. Rowe, chief, division of pediatric surgery, and associate professor of surgery and pediatrics, University of Miami School of Medicine, Coral Gables, Fla. Dr. Gellis will speak on neglected diagnostic procedures in pediatrics and problems in the diagnosis of pediatric syndromes; Dr. Grossman will discuss the newborn chest: newer methods of radiography and recently described disease entities as well as the distended abdomen in the newborn. Speaking on the controversy of the pediatric inguinal hernia and clinical and experimental aspects of neonatal shock will be Dr. Rowe. Contact: Dr. Howard A. Britton, Children's Hospital, 519 W. Houston St., San Antonio 78207, chairman, department of pediatrics.

TEXAS ACADEMY OF GENERAL PRACTICE, VALLEY CHAPTER, will host the Third Annual Medical-Surgical Conference of the Rio Grande Valley April 3-5 at the Casa De La Amistad in Harlingen. The conference is acceptable for 15 prescribed hours credit by the American Academy of General Practice. Thirteen speakers will discuss topics on orthopedics, dermatology, psychiatry, rheumatology, ophthalmology, obstetrics and gynecology, pediatrics, neurology, urology, gastroenterology, surgery, and cardiovascular surgery. Cocktail parties; luncheons; banquets in Old Mexico; and a style-show luncheon and shopping tour to Matamoros, Mexico, for the ladies will provide entertainment. Registration fee is $25. Contact: Dr. R. C. Hecht, P. O. Box 838, La Feria, Tex. 78559, chairman, publicity committee.

TEXAS DENTAL ASSOCIATION will convene for its annual session April 26-29 at the Sheraton-Fort Worth Hotel in Fort Worth. Scientific lectures will cover emergencies in the dental office, fixed prosthodontics, pedodontia, clinical application of biological principles for the edentulous patient, periodontia, endodontia, operative dentistry, occlusion, and gold foil dentistry. Guest speaker for the general assembly will be Dr. Harry M. Klenda (DDS), president, American Dental Association. Contact: Dr. Crawford A. McMurray (DDS), 3707 Gaston Ave., Dallas 75246, secretary-treasurer.

CURRENT REGIONAL MEETING

ARIZONA MEDICAL ASSOCIATION will hold its annual meeting April 21-25 in Scottsdale, Ariz.; and the scientific program will be presented by the faculty of The University of Texas Southwestern Medical School at Dallas. Program chairman will be Dr. John S. Chapman, assistant dean for postgraduate education at Southwestern. UTSMS faculty members from various medical specialties will give lectures and arrange panel discussions. Contact: Frank Chappell, 5323 Harry Hines Blvd., Dallas 75235, UTSMS director of medical information.

CURRENT NATIONAL MEETINGS

AEROSPACE MEDICAL ASSOCIATION will sponsor its 41st annual scientific meeting April 27-30 at the Chase-Park Plaza Hotel in St. Louis. Dr. Charles A. Berry, director of medical research and operations at the NASA Manned Spacecraft Center in Houston and 39th president of the association, will preside at opening ceremonies. In addition to scientific sessions on a variety of subjects, the program will include the annual Louis H. Bauer Lecture; the Armstrong Memorial Lecture; an undersea medical symposium; a report on Apollo lunar missions; special symposia for flight nurses and for Air Force Medical Reserves; and panels on management of G.I. disease in professional pilots, early detection of coronary heart disease in pilots, practical aerospace ophthalmology, aeromedical aspects of airport operations, the periodic health exam: boon or boondoggle?, and disposition of the pilot with a history of loss of consciousness. Special luncheons, activities for wives, and an honors night reception and banquet are also planned. Registration fee is $10 for members and $15 for nonmembers. Contact: Aerospace Medical Association, Washington National Airport, Washington, D.C. 20001.

AMERICAN ACADEMY OF NEUROLOGY's 22nd annual meeting will be held April 27-May 2 at the Americana Hotel in Bal Harbour, Fla. General sessions are scheduled Thursday, Friday afternoon, and Saturday, April 30-May 2; and the academy's sections on child neurology, neurochemistry, neuroanatomy, and neuroepidemiology will conduct sessions Friday morning. Special courses will be offered on Monday, April 27, through Wednesday, April 29, from which physicians may choose to attend one per day. Courses available on Monday will cover neuropathology, functional neuroanatomy, neurophysiology, electroencephalography, and neurochemistry; on Tuesday, neuropharmacology, neuroradiology I, neuromuscular disorders, pathophysiology of demyelinating diseases, and child neurology; and on Wednesday, practical clinical neurology, Parkinsonism, scientific basis of neurology, neuroradiology II, neuro-ophthalmology, and topics in neurochemistry. An Early Bird Party is planned for Wednesday evening; and a reception for residents, a dinner-dance, and special events prepared for the Woman's Auxiliary will round out the meeting's social activities. Members will not be charged a registration fee, and fee for nonmembers is $5. Contact: American Academy of Neurology, 4005 W. 65th St., Minneapolis, Minn. 55435.

AMERICAN ACADEMY OF PEDIATRICS will conduct its annual spring session April 13-15 at the Washington Hilton Hotel in Washington, D.C. Subjects scheduled for presentation include the institutionalized child, protection from infection, the pediatrician and hearing problems, infectious mononucleosis and EB virus, and logistics of delivery of child health practice. More than 90 scientific and technical exhibits and informative round table discussions on such topics as the pediatrician, the family, and the child in chronic diseases; adolescence; the pediatrician and the legislative process; asthma; and blood disorders will be featured. Also scheduled are a conference on pediatric nursing, an open meeting of the Academy Head Start Medical Consultation Service, a special seminar entitled "Fundamental Education, A Developmental Model" and a luncheon meeting of the AAP Council on Pediatric Practice. Entertainment events include the president's reception, the spring reception and banquet, and special luncheon and tours for the ladies. Contact: Dr. Gerald E. Hughes, American Academy of Pediatrics, Box 1934, Evanston, Ill. 60204, director for educational affairs.

AMERICAN ASSOCIATION OF ANATOMISTS will conduct its 83rd annual meeting March 31-April 3 in Chicago in conjunction with Northwestern University Medical School. Demonstrations, scientific papers, and commercial exhibits will be presented; and two symposia on topics of

general interest are planned. A keynote address will be delivered by an outstanding scientist at the general session, and a smoker and an annual banquet are scheduled. Special activities, including a gallery talk and luncheon at the Art Institute of Chicago, have been planned for the wives. Contact: Dr. Russell T. Woodburne (PhD), Department of Anatomy, The University of Michigan, 4643 Medical Sciences Bldg., Ann Arbor, Mich. 48104, secretary-treasurer.

AMERICAN COLLEGE OF OBSTETRICIANS AND GYNECOLOGISTS will host the Sixth World Congress of Gynaecology and Obstetrics April 13-18 at the Americana Hotel in New York City in conjunction with its own 18th annual clinical meeting. Attendance for the congress, which is attended by members of the 70 societies composing the International Federation of Gynaecology and Obstetrics, may exceed 11,000. The four principal subjects to be discussed at the conference are maternal physiology and its disturbances in pregnancy, antenatal and prenatal influences on the development of the fetus and child, social and endocrinological aspects and problems of female children and adolescents, and precancerous lesions in gynecology. More than 800 papers from over 50 countries have been submitted for presentation to participants at the congress; and physicians from all over the world will speak at 11 half-day programs, each of which will close with a panel discussion among the speakers and invited discussants. Luncheon conferences, seminars and correlated seminars, specialty meetings, motion pictures, and surgical programs on closed circuit color television are scheduled. An officers' reception, two banquets, luncheons, the ceremony for the induction of new fellows, and the inauguration of a new college president will highlight extracurricular activities. Contact: Donald F. Richardson, 79 W. Monroe St., Chicago 60603, congress coordinator.

AMERICAN INDUSTRIAL HEALTH CONFERENCE, the annual convention of the Industrial Medical Association and the American Association of Industrial Nurses, will take place April 13-16 at the Palmer House in Chicago. In addition to numerous scientific presentations, films, exhibits, and postgraduate seminars, the conference schedule includes tours to the Museum of Science and Industry and to the Argonne National Laboratory, a Gaslight Party, a Kungsholm dinner and theater party, and a boat trip and dinner. Entertainment for wives includes shopping and sightseeing trips, a luncheon with guest speaker Ann Landers, and a luncheon and lecture at the Art Institute of Chicago. Registration fee is $10. Contact Howard N. Schulz, Industrial Medical Association, 55 E. Washington St., Chicago 60602, executive director.

AMERICAN MEDICAL ASSOCIATION will sponsor its 23rd National Conference on Rural Health April 9-10 at the Pfister Hotel and Tower in Milwaukee, Wis. Conference goals are the following: to develop effective planning methods for community health services; to discuss effective ways for delivery of health services to all people in rural areas; to assess the effect of environmental factors on health, safety, and well-being of people living in rural areas; to understand more fully the socioeconomics of health care delivery; and to review methods for efficient utilization of health resources. Acceptable for 10 prescribed hours by the American Academy of General Practice, the program includes a variety of speakers, a series of six sectional meetings, and informal discussion. A banquet and a luncheon are also planned. Contact: Dr. Bond L. Bible (PhD), 535 N. Dearborn St., Chicago 60610, secretary.

AMERICAN PROCTOLOGIC SOCIETY will convene April 12-16 at the Diplomat Hotel in Hollywood, Fla., for its 69th annual meeting. Speakers on various scientific subjects; a presidential address; and symposia on polyps of the colon and rectum, diverticular disease of the colon, and anorectal disorders; and scientific exhibits are planned. Entertainment will include several cocktail receptions, a past presidents' luncheon, and a black tie dinner-dance. Contact: Dr. John E. Ray, 320 W. Lafayette, Detroit, Mich. 48226, secretary.

AMERICAN SOCIETY OF INTERNAL MEDICINE will hold its annual meeting April 10-12 at the Warwick Hotel in Philadelphia, Pa. Theme for the conference will be "Social and Economic Conditions Affecting the Delivery of Medical Care." Broad areas to be discussed include health care for the disadvantaged and health care for the "middle American." Guest speaker for the president's reception and luncheon will be Dr. Gerald D. Dorman, President, American Medical Association; and guest speaker for the annual banquet, which will follow a cocktail reception, will be Tom Anderson, columnist, public speaker, radio commentator, and editor and publisher of Southern Farm Publications. Contact: William R. Ramsey, 525 The Hearst Bldg., Third at Market, San Francisco 94103, executive director.

FIRST INTERNATIONAL CONGRESS ON GROUP MEDICINE will offer a world-wide forum for the discussion of methods for provision of comprehensive health services under the theme of "New Horizons in Health Care." To be held April 26-30 in Winnipeg, Manitoba, Canada, the congress will include sessions on socioeconomic philosophy of health care, group medicine and health care, group practice in many lands, organization and administration of group practice, research and education in group practice, university- and community-based group medicine, allied health professions and group medicine, and economics of health care delivery in group practice. Visits to private clinics in Winnipeg are planned for April 29; and a varied social program has been arranged, which includes ladies' activities and pre- and post-congress tours. Contact: Congress Secretariate, First International Congress on Group Medicine, 425 St. Mary Ave., Winnipeg 1, Manitoba, Canada.

INTERNATIONAL COLLEGE OF SURGEONS' 17th Biennial International Congress will attract participants from around the world to Paris, France, April 20-24. Scientific presentation and workshops on cardiac surgery, gynecology, orthopedics, thoracic surgery, ophthalmology, radiology, urology, oncology, and gastrointestinal surgery are scheduled. These scientific sessions will be continued in Istanbul, Budapest, Prague, Moscow, Leningrad, and Helsinki following the Paris meeting. Post-congress tours will also be available to various other European, African, and Asian countries. Entertainment during the congress includes a visit to the Institute Pasteur, several cocktail parties, a Lido party, an evening of ballet at the opera, an excursion by boat on the Seine, and a gala evening at the Conciergerie. Contact: Dr. Aldo Parentela, 1516 Lake Shore Dr., Chicago 60610, international executive secretary.

NATIONAL COUNCIL ON ALCOHOLISM, INC., will sponsor on April 1 the first Alcoholism Medical Education Conference ever held. To take place in New York City, the conference will consist of morning and afternoon plenary sessions and workshops on specific problems of the inclusion of alcoholism in the medical school curriculum. On April 2 there will be a visit to sites of various alcoholism programs in the New York area. Keynote speakers will be Dr. Jack Mendelson, chief of HEW's National Center for Prevention and Control of Alcoholism, and Dr. Paul Cornely, chairman of the department of public health and preventive medicine at Howard University and president of the American Public Health Association. Contact: James D. Lowe, Suite 1720, 2 Park Ave., New York 10016, director of public information.

UNITED STATES PHARMACOPEIAL CONVENTION, INC., will take place April 8-10 at the Shoreham Hotel in Washington, D.C. On April 9 a special program will honor the 150th anniversary of the founding of the United States Pharmacopeia. In addition to joining in this celebration, delegates to the convention will probably give new guidance and direction to USP programs and will select a new committee of revision and a new board of trustees to carry out their new programs. Contact: Dr. Arthur C. DeGraff, 4630 Montgomery Ave., Bethesda, Md. 20014, president.

MORE HIGHLIGHTS OF COMING MEETINGS

■ Denotes Texas meetings.

ALSO IN MARCH

AMERICAN ASSOCIATION OF ANATOMISTS, Chicago, March 31-April 3, 1970. Dr. Russell T. Woodburne (PhD), Department of Anatomy, The University of Michigan, E. Med. Bldg., Ann Arbor, Mich. 48104, Sec.-Treas.

■ BLUE CROSS-BLUE SHIELD SYMPOSIUM, Dallas, March 24, 1970; Fort Worth, March 25, 1970. Tom L. Beauchamp, Jr., Blue Cross Bldg., Main at N. Central Expwy., Dallas 75222, Pres.

■ HOUSTON SOCIETY OF CLINICAL PATHOLOGISTS, Houston, March 28, 1970. Dr. Don B. Singer, Dept. of Pathology, Texas Children's Hospital, 6221 Fannin St., Houston 77025, Chrmn.

ALSO IN APRIL

AMERICAN ACADEMY OF FACIAL PLASTIC AND RECONSTRUCTIVE SURGERY, Hollywood, Fla., April 24-26, 1970. Dr. Carl N. Patterson, 1110 W. Main, Durham, N.C. 27701, Sec.

AMERICAN ASSOCIATION FOR THORACIC SURGERY, Washington, D.C., April 6-8, 1970. Miss Ada Hanvey, 7710 Carondelet Ave., St. Louis, Mo. 63105, Exec. Officer.

AMERICAN COLLEGE HEALTH ASSOCIATION, Boston, April 14-17, 1970. James W. Dilley, 2807 Central St., Evanston, Ill. 60201, Exec. Sec.

AMERICAN COUNCIL OF OTOLARYNGOLOGY, Hollywood Beach, Fla., April 19, 1970. Executive Officer, 100 17th St., NW, Washington, D.C.

AMERICAN PEDIATRIC SOCIETY, Atlantic City, N.J., April 29-May 2, 1970. Dr. Charles D. Cook, 333 Cedar St., New Haven, Conn. 06510, Exec. Sec.

ASSOCIATION OF AMERICAN PHYSICIANS AND SURGEONS, INC., House of Delegates, Chicago, April 3-4, 1970. Frank K. Woolley, 230 N. Michigan Ave., Chicago 60601, Exec. Dir.

■ EIGHTH DISTRICT MEDICAL SOCIETY, Lake Jackson, Tex., April, 1970. Dr. Clinton E. Woodson, 2100 N. Fulton St., Wharton, Tex. 77488, Sec.

■ SOUTHWESTERN SURGICAL CONGRESS, Dallas, April 20-23, 1970. Dr. Jack A. Barney, 301 Pasteur Bldg., Oklahoma City 73103, Sec.-Treas.

■ TEXAS ACADEMY OF GENERAL PRACTICE, NORTH TEXAS CHAPTER, April 11, 1970. Dr. Robert W. L. Daily, 125 Med. Arts. Bldg., Wichita Falls, Program Chrmn.

■ TEXAS ASSOCIATION OF PUBLIC HEALTH PHYSICIANS, Dallas, April 30, 1970. Dr. Hardy D. Loe, Jr., 1115 N. MacGregor, Houston 77025, Sec.

■ TEXAS INDUSTRIAL MEDICAL ASSOCIATION, Dallas, April, 1970. Dr. Carolyn K. Veatch, 4837 Merrimac, Corpus Christi 78415, Sec.

■ TEXAS MEDICAL ASSOCIATION, Annual Session, Dallas, April 30-May 3, 1970. C. Lincoln Williston, 1801 N. Lamar Blvd., Austin 78701, Exec. Sec.

■ TEXAS PHYSICAL MEDICINE AND REHABILITATION SOCIETY, Dallas, April 30-May 3, 1970. Dr. James W. Caldwell, 3500 Gaston Ave., Dallas 75210, Sec.

■ TEXAS PROCTOLOGIC SOCIETY, Dallas, April, 1970. Dr. James M. Hampton, 448 Hermann Professional Bldg., Houston 77025, Sec.-Treas.

■ TEXAS SOCIETY OF CHILD PSYCHIATRY, Brownsville, Tex., April 17-18, 1970. Dr. Alberto C. Serrano, 2135 Babcock Rd., San Antonio, Sec.

■ TEXAS STATE BOARD OF EXAMINERS IN THE BASIC SCIENCES, examination, Dallas, Galveston, Houston, and San Antonio, April 10-11, 1970. Dr. Paul C. Witt (PhD), 1012 State Office Bldg., Austin 78701, Pres.

■ TEXAS TUBERCULOSIS AND RESPIRATORY DISEASE ASSOCIATION, Lubbock, April 2-4, 1970. Mrs. Pauline K. Matthis, 2402 Manor Rd., Austin, Exec. Officer.

■ 13TH DISTRICT MEDICAL SOCIETY, Wichita Falls, Tex., April 11, 1970. Dr. William H. Neil, 800 Fifth Ave., Fort Worth 76104, Sec.

MAY

■ AMERICAN ACADEMY OF PEDIATRICS, TEXAS CHAPTER, Dallas, May 1, 1970. Dr. William S. Conkling, 500 E. Washington, Navasota 77868, Sec.

AMERICAN ACADEMY OF PSYCHOANALYSIS, San Francisco, May 8-10, 1970. Dr. Sidney S. Goldensohn, 40 Gramercy Park N., New York 10010, Sec.

AMERICAN ASSOCIATION OF PLASTIC SURGEONS, Colorado Springs, Colo., May 10-13, 1970. Dr. Robert L. Harding, 2201 N. Second St., Harrisburg, Pa. 17110, Sec.

AMERICAN CANCER SOCIETY, Ninth Annual Seminar on Cancer of the Breast, Denver, May 14-16, 1970. Dr. Wendell P. Stampfli, Director of Radiology, St. Luke's Hospital, Denver, Chrm.

AMERICAN COLLEGE OF RADIOLOGY, Ninth Annual Seminar on Cancer and Diseases of the Breast, Denver, May 14-16, 1970. Dr. Wendell P. Stampfli, Director of Radiology, St. Luke's Hospital, Denver, Chrmn.

■ AMERICAN COLLEGE OF SURGEONS, NORTH TEXAS CHAPTER, May 16, 1970. Dr. Ernest Poulos, 6140 Sherry Lane, Dallas 75225, Sec.-Treas.

AMERICAN PSYCHIATRIC ASSOCIATION, San Francisco, May 11-15, 1970. Dr. Walter E. Barton, 1700 18th St. NW, Washington, D.C. 20009, Exec. Officer.

■ AMERICAN PSYCHIATRIC ASSOCIATION, TEXAS DISTRICT BRANCH, Dallas, May, 1970. Mrs. Iris Wenzel, 1801 N. Lamar Blvd., Austin 78701, Exec. Sec.

AMERICAN THORACIC SOCIETY, Cleveland, May 24, 1970. Robert G. Weymueller, 1790 Broadway, New York 10019, Exec. Officer.

AMERICAN UROLOGICAL ASSOCIATION, Philadelphia, May 11-14, 1970. Richard J. Hannigan, 1120 N. Charles St., Baltimore, Exec. Officer.

■ CONFERENCE OF CITY AND COUNTY HEALTH OFFICERS, Dallas, May, 1970. Dr. J. E. Peavy, 1100 W. 49th St., Austin 78756, Texas State Commissioner of Health.

INTERNATIONAL ACADEMY OF PROCTOLOGY, Spain, May 13-22, 1970. Executive Office, 147-41 Sanford Ave., Flushing, N.Y. 11355.

■ **INTERNATIONAL CANCER CONGRESS, Houston, May 22-29, 1970. Dr. Murray M. Copeland, Office of the Secretariat, Tenth International Cancer Congress, P.O.** Box 20465, Astrodome Station, Houston 77025, Sec. General.

MEDICAL LIBRARY ASSOCIATION, New Orleans, May 17-22, 1970. Mrs. Helen Brown Schmid, 919 N. Mich. Ave., Chicago 60611, Exec. Officer.

NATIONAL TUBERCULOSIS AND RESPIRATORY DISEASE ASSOCIATION, Cleveland, Ohio, May 24, 1970. Dr. James E. Perkins, NTRDA, 1740 Broadway, New York 10019, Exec. Officer.

■ NATIONAL LEAGUE FOR NURSING, Dallas, May 10-14, 1970. Mrs. Margaret E. Walsh, 10 Columbus Circle, New York 10019, Sec.

NEW MEXICO REGIONAL MEDICAL PROGRAM and AMERICAN HEART ASSOCIATION, NEW MEXICO CHAPTER, Symposium on Stroke, Albuquerque, N.M., May 22-23, 1970. Mrs. Elizabeth M. Barnett, Continuing Education, The University of New Mexico School of Medicine, Albuquerque 87106, Coordinator.

■ ST. LUKE'S EPISCOPAL SYMPOSIUM, Houston, May 14-16, 1970. Dr. Donald T. Lazarz, 1817 Dryden, Houston 77025, Pres.

STUDENT AMERICAN MEDICAL ASSOCIATION, Philadelphia, May 5-9, 1970. Russell F. Staudacher, 2635 Flossmoor Rd., Flossmoor, Ill. 60422, Exec. Dir.

■ **TEXAS AIR-MEDICS ASSOCIATION, Dallas, May 2, 1970. Dr. C. F. Miller, Box 1338, Waco 76703, Sec.**

■ TEXAS DERMATOLOGICAL SOCIETY, Dallas, May 2-3, 1970. Dr. Coleman G. Jacobson, 3707 Gaston, Dallas, 75246, Sec.

■ **TEXAS HOSPITAL ASSOCIATION, Houston, May 17-20, 1970. O. Ray Hurst, P. O. Box 4553, Austin 78751, Exec. Vice Pres.**

■ TEXAS MEDICAL ASSISTANTS ASSOCIATION, Baytown, May 21-24, 1970. Faye Gibson, 5401 41st St., Lubbock, Sec.

■ **TEXAS OPHTHALMOLOGICAL ASSOCIATION, Dallas, May 1, 1970. Dr. John C. Kuppinger, 1515 Ed Carey Dr., Harlingen 78550, Sec.**

■ **TEXAS ORTHOPAEDIC ASSOCIATION, Dallas, May 2, 1970. Dr. John J. Hinchey, 1A Medical Professional Bldg., San Antonio 78212, Exec. Officer.**

■ **TEXAS OTOLARYNGOLOGICAL ASSOCIATION, Dallas, May, 1970. Dr. James L. Baldwin, 712 N. Washington, Dallas 75246, Sec.**

■ TEXAS SOCIETY OF ATHLETIC TEAM PHYSICIANS, Dallas, May 1, 1970. Dr. John B. Gunn, 2618 Welborn St., Dallas 75219.

■ **TEXAS SOCIETY OF PLASTIC SURGEONS, Dallas, May 2, 1970. Dr. E. Frank Dunton, 3434 Swiss Ave., Suite 104, Dallas 75204, Sec.**

■ TEXAS STATE DEPARTMENT OF HEALTH, 20th Annual Southwestern Conference on Diseases in Nature Transmissible to Man, Austin, May 7-8, 1970. Dr. J. V. Irons (ScD), Director of Laboratories, Texas State Department of Health, 1100 W. 49th St., Austin 78756.

■ THE UNIVERSITY OF TEXAS NURSING SCHOOL, Dynamics of the Interviewing Process, Austin, May 18-20, 1970; Principles of Management in Nursing Care, McAllen, May 26-27, 1970. Dorothy Blume, Continuing Education, The University of Texas Nursing School, Austin 78712, Dir.

THIRD NATIONAL VOLUNTARY HEALTH CONFERENCE, Washington, D.C., May 7-8, 1970. Dr. D. A. Dukelow, Department of Health Education, AMA, 535 N. Dearborn St., Chicago 60610, Conference Coordinator.

JUNE

AMERICAN MEDICAL ASSOCIATION, Annual Session, Chicago, June 21-25, 1970. AMA, 535 N. Dearborn St., Chicago 60610.

AMERICAN MEDICAL SOCIETY ON ALCOHOLISM, Chicago, June 23-24, 1970. Dr. Frank A. Seixas, National Council on Alcoholism, 2 Park Ave., New York 10016, Sec.

AMERICAN PHYSICAL THERAPY ASSOCIATION, Washington, D.C., June 28-July 3, 1970. Royce P. Noland, 1740 Broadway, New York 10019, Exec. Officer.

AMERICAN RHEUMATISM ASSOCIATION SECTION OF THE ARTHRITIS FOUNDATION, Detroit, Mich., June 18-19, 1970. Margaret M. Walsh, 1212 Ave. of the Americas, New York, Exec. Sec.

AMERICAN THERAPEUTIC SOCIETY, Chicago, June 18-21, 1970. Dr. Richard T. Smith, 1718 Gallagher Rd., R.D. 4, Norristown, Pa. 19401, Exec. Sec.

■ TEXAS ACADEMY OF GENERAL PRACTICE, Fort Worth, June 7-10, 1970. Donald C. Jackson, 1905 Lamar, Austin, Exec. Officer.

■ TEXAS STATE BOARD OF MEDICAL EXAMINERS, Fort Worth, June 15-17, 1970. Dr. M. H. Crabb, 1612 Summit Ave., Suite 303, Fort Worth, 76102, Sec.

■ THE UNIVERSITY OF TEXAS NURSING SCHOOL, Dynamics of the Interviewing Process, Amarillo, June 1-3, 1970; Galveston, June 8-10, 1970. Dorothy Blume, Continuing Education, The University of Texas Nursing School, Austin 78712, Dir.

JULY

■ POSTGRADUATE MEDICAL ASSEMBLY OF SOUTH TEXAS, Houston, July 27-29, 1970. Mrs. Betty Dahme, 209 Jesse H. Jones Library Building, Houston 77025, Exec. Sec.

ROCKY MOUNTAIN CANCER CONFERENCE, Denver, July 17-18, 1970. F. C. Schmidt, 1764 Gilpin St., Denver 80218, Exec. Officer.

SOCIETY OF NUCLEAR MEDICINE, Washington, D.C., July 6-12, 1970. Margaret Gloss, 211 E. 43rd St., New York 10017, Exec. Officer.

■ TEXAS PHARMACEUTICAL ASSOCIATION, Dallas, July 26-29, 1970. Luther R. Parker, 404 Austin Savings Bldg., Austin, Exec. Officer.

■ THE UNIVERSITY OF TEXAS NURSING SCHOOL, The Changing Role in Mental Health Nursing—A New Dimension: Family Systems and Therapy, San Antonio, July 9-10, 1970. Dorothy Blume, Continuing Education, The University of Texas Nursing School, Austin 78712, Dir.

AUGUST

AMERICAN ACADEMY OF PHYSICAL MEDICINE AND REHABILITATION, New York City, Aug. 16-18, 1970. Creston C. Herold, 30 N. Mich. Ave., Chicago 60602, Exec. Dir.

AMERICAN COLLEGE OF CHEST PHYSICIANS, 11th International Congress, Lausanne, Switzerland, Aug. 3-7, 1970. Alfred Soffer, 112 E. Chestnut St., Chicago, Exec. Dir.

AMERICAN CONGRESS OF REHABILITATION MEDICINE, New York, Aug. 16-21, 1970. Creston C. Herold, 30 N. Michigan Ave., Chicago 60602, Exec. Dir.

THE UNIVERSITY OF WISCONSIN, Ninth National Conference on Therapies for Advanced Cancers, Madison, Wis., Aug. 20-22, 1970. Dr. Robert J. Samp, Assistant Professor of Surgery and Clinical Oncology, University Hospitals, Madison, Wis. 53706, Program Coordinator.

WORLD MEDICAL ASSOCIATION, Oslo, Norway, Aug. 16-22, 1970. Dr. A. Z. Romualdez, 10 Columbus Circle, New York 10019, Sec.

★

Specialized Service

IN

PROFESSIONAL LIABILITY INSURANCE

is a high mark of distinction

THE

MEDICAL PROTECTIVE COMPANY

FORT WAYNE, INDIANA

Professional Protection Exclusively since 1899

AUSTIN OFFICE: Robert F. Reiman, Representative
3201 Clearview, Austin 78703 Telephone: 512-472-9603
DALLAS OFFICE: Gayle Nelson and Arthur F. Ennis, Jr., Representatives
816 Medical Arts Building, Dallas 75201 Telephone: 214-742-4980
HOUSTON OFFICE: Richard B. Ross and William A. Orsburn, Representative
1525 Hermann Professional Bldg., Houston 77025 Telephone: 713-523-1127

Turner's Clinical & X-Ray Laboratories

Medical Center

El Paso, Texas

Telephone 532-4689

☆

SURGICAL PATHOLOGY
CLINICAL PATHOLOGY
RADIOLOGY

☆

GEORGE TURNER, M.D.
JEANNE TURNER BOWMAN, M.D.
DAVID LIBMAN, M.D.

The Martin X-Ray and Radium Clinic

3501 Gaston Ave. Dallas, Texas

ADJOINING
GASTON EPISCOPAL HOSPITAL

For X-ray diagnosis and the X-ray and radium treatment of cancer and other conditions suitable for radiation therapy.

Chas. L. Martin, M.D. James A. Martin, M.D.

CONTINUING EDUCATION COURSES

Cardiology: An intensive five-day program covering in detail the field of auscultation, phonocardiography, and pulse tracings will take place April 7-10 at the Mountain Shadows Resort in Scottsdale, Ariz. Emphasis will be placed on the values and limitations of phonocardiography and related areas applicable to the patient's diagnostic problems. Lectures and sessions devoted exclusively to individual analysis of phonocardiograms and pulse tracings by the participants under the orientation of the local and guest faculties will be included. Advance registration is required; and information is available from American College of Cardiology, 9650 Rockville Pike, Bethesda, Md. 20014.

Internal Medicine: A seminar on selected topics in internal medicine will be presented March 31-April 1, 1970, by the Medical College of Georgia at Augusta. The current status of diagnosis and management of a variety of conditions in clinical medicine will be presented. Lectures, simultaneous demonstrations, conferences, and panel discussions will be included; and opportunity will be provided for personal discussions with the faculty for the course. A social hour and dinner at the Town Tavern Restaurant is planned. The course is approved for 13 hours credit by the American Academy of General Practice.

Registration fee is $50, and interns and residents may be enrolled without charge. Applications and information are available from the Division of Continuing Education, Medical College of Georgia, Augusta 30902.

Various Subjects: The American College of Physicians will sponsor a series of postgraduate courses on the following subjects: neurology and the internist, March 23-26, Rochester, Minn.; current concepts in physiology of the gastrointestinal, endocrine, and respiratory systems, April 9-11, Philadelphia; and recent advances in endocrinology and selected metabolic diseases, April 23-25, San Francisco. Lectures, demonstrations, panel discussions, and question and answer periods will be included.

Tuition is $60 for members and $100 for nonmembers for each of the courses. Write to Dr. Edward C. Rosenow, Jr., Executive Director, American College of Physicians, 4200 Pine St., Philadelphia 19104, for additional information and registration forms.

Medicine and Psychiatry: Two postgraduate courses entitled "The Pulse of Laboratory Medicine" and "Pediatric and Adolescent Psychiatry" have been scheduled for April 16-18 and May 21-23, respectively, by the Mound Park Hospital Foundation, Inc. To be held at the Tides Hotel and Bath Club, Redington Beach, St. Petersburg, Fla., the courses will be completely comprehensive and designed to orient more fully practitioners in the various fields of medicine and surgery to the problems of patient care. Each program is acceptable for 18 accredited hours by the American Academy of General Practice.

Additional information may be obtained from Dr. M. A. Barton, President, Mound Park Hospital Foundation, Inc., 701 Sixth St. S, St. Petersburg, Fla. 33701.

Respiratory Care: Subject of a postgraduate course sponsored by the University of Colorado School of Medicine April 15-17, at Denver, Colo., will be management and care of respiratory insufficiency. This third annual three-day symposium for physicians is designed to review modern methods of respiratory care for patients both acutely and chronically ill. Emphasis is directed toward patients with chronic airway obstruction and is oriented toward both intensive and rehabilitative care. Aspects of management of respiratory insufficiency, including postoperative states, trauma, poisonings, and neurological emergencies are also considered. Informal lectures, movies, video tapes, and discussions are scheduled.

The course is limited to 300, and tuition is $75. Further information may be obtained from the Office of Postgraduate Medical Education, University of Colorado School of Medicine, 4200 E. Ninth Ave., Denver 80220.

Laboratory Workshops: A series of laboratory workshops for the benefit of public health, hospital, clinical, and other medical laboratories is under way. Public health and medical parasitology will be covered at a March 25-27 workshop designed to give the laboratory worker an opportunity to learn firsthand how to recognize the common intestinal protozoan parasites. Some other intestinal, blood, and tissue parasites, including *Toxoplasma*, will also be considered. Scheduled for April 14-17 is a general course on public health and medical mycology which will cover the morphology, culture, and identification of fungi of public health and medical importance. The dermatophytes as well as the systemic fungi will be included, and serological procedures will be considered. Daily starting and closing times for each workshop will be 9 a.m. and 5 p.m.

There is no registration fee for the workshops, and admittance is by prior registration only. Applications may be sent to Dr. J. V. Irons (ScD), Director of Laboratories, Texas State Department of Health, 1100 W. 49th St., Austin 78756.

Laboratory Training: A series of laboratory training courses are being presented by the Laboratory Division of the National Communicable Disease Center in Atlanta, Ga. "Management of Scientific Services for Public Health Laboratories" will be offered May 18-22, and registration for this course will end March 23. Offered June 1-12 will be "Laboratory Diagnosis by Serologic Methods" and June 15-26, "Isolation of Salmonellae from Food Products." Registration for the courses closes April 6 and April 20, respectively.

Information and applications may be obtained from the Training Office, Laboratory Division, National Communicable Disease Center, Atlanta 30333.

Rheumatic Diseases: The American College of Physicians will offer a course on the pathogenesis, diagnosis, and treatment of rheumatic diseases March 30-April 3, 1970, at the University of Michigan Medical Center in Ann Arbor, Mich. Designed to provide a comprehensive but integrated review of rheumatic diseases, the course will be directed toward problems which have arisen through recent progress in diagnosis and treatment. Current concepts of the pathogenesis of the more common diseases of joints and related structures will be presented to underscore the development of a rational approach to clinical management. Rheumatoid arthritis, systemic lupus erythematosus, degenerative joint disease, and gout will receive particular attention.

Registration fee is $60 for members, residents, and research fellows, and is $100 for nonmembers. The American College of Physicians, 4200 Pine St., Philadelphia 19104, will provide more information.

the common denominator in G.U. therapy

In G. U. therapy, the first consideration is control of infection. To your patient, a primary concern is *relief from pain*. URISED provides rapid relief from pain, and relaxation of smooth muscle spasm through parasympatholytic action of atropine and hyoscyamine.

URISED is not a dramatic "wonder drug" but a useful one that has served the medical profession for more than fifty years. You can rely on URISED; it has gained the confidence of physicians who have written more than one million prescriptions for their patients.

URISED is a mild but reliable agent with a low order of toxicity. It can be used alone to treat uncomplicated urinary tract infections where the invading organisms are susceptible to methenamine and methylene blue in an acid medium. URISED can provide "interim therapy" while awaiting complete laboratory diagnosis. It can also be used as an adjunct (to relieve pain and spasm) with almost any other form of antibacterial therapy).

For prompt relief of the distressing symptoms of pain, burning, frequency, dysuria, and spasm, consider URISED. Your patient will recognize its presence by the characteristic blue-green urine.

keeping your patient comfortable

PRECAUTIONS: Administer with caution to persons with known idiosyncrasy to atropine or cardiac disease.

SIDE EFFECTS: Neither irritation nor other untoward reactions have been reported; however, if pronounced dryness of the mouth, flushing, or difficulty in initiating micturition occur, decrease dosage. If rapid pulse, dizziness, or blurring of vision occur, discontinue use immediately. Acute urinary retention may be precipitated in prostatic hypertrophy.

CONTRAINDICATIONS: Glaucoma, urinary bladder neck or pyloric obstruction, duodenal obstruction and cardiospasm. Hypersensitivity to any of the ingredients.

DOSAGE: Adults—Two tablets, orally, four times per day followed by liberal fluid intake. Acute cases—Initially two tablets every hour for three doses followed by the recommended daily administration. Children—One-half the adult dose.

Stocked Nationally Through All Service Wholesale Druggists

URISED®

Each blue-coated tablet contains active:

Atropine Sulfate	0.03 mg.	Methylene Blue	5.4 mg.
Hyoscyamine	0.03 mg.	Phenyl Salicylate	18.1 mg.
Methenamine	40.8 mg.	Benzoic Acid	4.5 mg.

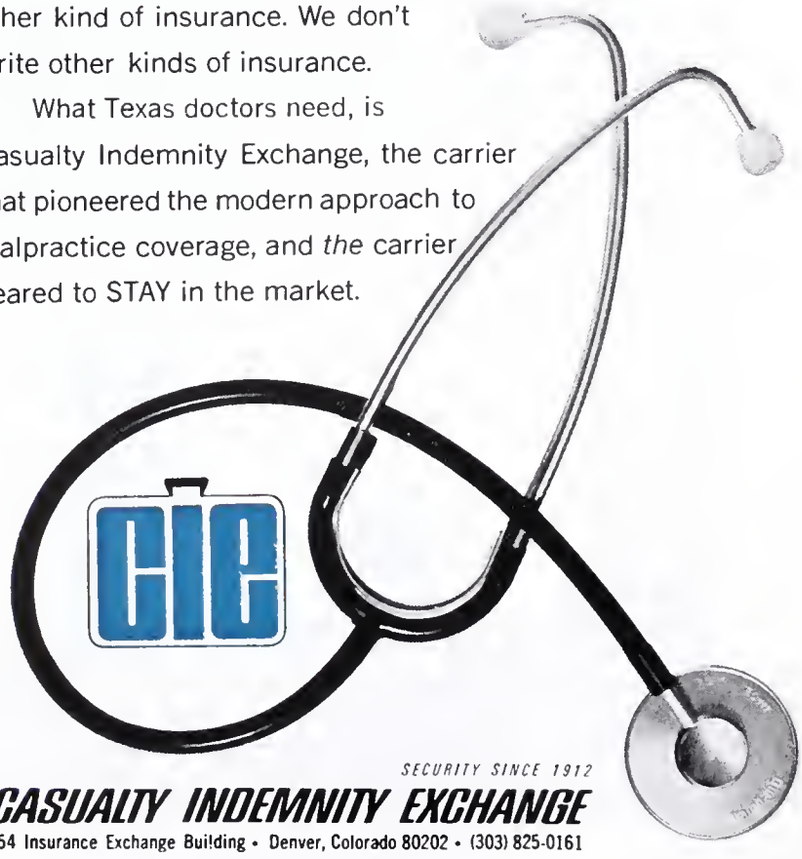
CONAL PHARMACEUTICALS, INC. CHICAGO, ILLINOIS 60640 / Manufacturers of Uriceutical® Specialties

What Texas doctors need, is a Malpractice Liability Carrier that won't fade when trouble comes.

This means the up-to-date carrier. The one that's replete with innovations and new developments in this clouded, sensitive area of liability protection. And the one that doesn't talk malpractice coverage just to get a foot in the door for every other kind of insurance. We don't write other kinds of insurance.

What Texas doctors need, is Casualty Indemnity Exchange, the carrier that pioneered the modern approach to malpractice coverage, and *the* carrier geared to STAY in the market.

Contact your local agent
or
RUSSELL GRACE INSURANCE
2304 W. 7th St.
Ft. Worth, Texas 76107
(817) 332-9269



SECURITY SINCE 1912
CASUALTY INDEMNITY EXCHANGE
754 Insurance Exchange Building • Denver, Colorado 80202 • (303) 825-0161

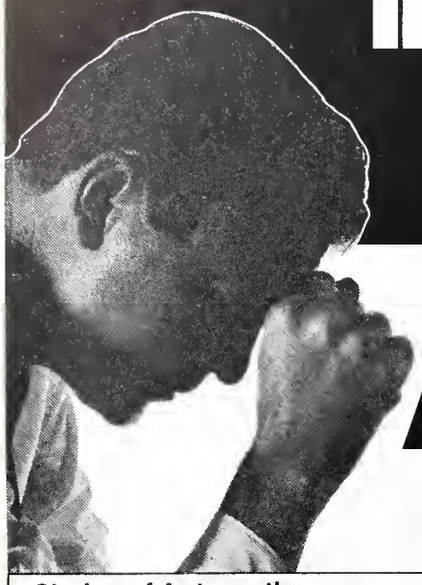
The treatment of

impotence

in the American male is complex.
The concept of chemotherapy plus the physician's psychological support is confirmed as effective therapy.

NEW CLINICAL STUDY

The Treatment of Impotence with Methyltestosterone Thyroid (100 patients—Double Blind Study)
T. Jakobovits
Fertility and Sterility, January 1970
Official Journal of the American Fertility Society



Android®

(thyroid-androgen) tablets

Double-Blind Study and Type of Patient: 100 patients suffering from undifferentiated impotence. Examination revealed the patients were within the average range of 17-Ketosteroid excretion and protein bound iodine. Except for fatigue in some patients all were in good health. Study was for one month in duration. Each patient received one tablet 3 times daily.

Results: Of the patients receiving the active medication (Android) a favourable response was seen in 78%. This compares with 40% with those on placebo. 80% of the patients treated with the active ingredients showed relief in fatigue compared with 42% of those receiving the placebo. Although psychotherapy is indicated in patients suffering from functional impotence the concomitant role of chemotherapy (Android) cannot be disputed.

Contraindications—Methyltestosterone is not to be used in malignancy of reproductive organs in male, coronary heart disease. Thyroid is not to be used in heart disease, hypertension unless the metabolic rate is low.

References: 1. Montesano, P., and Evangelista, I. Methyltestosterone-thyroid treatment of sexual impotence. Clin Med 12:69, 1966. **2. Dublin, M. F.** Treatment of impotence with methyltestosterone-thyroid compound. West Med 5:67, 1964. **3. Titeff, A. S.** Methyltestosterone-thyroid in treating impotence. Gen Prac 25:6, 1962. **4. Hellman, L., Bradlow, H. L., Zumoff, B., Fukushima, D. K., and Gallagher, T. F.** Thyroid-androgen interrelations and the hypocholesteremic effect of androsterone. J Clin Endocr 19:936, 1959. **5. Farris, E. J., and Colton, S. W.** Effects of L-thyroxine and liothyronine on spermatogenesis. J Urol 79:863, 1958. **6. Osol, A., and Farrar, G. E.** United States Dispensatory (ed. 25). Lippincott, Philadelphia, 1955, p. 1432. **7. Wershub, L. P.** Sexual Impotence in the Male. Thomas, Springfield, Ill., 1959, pp. 79-99.

REFER TO PDR

Choice of 4 strengths:

Android

Each yellow tablet contains:
Methyl Testosterone ..2.5 mg.
Thyroid Ext. (1/6 gr.) ..10 mg.
Glutamic Acid .....50 mg.
Thiamine HCL .....10 mg.
Dose: 1 tablet 3 times daily.
Available:
Bottles of 100, 500, 1000.

Android-HP
HIGH POTENCY

Each red tablet contains:
Methyl Testosterone ..5.0 mg.
Thyroid Ext. (½ gr.) ...30 mg.
Glutamic Acid .....50 mg.
Thiamine HCL .....10 mg.
Dose: 1 tablet 3 times daily.
Available:
Bottles of 100, 500, 1000.

Android-X
EXTRA HIGH POTENCY

Each orange tablet contains:
Methyl Testosterone .12.5 mg.
Thyroid Ext. (1 gr.) ....64 mg.
Glutamic Acid .....50 mg.
Thiamine HCL .....10 mg.
Dose: 1 or 2 tablets daily.
Available:
Bottles of 60, 500.

Android-Plus
WITH HIGH POTENCY B-COMPLEX AND VITAMIN C

Each white tablet contains:
Methyl Testosterone ..2.5 mg.
Thyroid Ext. (¼ gr.) ...15 mg.
Ascorbic Acid (Vit. C) .250 mg.
Thiamine HCL .....25 mg.
Glutamic Acid .....100 mg.
Pyridoxine HCL .....5 mg.
Niacinamide .....75 mg.
Calcium Pantothenate .10 mg.
Vitamin B-12 .....2.5 mcg.
Riboflavin .....5 mg.
Dose: 2 tablets daily.
Available: Bottles of 60, 500.

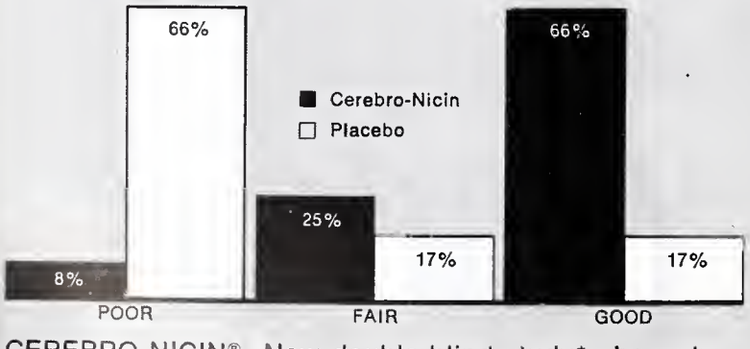
Write for literature and samples: BROWN **THE BROWN PHARMACEUTICAL CO., INC.** 2500 West 6th Street, Los Angeles, California 90057
A SUBSIDIARY OF ASSOCIATED CARE ENTERPRISES, INC.

For the treatment of the aging patient

Cerebro-Nicin®

capsules/elixir

A Gentle Cerebral Stimulant and Vasodilator



CEREBRO-NICIN® New double-blind study* shows how effectively senility can be forestalled. Four times as many aging patients showed striking improvement.

*A Double-Blind Study of Cerebro-Nicin, Therapy for the Geriatric Patient, R. Goldberg Jrnl,. of the Amer. Ger. Soc. June, 1964

Available in a tasty wine base elixir and capsules

Each Cerebro-Nicin capsule contains:

Pentylenetetrazole	100 mg.
Nicotinic Acid	100 mg.
Ascorbic Acid	100 mg.
Thiamine HCl	25 mg.
l-Glutamic Acid	50 mg.
Niacinamide	5 mg.
Riboflavin	2 mg.
Pyridoxine	3 mg.

DOSAGE: One capsule t.i.d. or as prescribed by physician.
AVAILABLE: Bottles of 100, 500, 1000 capsules.
Also elixir 8 oz. bottles.
CONTRAINDICATIONS: There are no known contraindications to Pentylenetetrazole although caution should be exercised when treating patients with a low convulsive threshold.
Most persons experience a flushing or tingling sensation after taking a higher potency niacin-containing compound. As a secondary reaction some will complain of nausea and other sensations of discomfort. This reaction is transient and is rarely a cause of discontinuance of the drug if the patient is forewarned to expect the reaction.

REFER TO PDR

Write for literature and samples...

BROWN **THE BROWN PHARMACEUTICAL CO.**
2500 W. 6th St., Los Angeles, Calif. 90057
Write for Product Catalog

during and after infection

Berocca®

TABLETS
high potency B-complex and C
for nutritional support

AVAILABLE ONLY ON Rx

contains water-soluble vitamins only

b.i.d. dosage

good patient acceptance

no odor, and virtually no aftertaste

Each Berocca Tablet contains:

Thiamine mononitrate	15 mg
Riboflavin	15 mg
Pyridoxine HCl	5 mg
Niacinamide	100 mg
Calcium pantothenate	20 mg
Cyanocobalamin	5 mcg
Folic acid	0.5 mg
Ascorbic acid	500 mg

Usual dosage is one tablet b.i.d.

Indications: Nutritional supplementation in conditions in which water-soluble vitamins are required prophylactically or therapeutically.

Warning: Not intended for treatment of pernicious anemia or other primary or secondary anemias. Neurologic involvement may develop or progress, despite temporary remission of anemia, in patients with pernicious anemia who receive more than 0.1 mg of folic acid per day and who are inadequately treated with vitamin B_{12}.

Dosage: 1 or 2 tablets daily, as indicated by clinical need.

Available: In bottles of 100.

ROCHE

Roche
LABORATORIES

Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

Mead Johnson–pharmaceuticals created for your specialized clinical needs

when your patients need continuous potassium supplementation...

they need the proved effectiveness and safety of

K·LYTE®

Each effervescent tablet supplies: 2.5 Gm. potassium bicarbonate (25 mEq. elemental potassium), 2.1 Gm. citric acid, cyclamic acid

Three clinical studies* confirm the effectiveness of good tasting K-Lyte as a source of supplemental potassium to increase low levels of serum potassium and to maintain normal levels. Patients were on continuous diuretic therapy and salt-restricted diets. K-Lyte dosage was one tablet b.i.d.

Serum Potassium Levels (in mEq./L)

Number of patients	Mean initial value	Mean final value
14	3.23	4.83
16	3.50	4.40
25	4.52	4.47

K-Lyte can offer effective potassium supplementation without the gastrointestinal complications sometimes associated with potassium chloride tablets and thiazide-potassium chloride combination therapy. Effervescent K-Lyte is taken in solution, speeding up absorption to avoid these hazards.

Composition: Each tablet contains potassium bicarbonate (2.5 Gm.), citric acid (2.1 Gm.), cyclamic acid, artificial flavor and color.
Contraindications: When renal function is impaired, or if the patient has Addison's disease, potassium supplementation should not ordinarily be instituted.
Precautions: Should not be used in patients with low urinary output unless under the supervision of a physician. In established hypokalemia, attention should be directed toward correction of frequently associated hypochloremic alkalosis and other potential electrolyte disturbances. Patients should be directed to dissolve tablet in stated amount of water to assure against gastrointestinal injury associated with the oral ingestion of concentrated potassium salt preparations.
Side Effects: While nausea has been reported in an occasional patient, K-Lyte produces no serious side effects when given in recommended doses to patients with normal renal function and urinary output. Potassium intoxication causes listlessness, mental confusion, tingling of the extremities and other symptoms associated with a high concentration of potassium in the serum.
Administration and Dosage: K-Lyte effervescent tablets must be dissolved in 3 to 4 ounces of water before taking. Adults: 1 tablet 2 to 4 times daily, depending on the requirements of the patient. Two tablets (50 mEq. of elemental potassium) supply the approximate normal adult daily requirement.
How Supplied: Effervescent tablets—boxes of 30 and 250 (orange or lime).

*Reports on file: Medical Research Department, Mead Johnson Laboratories, Evansville, Indiana 47721

© 1970 MEAD JOHNSON & COMPANY • EVANSVILLE, INDIANA 47721 71770

Mead Johnson LABORATORIES

Vasomist

(ANTIHISTAMINIC)

VASOCONSTRICTOR, NASAL DECONGESTANT AND LOCAL ANTIHISTAMINIC

Active Ingredients:
Phenylephrine Hcl 0.25%
Phenylpropanolamine Hcl . . . 0.50%
Chlorobutanol 0.15%
Tripelennamine Hel 0.50%
In Isotonic Solution

Vasomist

(PLAIN)

VASOCONSTRICTOR AND NASAL DECONGESTANT

Active Ingredients:
Phenylephrine Hcl 0.25%
Phenylpropanolamine Hcl . . 0.50%
Chlorobutanol 0.15%
In Isotonic Solution

USE: Temporary relief of nasal congestion due to colds and hay fever.

DIRECTIONS: Adults and Children: Instill two or three drops into each nostril, using no more than needed to provide relief. Repeat every three to four hours as needed but not oftener.

AVAILABILITY

In plastic squeeze bottles containing ¾ fluid oz. and in dropper bottles containing 1 fluid oz.

HUMCO LABORATORY
TEXARKANA, ARK.-TEX.

HUMCO LABORATORY
TEXARKANA, ARK.-TEX.
Our Integrity is Your Guarantee

HIGHLAND HOSPITAL

ASHEVILLE, NORTH CAROLINA

Founded 1904

A DIVISION OF THE DEPARTMENT OF PSYCHIATRY OF DUKE UNIVERSITY

Accredited by the Joint Commission on Accreditation and Certified for Medicare

Complete facilities for evaluation and intensive treatment of psychiatric patients, including individual psychotherapy, group therapy, psychodrama, electro-convulsive therapy, Indoklon convulsive therapy, drugs, social service work with families, family therapy, and an extensive and well organized activities program, including occupational therapy, art therapy, music therapy, athletic activities and games, recreational activities and outings. The treatment program of each patient is carefully supervised in order that the therapeutic needs of each patient may be realized.

High school facilities for a limited number of appropriate patients are now available on grounds. The School Program is fully integrated into the hospital treatment program and is accredited through the Asheville School System.

Complete modern facilities with 85 acres of landscaped and wooded grounds in the City of Asheville.

Brochures and information on financial arrangements available

Contact: (1) Mrs. Elizabeth Harkins, ACSW, Coordinator of Admissions

or

(2) Samuel N. Workman, M.D.
Chief of Clinical Services

(3) Charles W. Neville, Jr., M.D.
Assistant Professor of Psychiatry and Medical Director

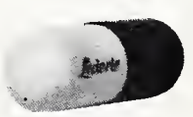
Area Code 704 - 254-3201

Doctor, after all we've been through together...

abscess
acne
amebiasis
anthrax
bacillary dysentery
bartonellosis
bronchitis
bronchopulmonary infection
brucellosis
chancroid
diphtheria
endocarditis
genitourinary infections
gonorrhea
granuloma inguinale
listeriosis
lymphogranuloma
mixed bacterial infection
osteomyelitis
otitis
pertussis
pharyngitis
pneumonia
psittacosis
pyelonephritis
Rocky Mountain spotted fever
scarlet fever
septicemias
sinusitis
soft tissue infection
tonsillitis
tularemia
typhus fever
urethritis

...don't you think it's time we were on a first-name basis?

call me "Achro® V"



Every pharmacist knows ACHRO® V stands for ACHROMYCIN® V

Contraindications: Hypersensitivity to tetracycline.
Warning: In renal impairment, since liver toxicity is possible, lower doses are indicated; during prolonged therapy consider serum level determinations. Photodynamic reaction to sunlight may occur in hypersensitive persons. Photosensitive individuals should avoid exposure; discontinue treatment if skin discomfort occurs.
Precautions: Nonsusceptible organisms may overgrow; treat superinfection appropriately. Tetracycline may form a stable calcium complex in bone-forming tissue and may cause dental staining during tooth development (last half of pregnancy, neonatal period, infancy, early childhood).
Adverse Reactions: *Gastrointestinal*—anorexia, nausea, vomiting, diarrhea, stomatitis, glossitis, enterocolitis, pruritus ani. *Skin*—maculopapular and erythematous rashes; exfoliative dermatitis; photosensitivity; onycholysis, nail discoloration. *Kidney*—dose-related rise in BUN. *Hypersensitivity reactions*—urticaria, angioneurotic edema, anaphylaxis. *Intracranial*—bulging fontanels in young infants. *Teeth*—yellow-brown staining; enamel hypoplasia. *Blood*—anemia, thrombocytopenic purpura, neutropenia, eosinophilia. *Liver*—cholestasis at high dosage. Upon adverse reaction, stop medication and treat appropriately.

Achromycin® V
Tetracycline

Lederle LEDERLE LABORATORIES • A Division of American Cyanamid Company, Pearl River, New York 10965

484-9

A once-popular treatment for back pains was to have the seventh son of a seventh son stand or walk on the patient's back.

The pain of earache was allegedly relieved by holding a hot roasted onion to the ear.

For headache, a sovereign remedy was to wear a snakeskin round one's head.

A realistic approach to pain relief

'Empirin'®

Compound with Codeine Phosphate gr. 1/2 No. 3

Each tablet contains:
Codeine Phosphate gr. 1/2 (Warning—May be habit forming), Phenacetin gr. 2 1/2, Aspirin gr. 3 1/2, Caffeine gr. 1/2.

keeps the promise of pain relief

'B.W. & Co.' narcotic products are Class "B", and as such are available on oral prescription, where State law permits.

BURROUGHS WELLCOME & CO. (U.S.A.) INC.
Tuckahoe, N.Y.

The girth control pill

Tepanil® Ten-tab®

(continuous release form)

(diethylpropion hydrochloride)

works on the appetite not on the 'nerves'

When girth gets out of control, TEPANIL can provide sound support for the weight control program you recommend. TEPANIL reduces the appetite—patients enjoy food but eat less. Weight loss is significant—gradual—yet there is a relatively low incidence of CNS stimulation.

Contraindications: Concurrently with MAO inhibitors, in patients hypersensitive to this drug; in emotionally unstable patients susceptible to drug abuse.

Warning: Although generally safer than the amphetamines, use with great caution in patients with severe hypertension or severe cardiovascular disease. Do not use during first trimester of pregnancy unless potential benefits outweigh potential risks.

Adverse Reactions: Rarely severe enough to require discontinuation of therapy, unpleasant symptoms with diethylpropion hydrochloride have been reported to occur in relatively low incidence. As is characteristic of sympathomimetic agents, it may occasionally cause CNS effects such as insomnia, nervousness, dizziness, anxiety, and jitteriness. In contrast, CNS depression has been reported. In a few epileptics an increase in convulsive episodes has been reported. Sympathomimetic cardiovascular effects reported include ones such as tachycardia, precordial pain, arrhythmia, palpitation, and increased blood pressure. One published report described T-wave changes in the ECG of a healthy young male after ingestion of diethylpropion hydrochloride; this was an isolated experience, which has not been reported by others. Allergic phenomena reported include such conditions as rash, urticaria, ecchymosis, and erythema. Gastrointestinal effects such as diarrhea, constipation, nausea, vomiting, and abdominal discomfort have been reported. Specific reports on the hematopoietic system include two each of bone marrow depression, agranulocytosis, and leukopenia. A variety of miscellaneous adverse reactions have been reported by physicians. These include complaints such as dry mouth, headache, dyspnea, menstrual upset, hair loss, muscle pain, decreased libido, dysuria, and polyuria.

Convenience of two dosage forms: TEPANIL Ten-tab tablets: One 75 mg. tablet daily, swallowed whole, in midmorning (10 a.m.); TEPANIL: One 25 mg. tablet three times daily, one hour before meals. If desired, an additional tablet may be given in midevening to overcome night hunger. Use in children under 12 years of age is not recommended.

T-006A / 1/70 / U. S. PATENT NO. 3,001,910

THE NATIONAL DRUG COMPANY
DIVISION OF RICHARDSON-MERRELL INC
PHILADELPHIA, PENNSYLVANIA 19144

BYRON B. HOLT, MD, J. T. ARMSTRONG, MD

Dangers & Contraindications

Hysterosalpingography is a relatively safe diagnostic procedure. Its simplicity and values are taught, but its dangers and complications frequently are neglected. Problems that can arise from hysterosalpingography are discussed.

EVERY OBSTETRICIAN AND GYNECOLOGIST knows the diagnostic value of a hysterosalpingogram, but as so often is true in medicine, this good diagnostic tool has its dangers despite its simplicity. The resident physician learns the technique of obtaining and interpreting a good hysterosalpingogram. However, he receives little instruction in the complications of hysterosalpingography.

Dangers of Hysterosalpingography: *Mechanical Complications:* Pain to some degree is the most common complaint, and it occurs in about 80% of the patients. Mild to moderate pain may result when a probe or instrument is passed into the cervical canal. If a fallopian tube is obstructed, its distention may cause lower abdominal discomfort. The degree of distention of the fallopian tubes is proportionate to the amount of pressure applied at the time of injection; discomfort can be reduced by injecting the contrast media slowly.[1] Contrast media can cause chemical irritation and pain when it spills into the pelvic cavity.

Good technique and experience in sounding the uterine cavity eliminate the danger of perforating the cervix or uterus.

Theoretically, endometriosis can occur as viable endometrial fragments are dislodged to distant sites.

Hemorrhage is rare. Bleeding usually indicates an organic lesion such as carcinoma, endometrial polyp, submucous fibroid, or advanced tuberculosis.

Chemical and Toxic Complications: Granulomas of the mucous membranes have been reported. The contrast media can cause a foreign-body reaction. Normally, tubal peristalsis and uterine contractility will expel the contrast media through the fimbriated end of the fallopian tube or the cervical canal. Granulomas primarily arise in occluded fallopian tubes because the contrast media, which cannot be expelled by normal peristalsis, may pool in the fallopian tubes and remain for a long time. A granuloma rarely forms in a normal fallopian tube with active peristalsis.[2]

Iodine hypersensitivity can cause allergic reactions most commonly manifested in urticaria and acneiform skin eruptions. All patients should be screened for iodine sensitivity, which frequently is manifested by an allergic reaction to seafood, intravenous pyelogram, or intravenous cholangiogram. In nearly every case of allergic reaction, the contrast media is forced into the uterine circulation. An antihistamine is the drug of choice for mild reactions, but an anaphylactic kit containing an antihistamine, steroid, and adrenalin should be readily accessible.

Intravasation: Accidental penetration of blood vessels or lymphatic structures by contrast media occurs in less than 1% of all cases. Intravasation can be caused by many factors, the most common of which is accidental instrument penetration of the uterine wall. This allows the contrast media to be injected into the uterine venous sinuses, and to travel through uterine veins, and into the general body circulation. Excessively high intrauterine pressures can rupture some of the vessels and push the contrast media into the uterine venous sinuses. Intravasation is most likely to occur when the endometrium is physiologically deficient, as it is during menstruation or primary and secondary amenorrhea. Any uterine cavity deformed by polyps, tuberculosis, or submucous fibroids is predisposed to this condition. Recent uterine surgery is a temporary contraindication to hysterosalpingography.[3]

Inflammatory Reaction: Contrast media can transmit bacteria from the cervical and uterine cavities through the fallopian tubes and into the peritoneal cavity. The incidence of infection is higher in clinic patients than in private patients. If lower abdominal pain lasts more than 24 hours and is associated with signs of infection, treatment with a broad-spectrum antibiotic

to Hysterosalpingography

should be started immediately. Antibiotics frequently are given prophylactically to patients with histories of chronic or recurrent pelvic inflammatory disease.

Deaths: The majority of deaths have resulted from error in selection of cases, judgment, or technique. The two primary causes of death are peritonitis and embolism. Chemical peritonitis is usually temporary and clears spontaneously. Bacterial peritonitis may be rapid or delayed. If an oil based contrast media is used, an oil embolus can occur immediately. When the oil media reaches the pulmonary circulation, symptoms of pulmonary emboli with coughing and dyspnea develop. If the emboli are extensive, pulmonary circulatory collapse may occur. An embolus frequently is associated with large amounts of contrast media injected with excessive force.[4]

Contraindications: Any acute or recent pelvic inflammatory disease must be cleared before hysterosalpingography. A patient with chronic or recurrent pelvic inflammatory disease should be evaluated carefully and may be a candidate for broad-spectrum antibiotic therapy. A thick or purulent endocervical discharge should be treated and eliminated before a contrast media is injected. All of these precautions are instrumental in preventing pelvic peritonitis.

Active uterine bleeding indicates open vessels in the endometrium which will allow the contrast media to intravasate the uterine vessels and enter the pulmonary circulation as multiple emboli.

Pregnancy is a relative contraindication, although usually there are no complications if hysterosalpingography is inadvertently performed during pregnancy. Hysterosalpingography has been used to rule out hydatidiform mole and unruptured tubal pregnancy.

Methods of Hysterosalpingography: Methods vary, but most physicians believe that the most ideal time for injection is at midcycle; the venous sinuses are not dilated then, and the endometrium will soon be shed thus decreasing the chance for an infection. The amount of contrast media will average between 4 and 10 cc, but many times it takes more to fill the uterine cavity and fallopian tubes. Sinografin is the contrast media used at Hermann Hospital; other water-soluble dyes have the same safety properties. Sinografin is water soluble, of low viscosity, less painful, and has 38% concentration of iodine. It is nonirritating and therefore will cause fewer adhesions and granulomas. The contrast media should be injected under low pressure. It is difficult to gauge manual pressure when injecting, but the following should indicate that injection cease: increasing pelvic pain, resistance to further instillation of contrast media, return of contrast media back into the syringe, or reflux of contrast media from the cervical canal into the vaginal vault.[5]

REFERENCES

1. Marshak, R H, et al: Hysterography and Hysterosalpingography, An Analysis of 2,500 Cases with Special Emphasis on Technique and Safety of the Procedure, Surg Gynec Obstet 91:182 (Aug) 1950.

2. Siegler, A M: Hysterosalpingography, Scranton, Pa, Hoeber Medical Division, Harper & Row, 1967, p 44.

3. Robins, S A, and Shapira, A A: Value of Hysterosalpingography; Study of 1,000 Cases, New Eng J Med 205:380 (Aug 20) 1931.

4. Aaron, J B, and Levine, W: Endometrial Oil Granuloma Following Hysterosalpingography, Amer J Obstet Gynec 68:1594 (Dec) 1954.

5. Measday, B: An Analysis of the Complications of Hysterosalpingography, J Obstet Gynec Brit Emp 67:663 (Aug) 1960.

Drs. Holt and Armstrong, Hermann Hospital, Houston, Tex 77025.

Fig 1. Normal hysterosalpingogram. Note spillage of contrast media through distal end of fallopian tubes.

Percutaneous subclavian vein catheterization in children

DONALD R. BUTTS, MD
HENRY GOODWIN GLASS, MD

Subclavian vein catheterization was used successfully in five pediatric patients, primarily for administering intravenous fluids and medications, monitoring central venous pressures, and obtaining blood samples for laboratory studies. There were no complications.

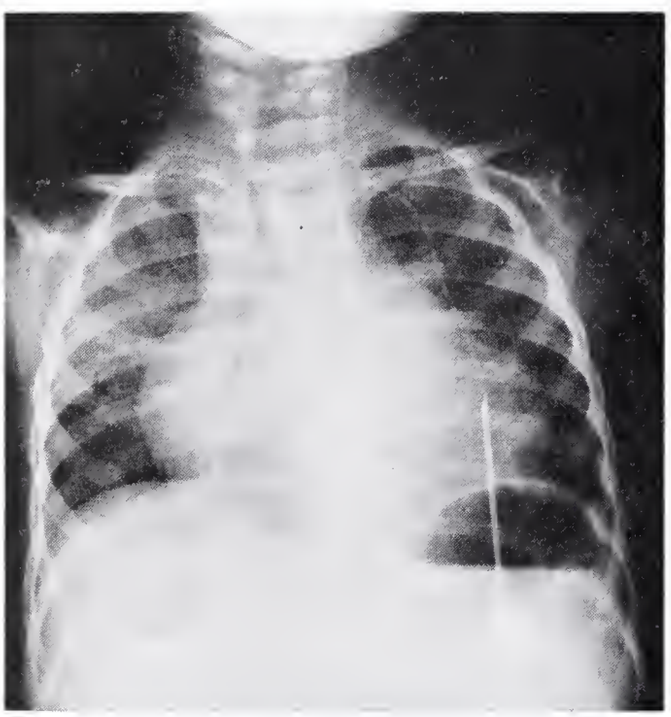


Fig 1. Chest x-ray of the second patient shows the medium Intracath located in the internal jugular vein. The patient received intravenous fluid for seven days through this catheter.

MALINAK HAS SHOWN the value of percutaneous subclavian catheterization in adults.[1] Many others, including Wilson and his associates,[2] popularized this technique in the United States. Subclavian catheterization provides a means for fluid and medication administration, as well as an adequate method for measuring central venous pressure. Complications are minimal; in Mogil's series of 210 patients, only six complications occurred.[3]

This procedure should be considered useful for children also. In our experience, it has been of considerable value in five patients ranging from four months to three years of age.

Technique: Before attempting the procedure in children, one should have a thorough knowledge of the anatomy involved.[4] The subclavian vein lies immediately posterior to the medial third of the clavicle, just medial to the point where the axillary vein becomes the subclavian vein as it crosses over the first rib. This is not a "blind" procedure if one keeps in mind the proximity of the vein to the undersurface of the medial third of the clavicle.

The patient is placed in a supine position and the feet elevated to increase central venous pressure and to prevent air aspiration when the venipuncture is performed. The patient is then secured with tape and sheets to eliminate any notable movement. His head is extended and turned to his left and held by an assistant. This positioning of the head establishes a triangle of the sternal and clavicular heads of the sternocleidomastoid muscle with the clavicle. It also keeps the child from watching and being frightened by the needle. The right side is preferable since there is minimal danger of injuring the thoracic duct on the left. The skin about the right clavicle then is prepared with a solution of Betadine and sterile drapes are applied. In children one year old or older, the skin, subcutaneous tissue and periosteum are injected with 1% Xylocaine. In children under age one this is not necessary, and only encourages more movement. A small Bardic Intracath (19 gauge needle with an inside diameter (ID): .017 catheter) is used for children under one year of age, and a medium Bardic Intracath (17 gauge needle with an ID: .027 catheter) for children over one year old. The operator, wearing sterile gloves, removes the needle from the Intracath and attaches it to a 5 cc glass slip syringe (not plastic) partially filled with sterile saline. The needle is inserted through the skin at the inferior border of the midclavicle and advanced, at an angle of 45°, medially and superiorly toward the base of the triangle formed by the sternal and clavicular heads of the sternocleidomastoid and the clavicle. When the needle touches the midclavicle, it is gently walked down the clavicle until it skims just beneath the inferior clavicle surface. Then, about 0.2 to 0.3 cc of saline is flushed through the needle

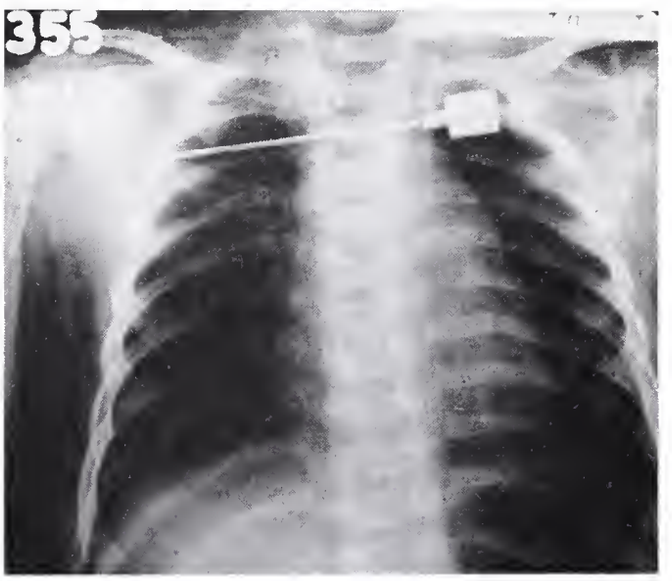


Fig 2. Chest x-ray of the fourth patient; the small Intracath is located in the superior vena cava.

to remove any skin plug or other obstruction. The needle is then advanced with negative pressure applied to the syringe, and the syringe is held against the chest wall, maintaining the needle adjacent to the posterior surface of the clavicle. A sudden flow of venous blood indicates that the needle is in the subclavian vein. The needle is then stabilized by grasping the hub with the gloved left thumb and third finger, and the syringe is disengaged. The gloved left index finger is placed over the hub opening to prevent leakage of blood which will be noted by high venous pressure, or air embolism which will be noted by negative venous pressure. The catheter is then grasped with the right hand and threaded through the needle to the depth of the superior vena cava. This distance can be estimated in advance by measuring from the midclavicle to the midsternum. The needle is removed with the catheter in place, then the syringe is reattached, and negative pressure applied. If blood flows freely back through the Intracath, all is well and the infusion is started; if not, the Intracath is repositioned by pulling back gently while applying negative pressure until free flow of blood is obtained, then the infusion is started. If free blood flow cannot be obtained, the Intracath is removed. After the operator is satisfied with the position of the Intracath and infusion has begun, the tubing is taped securely to the chest wall, especially in the area where the catheter passes through the needle. The needle point may cut through the catheter if it is not immobilized. All pediatric patients should have a chest x-ray to check for pneumothorax, hemothorax, and position of the radiopaque catheter.

Results: Five consecutive pediatric patients, ages four months to three years, have had subclavian venipunctures and catheterizations performed. All were successful without any notable complications. The longest infusion without change of catheter was seven days.

The first patient was a two-year-old with major burns of all extremities which prevented standard cut-down. The anterior chest wall was free of notable burns, and a subclavian catheter was a valuable means of fluid administration.

The second patient was a three-year-old who had already had multiple cut-downs on all extremities and phlebitis of one leg. The patient had congestive heart failure and a subclavian catheter was inserted. The central venous pressure was 20 cm of water. A post-venipuncture chest x-ray showed that the radiopaque catheter was in the internal jugular vein. The Intracath was left in place and the patient was treated for congestive heart failure. The following day the central venous pressure was decreased to 12 cm of water. Infusion was maintained through the subclavian catheter for seven days before it was discontinued.

The third patient was a severely dehydrated one-year-old with collapsed peripheral veins.

The fourth patient was four months old, weighed 11 lb 9 oz, and was brought to the emergency room with gastroenteritis and severe dehydration. A two-hour attempt was made to start pediatric scalp vein infusions, and cut-downs were also attempted without success. A small Bardic Intracath was placed in the right subclavian vein without difficulty or complications. Intravenous fluid infusion was given for five days until the child could tolerate oral feedings.

The fifth patient was an 11-month-old with gastroenteritis and dehydration. Subclavian infusion was performed without difficulty.

Discussion: In infants, it is sometimes quite difficult to start intravenous fluids with standard techniques, and it is extremely difficult to immobilize an infant's extremity. Therefore, subclavian venipuncture with catheterization is a valuable means of giving intravenous fluids and medications to a select group of pediatric patients.

Although we encountered no serious complications in these few cases, one should be alert for pneumothorax, hemothorax, hydrothorax, air embolism, subclavian artery injury, brachial plexus injury, thoracic duct injury, and infection. These complications may be avoided by using the technique described.

REFERENCES

1. Malinak, L R, et al: Percutaneous Subclavian Catheterization for Central Venous Pressure Monitoring; Application in Obstetrics and Gynecologic Problems, Amer J Obstet Gynec 92:477 (June 15) 1965.

2. Wilson, J N, et al: Central Venous Pressure in Optimal Blood Volume Maintenance, Arch Surg 85:563 (Oct) 1962.

3. Mogil, R A, et al: The Infraclavicular Venipuncture; Value in Various Clinical Situations Including Central Venous Pressure Monitoring, Arch Surg 95:320 (Aug) 1967.

4. Davidson, J T: Subclavian Venipuncture, Lancet 2:1139 (Nov 30) 1963.

Drs. Butts and Glass, Hermann Hospital, Houston, Tex 77025.

DEPARTMENT OF RADIOLOGY, HERMANN HOSPITAL
JOHN D. REEVE, MD, DIRECTOR

Roentgenographic Diagnosis

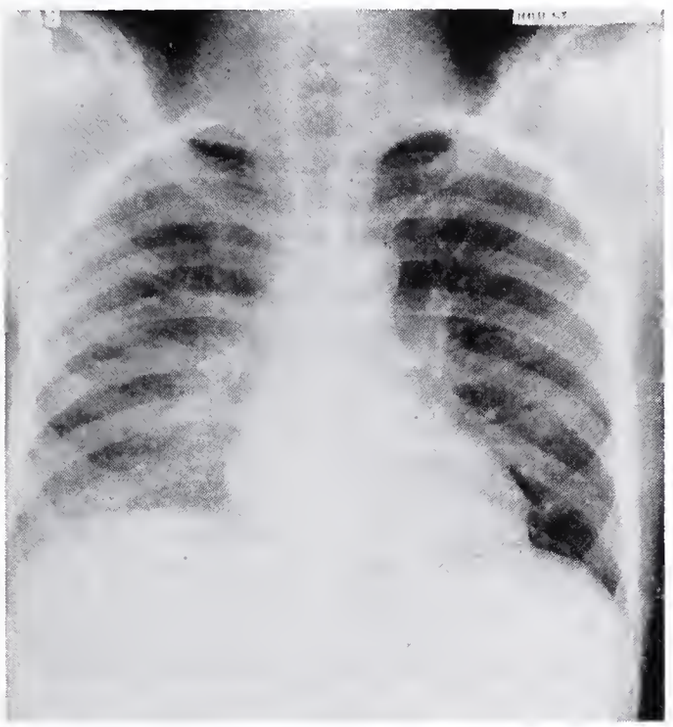


Fig 1.

Fig 2.

A 29-year-old Negro man gave a history of frequent pneumonia, backache, tiredness, and anemia.

After reviewing the three roentgenograms (Figs 1-3), what is your diagnosis?

The posteroanterior view (Fig 1) of the chest shows residual infiltrations from a resolving right basilar pneumonia. On lateral view (Fig 2) we see osteoporosis too advanced for a normal 29-year-old. In addition, there appears to be expansion of the intervertebral discs at several levels; this results from softening of the vertebrae which allows the discs to expand into the vertebrae. Lateral view of the leg (Fig 3) reveals an old bone infarct. All are components of sickle cell disease, which this patient has.

Fig 3.

ocular

management of emergencies

ALL PHYSICIANS SHOULD be familiar with the management of ocular emergencies. Although a great number of conditions could be included, this article is limited to the more important and more commonly occurring conditions which the physician is likely to see.

Examination: It is important to develop a standard approach to examination of any patient with an emergency eye condition, and to recognize and classify those patients who should be examined by an ophthalmologist.

Adequate examination requires the availability of certain basic equipment, including a visual acuity testing chart, a light source producing good focal illumination, a magnifying eye loupe, an ophthalmoscope, lid retractor (a large paper clip, properly bent, will serve), sterile fluorescein strips, topical anesthetic drops, a spud or hypodermic needle for removing foreign bodies, sterile irrigating fluid in a squeeze bottle, sterile cotton-tipped applicators, and mydriatic drops.

In an emergency, the routine for examining a patient with an eye problem is, first, to obtain the history of events leading up to it. Before actually examining the eyes, and if circumstances permit, record the visual acuity in each eye. External examination of the eye is next, with the lids, conjunctiva, and cornea examined grossly; the latter is stained with fluorescein if indicated. The motility of the eye in the cardinal fields of gaze is checked quickly, and any limitation of motion is noted. The anterior chamber of the eye is examined grossly for cloudy aqueous or for blood (hyphema). The pupils always should be observed and compared; and last, the fundus is examined. Circumstances may alter this routine, but it will serve in most instances.

Types of Emergencies: The most common ocular emergency that one is likely to see is corneal abrasion or foreign body in the cornea or conjunctiva. When a patient complains of "something in my eye," the cornea should be anesthetized first to make the patient more comfortable and to facilitate examination. Then the cornea is stained with fluorescein to identify areas of denuded epithelium. If no foreign body is noted on the cornea, the upper lid should be everted. Asking the patient to look down; then with a cotton-tipped applicator placed on the upper lid above the tarsal plate, the upper lid lashes are grasped by the fingers and the lid everted. The foreign body, if seen, can then be irrigated away or lifted off with a moistened applicator. Corneal abrasions usually require no treatment other than instillation of antibiotic drops such as Neosporin drops and a tight pressure bandage for 24 to 48 hours. Foreign bodies in the cornea can usually be removed easily with a spud or a 22-gauge needle by utilizing topical anesthetic drops, good illumination, and eye loupes. The eye can then be dressed in the same manner as for a corneal abrasion, except that frequently it is necessary to instill a drop of 5% homatropine or 1% Cyclogyl to reduce ciliary spasm, a common cause for excessive pain in these cases. Welder's burns are another frequent ocular emergency which, although quite painful, usually are not serious and are easily treated by instillation of topical anesthetic drops, application of an antibiotic steroid ointment if there is no staining of the cornea, and a pressure patch. Patients frequently require oral analgesia as well. Overexposure to ultraviolet light or a sunlamp is treated similarly.

Contact lens emergencies, usually resulting from wearing lenses too long, can be treated in much the same way as a corneal abrasion or

ELIZABETH S. CRAWFORD, MD; ROBERT B. GILLETT, MD. Adequate examination and care of the patient with an ocular emergency requires that the physician have certain basic equipment available, and use a standard systematic approach which will allow him to recognize the type of eye injury. Furthermore, he should be able to determine whether the injury requires immediate treatment or can await definitive treatment until an ophthalmologist can be summoned.

a welder's burn. Also, the patient should be instructed not to wear his lens until he has been seen by an ophthalmologist.

Chemicals, either acid or alkaline, splashed into the eye constitute a serious ocular emergency and an ophthalmologist usually should be consulted. Initial treatment of chemical injuries is copious irrigation of the eye with almost any fluid available, but preferably water or saline solution. One does not attempt to neutralize the chemical. With alkaline burns of the eye it is important to continue irrigation, even after what may seem to be adequate initial treatment. After irrigation of the burn, a combination antibiotic and steroid may be instilled into the eye. Because of the progressive nature of alkaline burns, patients frequently require hospitalization.

The patient with an attack of acute glaucoma usually presents with symptoms of acute pain in one eye and photophobia. There is congestion of the vessels around the cornea, and the cornea itself may appear hazy. The pupil is typically partially dilated. On palpation, the globe feels firm in comparison to the normal eye. A tonometer, if available, usually aids in making the diagnosis. The situation demands intense miotic therapy in addition to carbonic anhydrase inhibitors, but if possible, an ophthalmologist should be consulted.

Traumatic injuries to the eye can be divided into blunt trauma, penetrating injuries, and lid lacerations. In general, these injuries require the attention of an ophthalmologist.

Blunt trauma frequently presents as a black eye, which may involve nothing more than periorbital edema and ecchymosis of the lids. However, these injuries can prove far more serious than they first appear, and the eye should be examined carefully to rule out an orbital floor or "blowout" fracture of the orbit, a hyphema, or even a rupture of the globe. A hyphema must be treated with bed rest and binocular patching in the hospital. A blowout fracture should be suspected in any patient with abnormal motility and diplopia following an injury, and usually can be confirmed by x-rays of the skull utilizing a Water's view in addition to the routine anteroposterior and lateral views. Laminograms should be done also.

Penetrating injuries to the eye frequently reveal a corneal laceration with the anterior chamber shallow or flat. The iris may actually protrude through the wound. If the pupil is not round, iris prolapse should be suspected. If the lens is involved, it may appear cloudy or milky. A fundus examination may be impossible, but if attempted it may reveal vitreous hemorrhage. Roentgenograms of the skull and orbit always should be made in an attempt to identify foreign bodies. Until an ophthalmologist can be summoned for definitive treatment, it is usually best to patch the injured eye, keep the patient lying flat, and administer sedation and analgesics as necessary.

Lacerations which involve the full thickness of the lid or the lid margins, especially medial to the upper and lower lacrimal puncta, are best left to the attention of the ophthalmologist. Otherwise, superficial lacerations on or about the lids may be sutured just as any other skin laceration, using small sutures, preferably 6-0 black silk.

Drs. Crawford and Gillett, Hermann Hospital, Houston, Tex 77025.

CARCINOMA IN SITU IN ADENOMATOUS POLYPS OF VERMIFORM APPENDIX

WILSON G. BROWN, MD

ENRIQUE VAN SANTEN, MD

An unusual case of an in situ carcinoma, an incidental finding in an adenomatous polyp of the appendix, is reported.

THE SURGICAL PATHOLOGIST, when examining an appendix, usually looks for the obvious inflammatory changes, carcinoid tumors, or mucoceles. Polyps of the appendix are seldom thought of and, as in this case, are incidental findings that may be of considerable importance.

Case Report: A 65-year-old man was admitted to Hermann Hospital July 24, 1968, with abdominal pain and nausea. Four days earlier he had drunk some beer and eaten peanuts; a few hours later nausea and vomiting with some severe abdominal pain developed in his epigastric area. At this time his physician found essentially no physical abnormalities and consequently sent him home for observation. Since that time the patient had low-grade fever and anorexia. On the day of admission, pain in the right upper quadrant developed and worsened on deep breathing, twisting, or turning. He also complained of having a bad taste in his mouth, and of some obstipation.

The patient was moderately ill with a temperature of 101° F, blood pressure of 130/80 mm Hg, and pulse rate 96/min. His abdomen was tender to palpation with rebound tenderness in the right upper quadrant. Murphy's sign was positive. No other significant physical abnormalities were present. The diagnostic impression was that of acute cholecystitis.

Roentgenographic Studies: The gallbladder could not be visualized with an oral cholecystogram. An upper gastrointestinal series and a kidney-ureter-bladder film were normal.

The laboratory values at the time of admission were as follows: total bilirubin, 1.1 mg/100 ml; complete blood count, hemoglobin 13.9 gm/100 ml, hematocrit 40%, white blood cells (WBC) 14,700/cu mm with a differential count of stabs 1, segmented neutrophils 71, lymphocytes 18, and monocytes 10. A profile of 12 blood chemistry determinations was in the normal range.

A cholecystectomy and an incidental appendectomy were performed on July 30. The patient had a normal postoperative course and was discharged on Aug 15.

Pathologic Findings: Cholecystitis was evident grossly and microscopically. The appendix wall was intact and the serosa smooth. The appendix was 9 cm long and the caliber varied from 0.5 to 0.8 cm in the midportion. A section was taken from the tip and at an area that was slightly expanded near the proximal end. When the latter was done, two polypoid masses were found protruding and filling the appendiceal lumen. These were 1.3 cm long, were faintly lobulated, and had a mulberry-like appearance. The polyps were attached to the appendiceal wall by a narrow pedicle. The appendiceal mucosa was velvety, light gray, and unremarkable.

In the microscopic sections of the polypoid masses, the size and number of glands were increased. There were varying degrees of mucosal epithelial proliferation and atypism merging in some areas with in situ malignant neoplastic columnar epithelium. The neoplastic epithelial-lined glands were oriented back to back with no stromal invasion (Figs 1-3).

Comment: Polyps of the appendix apparently occur infrequently or are not searched for diligently. Reports in the literature are scarce. Collins found 57 benign mucosal polyps in 71,000 appendix specimens studied during 40 years. Villous adenomas and adenomatous polyps have been found in patients with familial multiple polyposis[2] and in patients with the Peutz-Jeghers syndrome.[1] Malignancy within these polyps has also been observed.[2] Three cases of juvenile retention polyps within the appendix have been reported.[6] These findings have led to the belief that polyps of the appendix show the same pathologic range as is seen in polyps elsewhere in the intestine.[5]

From the histologic aspect, polyps of the ap-

1. Hereditary Polyposis
   a. Familial multiple polyposis
   b. Peutz-Jeghers syndrome
   c. Gardner syndrome
2. Acquired Polyps
   a. Juvenile retention polyps
   b. Adenomatous polyp
   c. Villous (papillary) adenoma

Table 1. Classification of polyps.

pendix resemble those found in the colon.[8] A useful classification suggested by Hameed emphasizes this.[5] He groups the polyps as being hereditary or acquired (Table 1).

Arbitrarily, it is concluded from the number of reports that villous adenomas occur more frequently than adenomatous polyps.[3,4] This phenomenon could be due to the attraction villous adenomas have because of the controversy over their propensity for malignant changes.

The prognosis for adenocarcinoma of the appendix is comparable to or better than that for carcinomas of the colon.[7,9] According to Straus,[9] the treatment of choice is radical resection when the muscularis mucosa has been invaded, and simple appendectomy for the in situ carcinomas. This view is challenged by Steinberg, who recommends a right hemicolectomy in all cases of adenocarcinoma unless the risk of operation is prohibitive.[7]

REFERENCES

1. Bartholomew, L G, et al: Intestinal Polyposis Associated with Mucocutaneous Melanin Pigmentation (Peutz-Jeghers Syndrome): Review of Literature and Report of Six Cases with Special Reference to Pathologic Findings, Gastroenterology 32:434 (March) 1957.

2. Collins, D C: 71,000 Human Appendix Specimens; A Final Report, Summarizing Forty Years' Study, Amer J Proctol 14: 265 (Dec) 1963.

3. Goldfarb, W B, and Kempson, R: Villous Adenoma of Appendix, Surgery 55:769 (June) 1964.

4. Hameed, K: Villous Adenoma of the Vermiform Appendix; A Review with Report of a Case, Arch Path 81:465 (May) 1966.

5. Hameed, K: Epithelial Polyps of the Vermiform Appendix; A Review, Amer J Gastroent 46:339 (Oct) 1966.

6. Shnitka, T K, and Sherbaniuk, R W: Adenomatous Polyps of the Appendix in Children, Gastroenterol 32:462 (March) 1957.

7. Steinberg, M, and Cohn, I, Jr: Primary Adenocarcinoma of the Appendix, Surgery 61:644 (April) 1967.

8. Uihlein, A, and McDonald, J R: Primary Carcinoma of the Appendix Resembling Carcinoma of the Colon, Surg Gynec Obstet 76:711 (June) 1943.

9. Straus, R: Carcinoma of the Vermiform Appendix, Amer J Proctol 15:117 (April) 1964.

Drs. Brown and Van Santen, Hermann Hospital, Houston, Tex 77025.

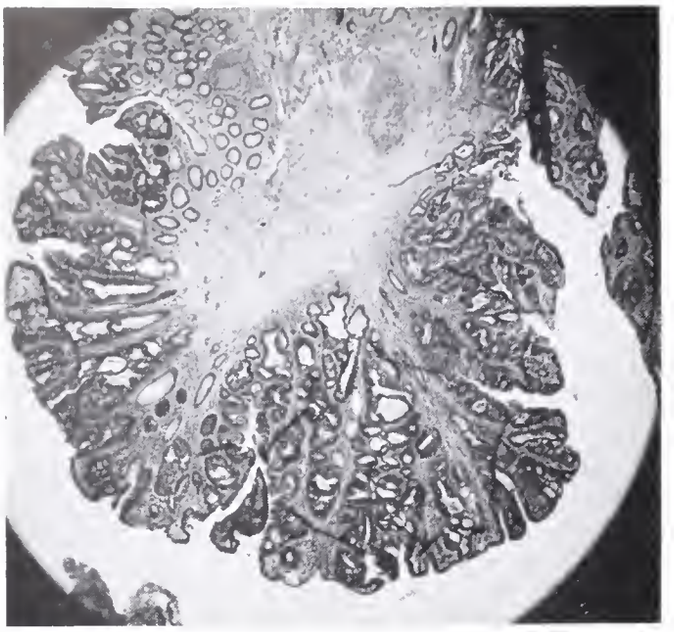


Fig 1. Low magnification of an adenomatous polyp in appendiceal lumen.

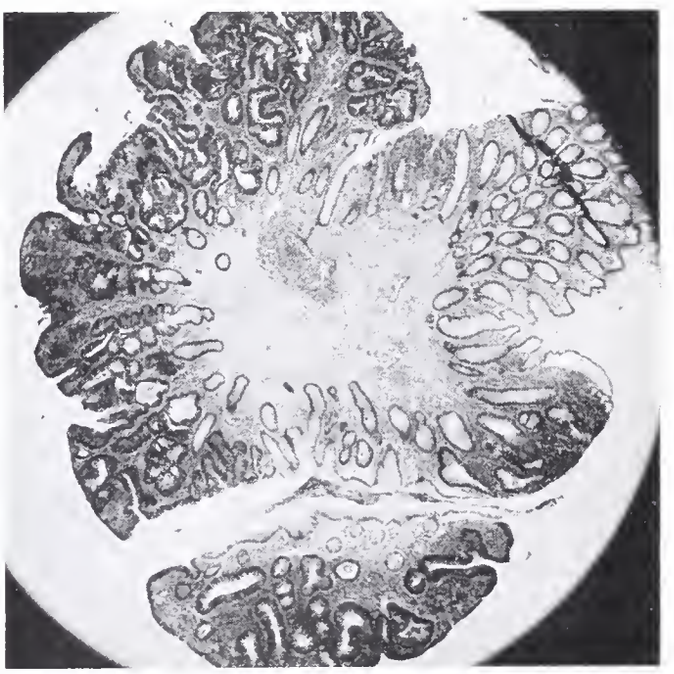
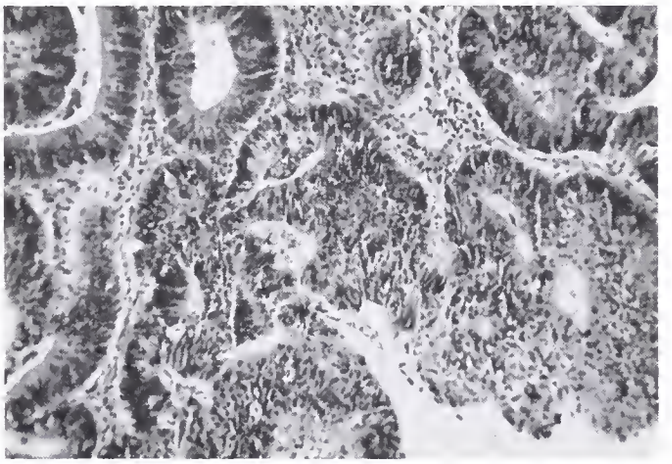


Fig 2. Photomicrograph of a second intraluminal polyp, low magnification.

Fig 3. Photomicrograph with high magnification of area with pleomorphic cellular changes regarded as carcinoma in situ.



FAMILIAL ENDOCRINE ADENOMATOSIS

HYLMAR E. KARBACH, JR., MD
D. LEO GALINDO, MD

Historical and descriptive data on familial endocrine adenomatosis are presented and a case is reported. Although the syndrome is rare, it should be kept in mind in a variety of complaints because of its varied expressivity.

THE CONCEPT OF AN HEREDITARY syndrome involving adenomatous changes in multiple endocrine glands has crystallized during the past 15 years, and has been variously called Wermer's disease, pluriglandular syndrome, multiple endocrine adenomatosis, and Job's syndrome. We shall call it familial endocrine adenomatosis, as suggested by Lulu,[1] Underwood,[2] Saint,[3] and others. The well-defined aspects of this syndrome, its history and summary of relevant literature are presented, as is a recent case with factors that we found interesting and unusual.

In 1903 Erdheim described an autopsy of an acromegalic patient in whom an eosinophilic adenoma of the anterior pituitary and four enlarged parathyroid glands were found.[4]

Cushing and Davidoff in 1927 were the first to describe endocrine adenomas in three glands.[4] At autopsy, their patient had an eosinophilic adenoma of the anterior pituitary, two parathyroid adenomas, and a solitary pancreatic islet cell adenoma. This was the same year in which Wilder attempted the first surgical exploration for hyperinsulinism. Unfortunately, his patient had metastatic islet cell carcinoma and soon died.

In 1939, ten years after Graham's first successful islet cell adenomectomy, Rossier and Dressler,[5] described a family in which peptic ulcer was a frequent occurrence and in which one person had multiple endocrine adenomas and her sister had recurrent Cushing's syndrome. They theorized that this occurrence was familial and involved the endocrine system in the female and the gastrointestinal tract in the male.

Although Underdahl[6] in 1953 reported the Mayo Clinic experience with eight patients, three of whom had presumptively positive family histories, it remained for Wermer[7] in 1954 to theorize specifically on the familial nature and the mode of inheritance. He described a family in which the father and four of nine siblings had multiple endocrine adenomas, and suggested that the disease is hereditary due to a dominant autosomal gene with a high degree of penetrance.

As originally described by Wermer, the syndrome includes benign tumor of the anterior pituitary gland, adenomatous hyperplasia of the parathyroids, multiple benign or malignant pancreatic islet cell tumors, and peptic ulceration. This was later broadened to include occasional adenomatous goiter, multiple benign or malignant cortical adrenal tumors, carcinoid bronchial adenomas, and multiple lipomatosis. The syndrome expresses itself in a variety of ways, but rarely is it first clinically manifest through more than one endocrine system.

Since 1954, the syndrome has been recognized more frequently, and to date there have been 30 documented families (Table 1).

Case Report: A 46-year-old migrant worker was first seen in October 1967 with a 12-year history of hyperinsulinism. Repeated blood sugar determinations were in the range of 40 mg/100 ml. His father died of cirrhosis at age 56 and his mother died at age 46 after massive hematemesis. His 40-year-old sister has 28 children and is said to be in good health. His 41-year-old brother had a total gastrectomy and partial pancreatectomy for Zollinger-Ellison tumor in 1960, and had a presumptive diagnosis of parathyroid adenoma but surgery was not done. His brother's 12-year-old son had excision of a beta cell islet adenoma of the pancreas in 1961. His 40-year-old sister has had several operations for peptic ulcer and kidney stones, and has spells of bad temper.

An exploratory laparotomy on Dec 19, 1967, showed multiple large islet cell adenomas of

the pancreas (Fig 1). A subtotal pancreatectomy was performed to remove all palpable adenomas (Figs 2, 3). The pathologist suspected malignancy. On the first postoperative day, the patient's fasting blood sugar level was 187 mg/100 ml; it dropped to 179 mg on the fourth day and 124 on the 14th day, and now his glucose tolerance curve is slightly diabetic.

During the following year, his serum calcium level varied from 5.1 to 6.0 mEq/liter, and serum phosphorus from 1.0 to 3.0 mEq/liter. Hyperparathyroidism was suspected, but it was not until December 1968 that he was admitted for final studies and exploratory surgery of the neck. At this time, small bilateral renal stones had developed (Fig 4), as had symptoms and roentgenographic findings of ulcer disease (Fig 5). Three enlarged parathyroid glands were found, about 1 cm in diameter (Fig 6). The largest of these was removed, and a frozen section showed hyperplasia. Two and a half of these glands were removed and a pathologic diagnosis of chief cell and clear cell nodular hyperplasia was returned (Fig 7). Postoperatively, symptoms of hypoparathyroidism developed and the calcium level fell to 4.0 mEq/liter. However, the patient responded to oral calcium replacement (Os-Cal) and was dismissed with instructions to continue that medication. Recently, laboratory studies showed calcium 5.1 mEq/liter and phosphorus 3.8 mEq/liter, and he no longer takes calcium supplement.

Five of the patient's 16 children have been examined by five-hour glucose tolerance test, serum calcium, and phosphorus determinations, and roentgenograms of the skull; these were normal in all respects except for borderline calcium and phosphorus values in the oldest girl. There are older children who cannot be reached for examination.

Comment: Three pathologic types of insulinomas are described by Frantz[29] and commented upon later by Howard,[4] Eger,[30] McKirdie,[31] and others. The commonest type is the benign adenoma. About one-tenth as frequent is the carcinoma, and twice as frequent as the carcinoma is the group known as "suspiciously malignant tumors." In this latter group, there is lymph node spread within the pancreatic capsule and blood vessel and nerve invasion, but no distant metastases are found at the time of surgery or on follow-up study. However, metastases do not necessarily function,[31] and one must be careful in classifying a tumor in this suspiciously malignant group on the basis of return to normal carbohydrate metabolism. Also, it may be that the natural course of this disease makes it slow to metastasize, and blood vessel, nerve invasion, and local lymph node spread may precede actual distant metastasis causing the illusion of a pathologic type.

The inter-relationship of this syndrome with familial hyperparathyroidism and with Zollinger-Ellison syndrome is unclear. Ellison[32] has indicated that the latter is a separate entity from multiple endocrine adenomatosis. He reported associated endocrine disease in 21% of his cases, but multiple adenomatosis in only 3%. Other authors believe that the Zollinger-Ellison syndrome is only a part of the familial endocrine adenomatosis syndrome. Stocks[25] is convinced that this results from varied expression of a genetic abnormality, and Wermer[7,8] defines this trait as variable expressivity with a high degree of penetrance of a dominant autosomal gene by pleiotropy. Report of a family in whom various members had assayably increased secretion of glucagon, insulin, or gastrin, respectively, seem to support the thesis that the Zollinger-Ellison syndrome is but a part of multiple endocrine adenomatosis.[27]

That peptic ulcer disease is always dependent upon a gastrin-secreting islet adenoma seems disproved by the high incidence of ulcers even after all adenomas have been removed. Peptic ulcer disease is found in 50% of patients with multiple endocrine adenomatosis, and conversely about 20% of patients with the Zollinger-Ellison syndrome have multiple endocrine adenomatosis. Peptic ulcer disease likewise is not dependent on hyperparathyroidism; Kerr[24] found no significant decrease in gastric hypersecretion in a patient with parathyroid and islet cell adenomas when hyperparathyroidism was corrected prior to laparotomy. Wermer[8] noted

REF.	FAM-ILY	CASE	AGE/SEX	PITUITARY	PARATHYROID	PANCREAS	GASTROINTESTINAL	MISCELLANEOUS	FAMILY HISTORY
5	1	1	43/F	Chromophobe adenoma		Hypoglycemic; islet cell adenoma		Early menopause	Daughter had primary hyperparathyroidism
		2	25/F		Hyperparathyroidism	Hypoglycemic; islet cell cancer		Nephrolithiasis; irregular menses	
		3	44/F	Cushing	Hyperparathyroidism			Nephrolithiasis	Son had primary hyperparathyroidism
9		4	39/M		Hyperparathyroidism			Meningioma	
		5	25/M			Zollinger-Ellison syndrome			
		6	27/M			Zollinger-Ellison syndrome			
		7	M						
6	2	8	50/F	Tumor (x-ray)	Hyperparathyroidism; 4 adenomas	Hypoglycemic	Duodenal ulcer		Father and sister had peptic ulcer
	3	9	36/M		Hyperparathyroidism; 2 adenomas	Hypoglycemic	Duodenal ulcer	Metastatic bronchial adenoma	Father died of ulcer; twin brother had nephrolithiasis; died cancer, tail of pancreas
	4	10	28/M	Chromophobe adenoma	Multiple adenomas	Multiple adenomas	Duodenal ulcer; Menetrier's	Adrenal cortical hyperplasia	Father, 3 ulcer operations; 3 uncles died brain tumors; sister, islet cell adenoma
7, 8	5	11	41/M			Islet cell adenoma	Ulcer; adenoma in duodenum		Father of #12, 13, 14, 15
		12	35/F	Tumor (x-ray)	Hyperparathyroidism	Hypoglycemic; multiple islet cell adenomas		Early menopause	Daughter of #11
		13	54/F	Tumor (x-ray)	Hyperparathyroidism	Hypoglycemic; islet cell adenoma and carcinoma	Ulcer, stomach and duodenum	Primary amenorrhea	Daughter of #11
		14	44/F	Tumor (x-ray) acromegaly		1 adenoma	Duodenal ulcer	Amenorrhea; nephrolithiasis; lipomatosis	Daughter of #11
		15	34/F	Tumor (x-ray)	Hyperparathyroid; hyperplasia	Hypoglycemic; multiple adenomas	Ulcers, duodenal and stomach; islet adenoma in duodenum	Amenorrhea; cortical adenoma; nephrolithiasis	Daughter of #11
		16	40/M				Died of peptic ulceration		Father of #11
		17	73/F		Adenomatous hyperplasia	Islet cancer	Severe ulceration	Nephrolithiasis; cancer of adrenal	Cousin of #11
		18	51/F		Hyperparathyroidism		Severe ulcerations		Daughter of #17
		19	33/M				Died of peptic ulcers		Brother of #17
		20	28/M				Died of peptic ulcers		Brother of #17
		21	41/M				Died of peptic ulcers		Brother of #11
		22	28/F			Islet adenoma	Severe ulcers	Cortical tumor	Daughter of #20
		23	36/F	Chromophobe adenoma	2 enlarged parathyroids			Nephrolithiasis	Sister of #22
		24	42/M	Acromegaly		Several islet tumors	Duodenal ulcer	Cortical adenoma; thyroid adenomas	Brother of #22
10	6	25	41/M	Chromophobe adenoma	4 adenomas	Multiple islet adenomas	Ulcers		Mother had ulcer; brother died of ulcer
		26	22/F		3 adenomas	Hypoglycemic; 2 adenomas		Nephrolithiasis	Daughter of #25

11	7	27	32/M		Hyperparathyroid; 3 adenomas	Islet cell carcinoma	Ulcer; islet cancer, duodenum		
		28	25/F		Hyperparathyroid; 1 adenoma			Nephrolithiasis	Sister of #27
	8	29	45/M	Chromophobe adenoma; hypopituitarism	3 adenomas	3 islet adenomas		Nephrolithiasis	
		30	12/F	Carcinoma					Sister of #29
12	9	31	36/F			Zollinger-Ellison syndrome			Father and mother had peptic ulcers
		32	22/F			Died of hyperinsulinism			Sister of #31
13	10	33	37/M	Amphophilic, basophilic hyperplasia	Hyperparathyroidism; nodular hyperplasia	Adenomatosis; islet cancer	Ulcer duodenum and jejunum; islet adenoma duodenum	Adrenal cortical hyperplasia; nephrolithiasis	Brother of #34
14		34	32/M	Amphophilic, basophilic hyperplasia	Hyperplasia	Islet adenoma	Ulcer, duodenum and jejunum; carcinoid of duodenum	Adrenal cortical hyperplasia	Brother of #33
15	11	35	34/M			Hypoglycemic; islet cancer	Ulcer	Nephrolithiasis	One brother had duodenal and jejunal ulcers
16	12	36	39/M			Zollinger-Ellison syndrome			
		37	12/F			Hypoglycemic; islet adenoma			Daughter of #36
15	13	38	36/M		Hyperparathyroidism; 4 adenomas	Adenomatosis	Ulcers of stomach and duodenum	Nephrolithiasis	Father died of peptic ulcer
17	14	39	M	Tumor		Islet adenoma	Ulcer		Brother had peptic ulcers
18	15	40	58/F		2 adenomas			Liposarcoma; hyperthyroid; fetal adenoma of thyroid	
		41	51/M		2 adenomas		Ulcerogenic islet cancer		Brother of #40
		42	47/F		2 adenomas		Ulcerogenic islet adenoma	Thyroid adenoma	Sister of #40
		43	46/F	Tumor				Metastatic cancer, bladder	Sister of #40
		44	45/F		1 adenoma removed, still hyperparathyroid				Sister of #40
19		45	28/F		1 adenoma removed				Niece of #40
		46	34/M		Hyperparathyroidism			Nephrocalcinosis; lipoma	Daughter of #41
		47	29/F		Hyperparathyroidism			Bilateral nephrolithiasis	
		48	33/M		Hyperparathyroidism				
		49	23/F		Chemically hyperparathyroid; surgery negative				
		50	18/F		Hyperparathyroidism				
		51	19/M		Hyperparathyroidism				

Table 1.

REF.	FAM-ILY	CASE	AGE/SEX	PITUITARY	PARATHYROID	PANCREAS	GASTROINTESTINAL	MISCELLANEOUS	FAMILY HISTORY
20	16	52	63/M	Choristoma	1 adenoma	Tumor nodule		Interstitial cell tumor, testicle	
		53	52/F	Amphophilic, basophilic hyperplasia	Hyperplasia	Hyperplasia and adenomatosis	Duodenum and jejunum ulcers	Adrenal cortical nodular hyperplasia; nephrocalcinosis	Daughter of #52
		54	50/F		Hyperparathyroidism; hyperplasia	3 islet adenomas; islet cancer	Duodenal ulcer	Lipomas	Sister of #53
		55	24/M			Islet cancer; died of carcinoma		Nephrolithiasis; adrenal cortical adenomatosis	Brother of #53
		56	18/M	Died of acute abdominal pain; had passed kidney stones; no necropsy					
		57	25/F			Islet carcinoma	Died perforated jejunum and duodenal ulcers	Adrenal cortical adenomatosis; nephrocalcinosis; metastatic endocrine cancer	Sister of #53
		58	37/M		Hyperparathyroidism		Ulcer gastrectomy		Son of #57
		59	35/M		Hyperparathyroidism; 3 adenomas		Ulcer gastrectomy		Brother of #58
		60	15/F		Hyperparathyroidism		Perforated ulcer	Primary aldosteronism	Daughter of #58
		61	30/F			Tumor pancreas	Died of perforated gastric ulcer	Calcific densities in renal area, x-ray	Sister of #52
		62	28/M			Islet hyperplasia	Perforated gastric ulcer and jejunal	Cortical adenomas; nephrocalcinosis	Son of #61
15	17	63	42/F	Basophilic adenoma	Multiple adenomas	Multiple islet adenomas	Ulcers	Cortical adenomas; ovarian atrophy; thyroid adenomas	Father died, ulcer; daughter had parathyroids removed
3	18	64	31/F	Hypopituitary erosion sella	Low P, Elev. Ca	Multiple islet adenomas	Z-E syndrome	Watery diarrhea; amenorrhea	
		65	61/M	Chromophobe adenoma	Adenomatous hyperplasia	Islet cell adenoma		Cortical hyperplasia	Father of #64
21	19	66	16/F	Adenoma					
		67	52/M	Acromegaly, adenoma					Father of #66
		68	22/M		Parathyroid tumor			Multiple kidney stones	Brother of #66
		69	50/M	Died after developing convulsive seizures and mental incompetence					Grandfather of #66
22	20	70	68/M	Eosinophil chromophobe mixed adenoma	2 hyperplastic adenomas	Islet adenoma; hyperplasia		Thyroid papillary adenoma	
		71	39/F	Acromegaly	Parathyroid adenoma	Hypoglycemic; refused laparotomy	Duodenal ulcer		Daughter of #70
2	21	72	18/M			Islet adenoma			
		73	10/F			Islet adenoma			Sister of #72
		74	40/M		2 parathyroid adenomas	Multiple islet adenomas		Adenocarcinoma, bronchus, arising from adenoma; renal stone	
23	22	75	38/F		Tumor	Multiple islet tumors	Bleeding, obstructing	Goiter, ulcer	Grandmother had ulcer; 2 aunts had ulcer, one abdominal cancer, one bone fractures
		76	42/M		Tumors	Islet tumor	Peptic ulcer		Brother of #75
		77	37/F		2 adenomas			Toxic goiter	Sister of #75
		78	39/F		Adenoma			Spontaneous fractures	Sister of #75
	23	79	26/F			Islet adenoma	Diarrhea; jejunal ulcers		Father had bilateral nephrolithiasis and severe duodenal ulcer
		80	24/F	Acromegaly	3 adenomas	5 islet adenomas	Peptic ulcer	Cortical adenoma	Sister of #79

24	24	81	54/F	Chromophobe adenoma	Chief cell adenoma, 1 gland			Thyroid papillary cancer; renal stones; acute leukemia	
		82	39/F		4 hyperplastic glands	Non-beta cell islet adenoma			Daughter of #81; 14-year-old son has elev. Ca.
		83	36/F		4 hyperplastic glands	Microscopically normal	Severe hyperacidity and ulcers	Renal stones	
		84	33/M		Hyperparathyroidism; hyperplasia of 3 glands			Fibromas on skin	
25	25	85	49/F		Hyperparathyroidism; 3 glands removed		26-year ulcer; anastomotic ulcer		
		86	45/M		4 adenomas	Multiple islet adenomas; hypoglycemic		Renal stones	Brother of #85
		87	45/M		Hyperparathyroidism				Brother of #85
		88	36/M		1 adenoma and 2 hyperplastic glands	Multiple islet adenomas			Brother of #85
	26	89	40/F	2 small basophilic adenomas	4 large adenomas	Multiple islet adenomas		Bronchial carcinoid cancer; thyroid adenoma; cortical hyperplasia; and adenoma	
		90	20/F		Hyperparathyroidism				Daughter of #89
		91	45/M		1 adenoma; rest hyperplasia		Severe ulcer disease (died)	Nephrocalcinosis	Brother of #89
		92	44/M				Severe ulcer disease (died)		Father of #89
26	27	93	58/F	Eosinophil nodular hyperplasia	4 parathyroid adenomas	Islet carcinoma	Persistent duodenal ulcer with hemorrhage	Nodular hyperplasia, adrenal cortex	
		94	63/F	Adenoma, hyperparathyroidism			Surgery, duodenal ulcer		Sister of #93. Two offspring have hyperparathyroidism
		95	35/F		2 adenomas				Daughter of #93
		96	28/M		2 adenomas				Son of #94
27	28	97	19			Islet cancer		Adrenal hyperplasia	Father has Z-E and (+) tolbutamide test
		98	21		Hyperplasia	Multiple adenomas	Border hyperacidity		
		99	23			Hyperinsulinism; no surgery			
1	29	100	41/M		3 parathyroidectomy adenomas	Multiple islet adenomas with cancer		Renal calculi; cortical adenoma	Mother died of cancer, pancreas
		101	42/M			Islet cancer		Renal stones	Brother of #100
28	30	102	28/F			Multiple insulin adenomas			4 siblings with hypoglycemia
		103	F	Chromophobe adenoma		Insulinoma, removed		Hyperplasia, cortex	Sister of #102
*	31	104	47/M		Hyperplasia, 2½ removed	Multiple adenomas (?) malignant	Menetrier's; gastric ulcer	Renal stones	
		105	42/M		Hyperparathyroidism	Islet adenomas	Z-E syndrome		Brother of #104
		106	12/M			Hyperinsulinism, adenomas			Son of #105
		107	40/F			"Spells"	Multiple surgery for peptic ulcer	Renal stones	Sister of #104

*Present report.

Table 1, continued.

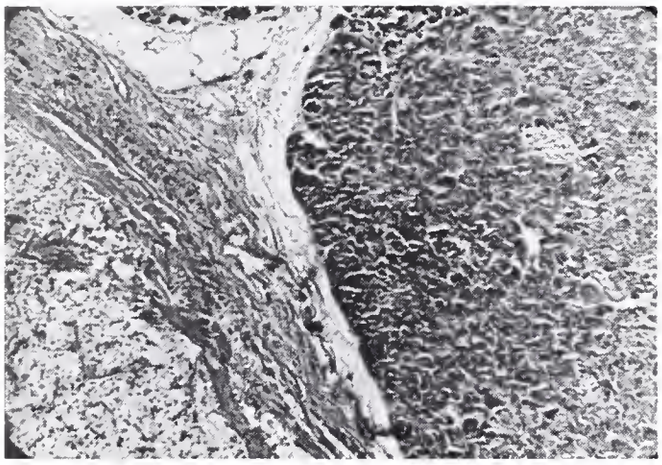


Fig 1. Note the normal pancreas with an islet of Langerhans on the right, separated from the beta-cell islet adenoma by a well developed capsule.

that Menetrier's disease was a frequent finding, and suggested that the parietal cell mass of the stomach may be a target for the genetic stimulus. The usual peptic ulcer disease seen with familial endocrine adenomatosis is milder than that identified with the Zollinger-Ellison syndrome, and has been successfully treated by means short of total gastrectomy. If a gastrin-producing adenoma of the pancreas is a part of the syndrome, then apparently nothing short of total gastrectomy is effective.

Diagnosis of this syndrome depends upon which endocrine system first causes symptoms. Pituitary adenoma presents as bitemporal hemianopsia, acromegaly, or hypopituitarism. Hyperparathyroidism may present as a pathologic fracture of renal lithiasis, but frequently is found only by chemical tests because the physiologic deviation is relatively mild as compared with that of true parathyroid adenoma. Nodular hyperplasia of the parathyroids, the most frequent pathologic finding, ordinarily is present for years before nephrolithiasis occurs; even then, roentgenographic changes of the bone and lamina dura are generally lacking. Beta cell adenoma of the islets classically produces symptoms of nervousness, sweating, diplopia, and blurring of vision, and sometimes progresses to coma with a venous blood sugar level of less than 50 mg/100 ml which is relieved by intravenous glucose. Fasting and exercise have been used to provoke Whipple's triad. More recently, intravenous injection of 1 gm sodium tolbutamide (or 25 mg/kg body weight, whichever is more) as a provocative test, with blood sugars measured every 30 minutes for three hours, has been advocated.[2,33] Another provocative test is 150 mg/kg of L-leucine as a chilled 2% solution ingested over a five-minute period followed by interval blood sugar determinations. Though these tests are extremely helpful in difficult-to-diagnose cases, they should be used with caution because of the obvious inherent danger of severe hypoglycemia.[34] Islet adenomas of the non-beta cell type are diag-

nosed by well recognized principles outlined by Zollinger,[35,36] and Ellison.[32]

The family history of persons presenting with any one of these endocrine adenomas should be carefully recorded; ideally, available siblings, parents, and offspring should be screened by appropriate laboratory tests. To be practical, these should include a lateral skull roentgenogram, 12-hour fasting blood sugar (or a five-hour glucose tolerance test following a 12-hour fast), serum calcium and phosphorus determinations, and a careful history and physical examination. The syndrome rarely is manifest before age 10, and infrequently before age 20. Relatives having suggestive conditions should not be dismissed after an initial negative screen, but should be seen at intervals for follow-up examinations.

After removal of an insulin-producing tumor there is a hyperglycemic period which was thought to result from suppression of normal islets by the prolonged hyperinsulinism. Thirty minutes after removal of such a tumor, Johnston[34] drew pancreatic venous blood which assayed normal for insulin. He reasoned that this showed normal response of residual islets, and indicated that the temporary hyperglycemia was due to prolonged secretion of insulin antagonists such as epinephrine, glucagon, and adrenocorticoids.

The treatment of this condition is perplexing, and as one becomes involved with a family exhibiting this syndrome he can readily appreciate the despair Moldawer[11] must have felt when he labeled it Job's syndrome. Each manifestation must be dealt with as it appears. Pituitary adenoma usually has been treated radiologically. Parathyroidectomy is used for hyperparathyroidism, and all but one-half of one hyperplastic gland probably should be removed. In some cases all glands have been removed, and in one case[37] the disease was not controlled until a fifth parathyroid adenoma was excised

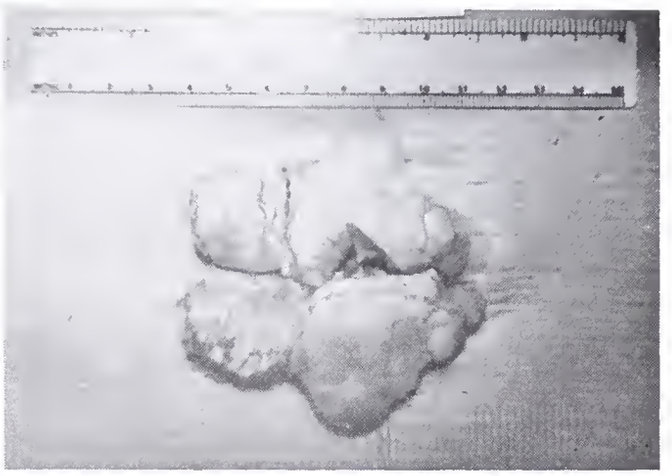


Fig 2. The largest of the many adenomas was removed with the accompanying tail of the pancreas.

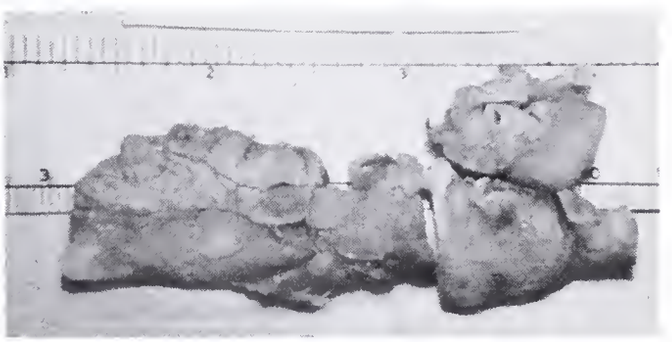
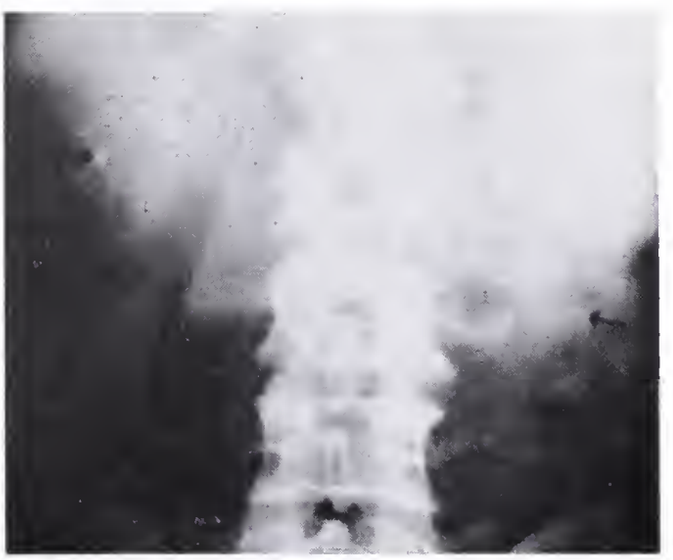


Fig 3. The spleen and remaining pancreatectomy specimen was next removed. Note the multiple adenomas.

Fig 4. The KUB roentgenogram showed small bilateral renal stones.



from within the mediastinum after four hyperplastic glands had been removed from the neck. The success rate of the first neck exploration is low, however; in one series[25] 11 of 34 patients having parathyroid surgery had persistent hyperparathyroidism postoperatively.

Treatment of islet adenoma of the pancreas is surgical, though Alloxan, cortisone, and corticotropin have been advocated in treating the insulin-producing adenoma.[38] The patient usually notes that his symptoms can be prevented or controlled by frequent carbohydrate ingestion, and puts himself on a diet. In one who had no adenoma, the hypoglycemia was treated successfully with cortisone for three years.[39] In another case, ACTH was used to treat hypoglycemia with favorable but not dramatic results.[40] The only real cures have been obtained by surgical excision of the offending tumors, and not infrequently subtotal pancreatectomy is necessary. An initial rise in blood sugar falling to normal in a few days, followed by a mildly diabetic five-hour glucose tolerance curve, signifies success. Prompt treatment after diagnosis is mandatory,[41] for the high incidence of psychiatric aberrations following repeated episodes of hypoglycemic attacks is well documented, and the permanent central nervous system damage should be avoided.

Nonsurgical treatment of the gastrin-producing islet adenoma has been attempted. Although anticholinergics and ganglionic blocking agents have decreased secretion, a direct surgical attack is indicated. In practice, excising the adenoma rarely gives relief, and initial total gastrectomy is recommended. Although proximal gastrectomy leaving the antrum in place, coupled with pyloroplasty, has been advocated and is a tempting consideration, the anatomy of the stomach is so distorted that it would be difficult to be certain that acid-producing cells had not invaded the distal stomach. In one case,[24] histology of the excised stomach showed extension of the parietal cell mass almost to the junction of mucosa. There is general agreement that the treatment of Zollinger-Ellison syndrome is total gastrectomy.

If peptic ulcer disease is less severe and is of the type accompanying Menetrier's disease, medical management or vagotomy and gastric resection should be the first treatment, as the latter frequently will allow medical management to be effective.

When doing a laparotomy for an intra-abdominal manifestation, any direct surgery should be complemented by careful exploration of the adrenals, for cortical nodular hyperplasia and adenomas have been reported. The exploration should include all organs, for duodenal carcinoid, renal tumors, and multiple lipomas have also been described.

REFERENCES

1. Lulu, D J, et al: Familial Endocrine Adenomatosis with Zollinger-Ellison Syndrome; Wermer's Syndrome, Amer J Surg 115:695 (May) 1968.

2. Underwood, L E, and Jacobs, N M: Familial Endocrine Adenomatosis; A Family with Hyperinsulinism and the Predominant Manifestation, Amer J Dis Child, 106:218 (Aug) 1963.

3. Saint, E G, et al: Familial Endocrine Adenomatosis with Ulcerogenic Tumour of the Pancreas, Aust Ann Med 10:308 (Nov) 1961.

4. Howard, J M, et al: Collective Review; Hyperinsulinism and Islet Cell Tumors of the Pancreas with 398 Recorded Tumors, Internat Abstr Surg 90:417, 1950; in Surg, Gynec, & Obstet (May) 1950.

5. Rossier, P H, and Dressler, M: Familiare Erkrankung innersekretorischer Drusen kombiniert mit Ulcuskrankheit, Schweiz med Wchnschr, 69:985 (Oct) 1939.

6. Underdahl, L O, et al: Multiple Endocrine Adenomas; Report of 8 Cases in which the Parathyroids, Pituitary and Pancreatic Islets Were Involved, J Clin Endocrinol 13:20 (Jan) 1953.

7. Wermer, P: Genetic Aspects of Adenomatosis of Endocrine Gland, Amer J Med 16:363 (March) 1954.

8. Wermer, P: Endocrine Adenomatosis and Peptic Ulcer in a Large Kindred; Inherited Multiple Tumors and Mosaic Pleiotropism in Man, Amer J Med 35:205 (Aug) 1963.

9. Schmidt, J R, et al: Relationship of Multiple Endocrine Adenomas to the Syndrome of Ulcerogenic Islet Cell Adenomas (Zollinger-Ellison), Amer J Med 31:343, 1961.

10. Moldawer, M P, et al: Concomitance of Multiple Adenomas of the Parathyroids and Pancreatic Islets with Tumor of the Pituitary: A Syndrome with Familial Incidence, Amer J Med Sci 228:190 (Aug) 1954.

11. Moldawer, M: Multiple Endocrine Tumors and Zollinger-Ellison Syndrome in Families: One or Two Syndromes: A Report of Two New Families, Metabolism 11:153 (Jan) 1962.

12. Zollinger, R M, and Ellison, E H: Primary Peptic Ulcerations of the Jejunum Associated with Islet Cell Tumors of the Pancreas, Ann Surg 142-709 (Oct) 1955.

13. Fisher, E R, and Flandreau, R H: Multiple Endocrine Tumors and Peptic Ulcer, Gastroenterology 32:1075 (June) 1957.

14. Fisher, E R, and Hicks, J: Further Pathologic Observations on the Syndrome of Peptic Ulcer and Multiple Endocrine Tumors, Gastroenterology 38:458 (March) 1960.

15. Becker, V, and Schneider, H H: Das Wermer-Syndrom: Hereditare endokrine Polyadenomatose, Deutsch Med Wschr 93:935 (May 10) 1968.

16. Pender, B: Islet Cell Tumour of the Pancreas Associated with Peptic Ulceration, Lancet 1:123 (Jan 17) 1959.

17. Sanchez, G C, and Sommers, S C: Peptic Ulcer Diathesis with a Mixed Adenocarcinoma of the Pancreas; Case Report, Gastroenterology, 38:467 (March) 1960.

18. Johnson, G J, et al: Clinical and Genetic Investigation of a Large Kindred with Multiple Endocrine Adenomatosis, New Eng J Med 277:1379 (Dec 28) 1967.

19. Summerskill, W H, et al: Intractable Peptic Ulcer in Hereditary Endocrine-Ulcer Disease: "Gastrin" Content of Endocrine Tissues, Proc Mayo Clin 36:611 (Nov 22) 1961.

20. Ballard, H S, et al: Familial Multiple Endocrine Adenoma-Peptic Ulcer Complex, Medicine (Balt) 43:481 (July) 1964.

21. Baker, R L: Familial Adenomatosis of Endocrine Glands; Presentation of a New Family, Northw Med 60:905 (Sept) 1961.

22. Berdjis, C C: Pluriglandular Syndrome: II. Multiple Endocrine Adenomas in Man. A Report of Five Cases and a Review of the Literature, Oncologia (Basel) 15:288, 1962.

23. Huizenga, K A, et al: Peptic Ulcer with Islet Cell Tumor; A Reappraisal, Amer J Med 37:564 (Oct) 1964.

24. Kerr, G D, and Smith, R: Hypercalcaemia and Gastric Hypersecretion in the Familial Endocrine-Adenoma Syndrome, Lancet 1:1074 (May 20) 1967.

25. Stocks, A E: Problems of the Syndrome of Familial Multiple Endocrine Adenomas, Aust Ann Med 16:278 (Nov) 1967.

26. Jackson, C E, and Boonstra, C E: The Relationship of Hereditary Hyperparathyroidism to Endocrine Adenomatosis, Amer J Med 43:727 (Nov) 1967.

27. Vance, J E, et al: Hypersecretion of Insulin, Glucagon and Gastrin in a Kindred with Multiple Adenomatosis, Diabetes, 17:299, 1968.

28. Markaresz, D: Familial Insulinoma, Zbl Chir, 86:2116, 1961.

29. Frantz, V K: Tumors of Islet Cells with Hyperinsulinism; Benign, Malignant, and Questionable, Ann Surg 112:161 (Aug) 1940.

30. Eger, A W, and Putzki, P S: Spontaneous Hypoglycemia due to Islet Cell Tumors of the Pancreas; Report of a Case due to Multiple Adenomas, M Ann District of Columbia 24:463 (Sept) 1955.

31. McKirdie, M: Hyperinsulinism due to Adenoma of Islets of Langerhans, West J Surg 62:329 (June) 1954.

32. Ellison, E H, and Wilson, D S: The Zollinger-Ellison Syndrome; Reappraisal and Evaluation of 260 Registered Cases, Ann Surg 160:512 (Sept) 1964.

33. Frawley, T F, and Pensuwan, S: Hypoglycemia; Tolbutamide and Leucine Tests in Insulinoma, Med Clin N Amer 52: 283 (March) 1968.

34. Johnston, R, et al: Insulin-Secreting Tumor of the Pancreas; Report of a Case with an Untoward Response to Tolbutamide and with a Study of the Possible Mechanism of Postoperative Hyperglycemia, New Eng J Med 263:1345 (Dec 29) 1960.

35. Zollinger, R M: Endocrine Adenomas and Peptic Ulcer, with Special Reference to Pancreatic Adenomas, Gastroenterology 39:541 (Nov) 1960.

36. Zollinger, R M, and Craig, T V: Endocrine Tumors and Peptic Ulcer, Amer J Med 29:761 (Nov) 1960.

37. Kolodny, H D, and Griboff, S I: Multiple Endocrine Adenomatosis, J Mount Sinai Hosp, 31:179 (May-June) 1964.

38. Fisher, J, et al: Islet-Cell Tumor of the Pancreas with Hyperinsulinism; Failure of Surgical and Alloxan Treatment; Report of a Case, Arch Path 60:628 (Dec) 1955.

39. Gershberg, H, and Ralli, E P: Studies on a Patient with Severe Hyperinsulinism Treated with Cortisone for 3 Years, Amer J Med 20:631 (April) 1956.

40. Brown, G M: The Effect of ACTH in a Case of Beta Islet Cell Adenoma of the Pancreas, Amer J Digest Dis 18:145 (May) 1951.

41. Tompkins, R K, et al: Definitive Diagnosis of Insulin-Secreting Tumors of the Pancreas, Surg Gynec Obstet 125: 1069 (Nov) 1967.

Dr. Karbach, 664 North Houston, New Braunfels, Tex 78130.

Dr. Galindo, 914 Medical Arts Bldg, San Antonio, Tex 78205.

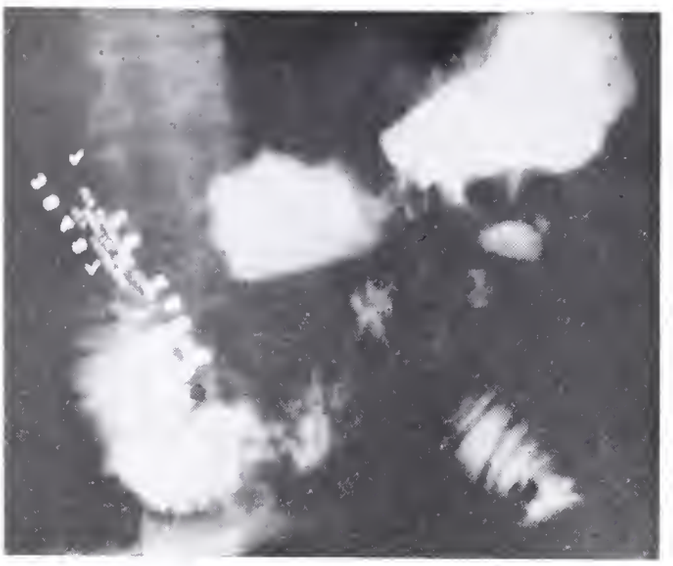
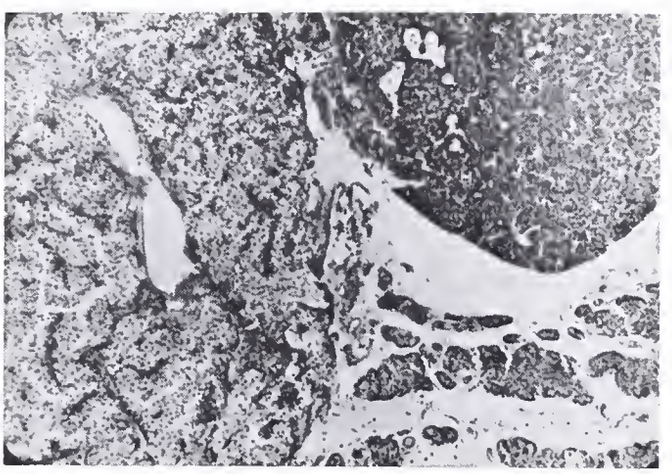


Fig 5. Giant gastric rugal folds, gastric ulcer, increase in diameter of duodenal lumen, and coarse folds in proximal jejunum are classic with the disease.

Fig 6. The left inferior parathyroid is indicated at tip of clamp.

Fig 7. Clear-cell and chief-cell nodular hyperplasia was indicated microscopically.



MESENTERIC ARTERY OCCLUSION

RECOGNITION AND MANAGEMENT OF INTESTINAL ISCHEMIC SYNDROMES

FRED J. WOLMA, MD; JAMES A. ALLUMS, MD

A delay or error in diagnosis is the major cause of the high mortality in intestinal ischemic syndromes. As many as one-third of the patients who ultimately develop mesenteric artery thrombosis may have intestinal angina for several years. More liberal use of angiography in evaluating patients with vague abdominal symptoms should lead to earlier diagnosis and improved prognosis. Bowel necrosis will occur if acute mesenteric artery occlusion is not corrected in less than six hours. Aggressive management of intestinal ischemic syndromes will result in lowered mortality as well as fewer intestinal cripples among the survivors.

INTESTINAL ISCHEMIC syndromes may be acute or chronic. The recorded causes include atherosclerotic narrowing with thrombosis, embolus secondary to cardiac mural thrombus, vasculitis as seen in lupus erythematosus and periarteritis, and compression of the celiac axis by the crus of the diaphragm[1] (Fig 1).

Acute occlusion of the blood supply to the bowel leads to its death, usually within six hours.[2] Once gangrene of the bowel develops, the mortality, even following surgical intervention, approaches 95%.[3] Early recognition of the syndrome is imperative if the mortality rate is to be lowered significantly.

The chronic syndrome is frequently called intestinal angina, and is usually the result of atherosclerotic narrowing of the celiac axis or the superior mesenteric artery. Derrick has pointed out that the atherosclerotic narrowing is generally limited to the proximal 1.5 cm of these vessels.[4] Earlier reports have indicated at least two of the three major mesenteric vessels must be occluded for intestinal angina to occur.[5] However, recent experience indicates symptoms may result when only one major vessel is occluded.[6] It is true that one of the major vessels may be occluded gradually without producing classic symptoms. Diagnosis of this syndrome is vital since surgery will relieve the pain and also prevent subsequent acute complete occlusion. The key to correct diagnosis is awareness that the syndrome exists, and confirmation by mesenteric and celiac arteriography. It has been estimated that the mortality from intestinal ischemic syndromes could be lowered to 25% by early revascularization of the bowel.[7]

Clinical Study: Cases of mesenteric artery thrombosis at The University of Texas Medical Branch Hospitals between 1958 and 1968 have been reviewed in an attempt to find ways of improving the salvage rate. Table 1 summarizes the causes of the occlusions and the duration of acute symptoms prior to surgery or death.

It is obvious that treatment in all cases with acute vascular insufficiency was delayed beyond the time the bowel could be expected to maintain its viability. The most common cause for this was delayed hospital admission; the hospital receives referrals from the entire State of Texas. Two of the patients suffered superior mesenteric artery thrombosis while in the hospital recovering from laparotomy for inflammatory disease (appendicitis and cholecystitis), and the significance of their prolonged postoperative ileus and abdominal tenderness was not appreciated. The diagnosis of the one case of embolism was suspected immediately and confirmed by angiography (Fig 2); however, more than 12 hours elapsed between the onset of acute symptoms and the request for surgical consultation. Had the syndrome been recognized immediately on admission, the diagnosis could have been confirmed and embolectomy carried out within two to three hours after onset.

Two of the 13 patients had definite histories of intestinal angina. Two others gave histories highly suggestive of intestinal angina, indicating that almost one-third of the patients with acute mesenteric artery thrombosis may have had demonstrable lesions correctable by elective surgery if the diagnosis had been made. Unfortunately, the significance of the history was not appreciated in any case. One patient underwent bowel resection in an almost moribund condition, and a compromised blood supply to the remaining viable bowel was suspected. Retrospective review of the history re-

Etiology of Mesenteric Artery Thrombosis	No. Cases	Duration of Symptoms Prior to Surgery or Death
Atherosclerosis	9 (69.2%)	1-10 days (av 4.7)
Embolus	1 (7.7%)	18 hours
Vasculitis	1 (7.7%)	7 days
Unknown	2 (14.4%)	8 days
Total	13	(4.4 days av)

Table 1. Summary of cases reviewed.

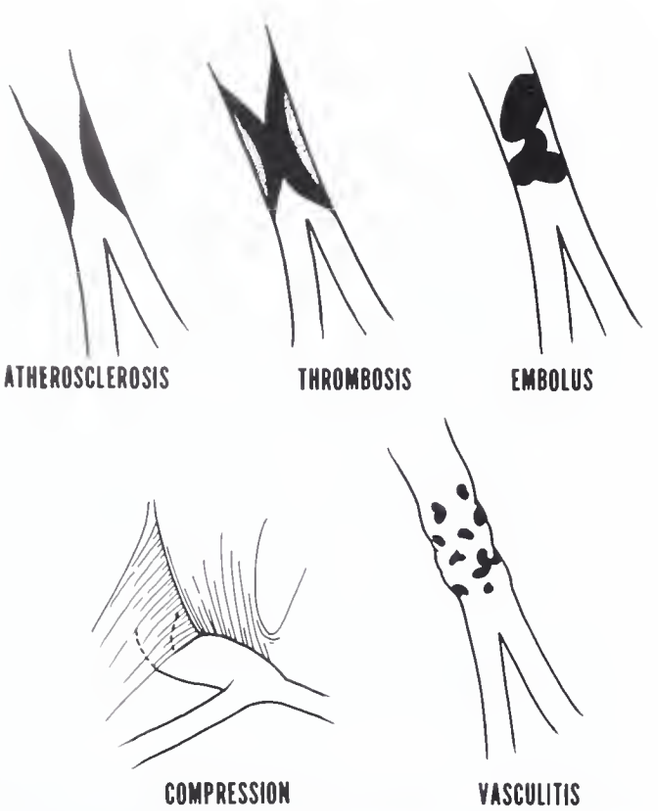


Fig 1. Causes for mesenteric artery occlusion.

vealed a classical story of intestinal angina. Angiography showed that the celiac axis, superior mesenteric artery, and inferior mesenteric artery were occluded and the entire bowel appeared to receive its blood supply by anastomotic channels between the middle and superior hemorrhoidal arteries (Fig 3).

Four patients with acute vascular occlusion underwent surgery. The patient with the embolus to the superior mesenteric artery underwent laparotomy and embolectomy in which the Fogarty catheter was used. The entire mid-gut was of questionable viability; however, since revascularization could be accomplished, resection was not carried out. A "second look" operation was carried out 24 hours later. Even though revascularization was accomplished, the ischemic process was irreversible and massive bowel resection was required. The patient died during the postoperative period.

The patient found to have occlusion of the celiac axis and both mesenteric arteries underwent an aorta-superior mesenteric artery bypass graft procedure utilizing a Dacron prosthesis. Postoperative arteriography (Fig 4) showed patency of the graft. Eight months later, the patient suffered thrombosis of the graft and died, despite a massive bowel resection.

Two patients were treated with bowel resection only. In one, the ileum and right colon were resected, and this patient is living and well five years later. The second patient required resection of the entire mid-gut and survived two months, then died of severe malnutrition.

Fig 2. Mesenteric arteriogram showing acute occlusion of the superior mesenteric artery due to embolus.

Discussion: The classic acute syndrome is seen most often with acute occlusion of the superior mesenteric artery from the formation of a thrombus in an arteriosclerotic narrowing, or from an embolus. It is characterized by the following symptoms and findings: (1) Acute, severe, unrelenting abdominal pain. (2) Initially, the pain is cramping in nature and generalized. (3) As peritonitis develops, the pain becomes continuous and usually persists until revascularization or resection can be accomplished. (4) Melena is common. Bloody gastric drainage from the nasogastric tube is frequent.

3a

3c

3b

Fig 3a. Mesenteric arteriogram showing no filling of the mesenteric vessels (anteroposterior view). b. Mesenteric arteriogram showing occlusion of the celiac axis, superior mesenteric artery, and inferior mesenteric artery (lateral view, same patient). c. Mesenteric arteriogram demonstrating collateral circulation to the mesenteric vessels through the hemorrhoidal vessels (same patient).

(5) Early, the abdominal findings may be minimal and the pain out of proportion to the findings. (6) Later, as gangrene of the bowel occurs, low perfusion shock with cold, clammy, cyanotic skin and weak, fast, thready pulse appears. (7) As bowel necrosis and peritonitis develop, fever and leukocytosis are present. The white blood count usually rises rapidly and to levels above 20,000/cu mm with an increase in stab forms. (8) Needle paracentesis often reveals a thin, bloody fluid. (9) Roentgenogram of the abdomen usually is nonconclusive.

The chronic syndrome is characterized by the following symptoms and findings: (1) Pain which occurs after eating and continues one to three hours. (2) Pain is usually cramping and epigastric. (3) Because of the subsequent pain, patients fear eating and therefore lose weight. (4) Flatulence, distension, and constipation are common. (5) Fecal fat is often increased due to malabsorption. Gross steatorrhea may be present and occult blood may be present in the stools. (6) Selective celiac and mesenteric arteriography will show the lesion in the proximal 1.5 cm of the large arteries to the gut, and confirms the diagnosis.

Most patients with intestinal angina eventually suffer acute mesenteric vascular thrombosis, with its attending grave prognosis.

In general, there are two methods available for treating intestinal ischemia. The oldest of these is bowel resection to remove gangrenous bowel. Its obvious disadvantages are the necessity of

Fig 4a. Postoperative mesenteric arteriogram showing by-pass graft between the aorta and superior mesenteric artery. (Note the immediate filling of mesenteric vessels in contrast to Fig 3).

Fig 4b. Postoperative mesenteric arteriogram showing immediate filling of mesenteric vessels (compare with Fig 3).

operating on acutely ill patients with gangrenous bowel, peritonitis, and usually low-perfusion shock; and shortening of the gastrointestinal tract failing to correct ischemia of the remaining viable bowel. The other alternative is revascularization of the ischemic bowel. Methods include endarterectomy and thrombectomy with patch graft angioplasty, embolectomy, by-pass graft, and release of external compression by division of fibrous bands (Fig 5). Obviously, to be successful, surgery should be carried out while the bowel remains viable.

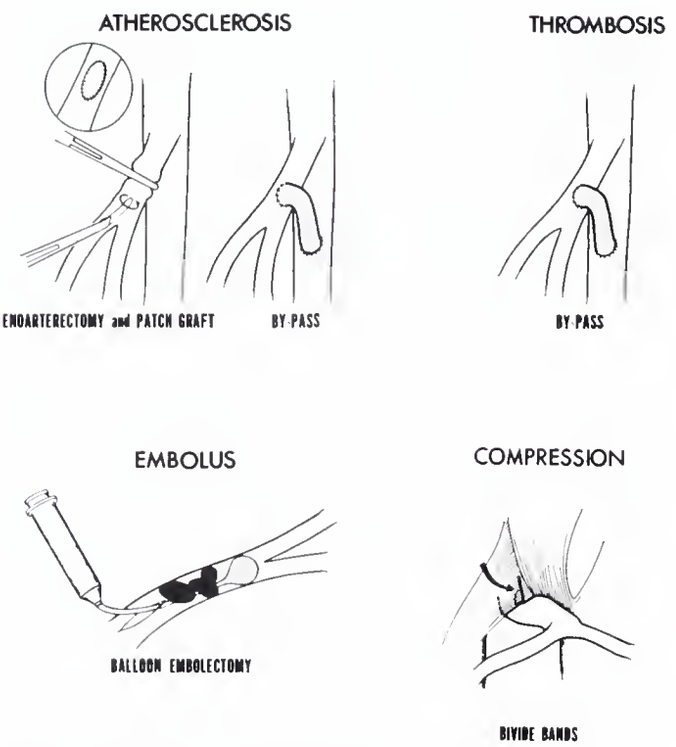


Fig 5. Methods of revascularization of mesenteric artery occlusions.

REFERENCES

1. Bergan, J J: Recognition and Treatment of Intestinal Ischemia, Surg Clin N Amer 47:109 (Feb) 1967.

2. Girvin, G W: Superior Mesenteric Arterial Occlusion and Intestinal Infarction, Amer Surg 32:561 (Aug) 1966.

3. Ottinger, L W, and Austen, W G: A Study of 136 Patients with Mesenteric Infarction, Surg Gynec Obstet 124:251 (Feb) 1967.

4. Derrick, J R, et al: The Pattern of Arteriosclerotic Narrowing of the Celiac and Superior Mesenteric Arteries, Ann Surg 149:684 (May) 1959.

5. Morris, G C, Jr, et al: Revascularization of the Celiac and Superior Mesenteric Arteries, Arch Surg 84:95 (Jan) 1963.

6. Bergan, J J, et al: Intestinal Ischemic Syndromes, Ann Surg 169:120 (Jan) 1969.

The authors, The University of Texas Medical Branch, Galveston, Tex 77550.

Regional

Diagnosis & Management

Everett D. Kiefer, MD

Regional enteritis occurs often enough to make it an important medical diagnosis. It starts with lymph stasis in the wall and mesentery of the small intestine, and goes on to mucosal ulceration, fibrosis, and granuloma formation. Symptoms relate to impaired motor and absorptive functions and to exudate loss of blood and protein. Diagnosis is mainly by roentgenographic means. Medical treatment is empirical, nonspecific, and supportive; corticosteroids are valuable anti-inflammatory drugs. In general, surgery is reserved for treating complications and certain intractable cases. About 80% of patients with regional enteritis can be maintained in reasonably good health.

REGIONAL ENTERITIS is not a common disease, but it occurs often enough to be important in the practice of internists, surgeons, and general practitioners.

The pathogenesis of regional enteritis remains unsolved, but the clinicopathological aspects are well known and impressive. The process starts as a reaction to an unknown factor in which lymphedema develops in all coats of the gut wall and in the mesentery. Later, capillary congestion, ulceration of the mucosa, and fibrosis of the bowel wall result in structural changes in the intestine. The lumen narrows, the wall becomes thick and rigid, and normal haustrations and peristalsis are lost. The end stage is the characteristic granuloma, which explains why regional enteritis is sometimes called cicatrizing or granulomatous enteritis. During exacerbations of the disease, all stages of the process may exist at the same time. With these pathologic changes it is not difficult to understand the extensive symptomatology, which includes impaired motility and absorption as well as exudation with loss of blood and protein.

Signs and Symptoms: Usual presenting symptoms are persistent diarrhea, weight loss, abdominal pain, and mild fever; but there are many variations. This clinical picture may be totally absent and replaced by some manifestation of one of the many complications showing up in unexpected areas. As a result, the diagnosis of regional enteritis often is delayed or missed mainly because it was not suspected. Clinical features that should lead the clinician to consider enteritis include: (1) Persistent or chronic diarrhea, particularly in a young person; and (2) especially if associated with upper or middle abdominal cramps immediately after eating; (3) watery, light yellow, foamy stools which indicate that the diarrhea is of small intestinal origin; (4) associated mild fever and anemia; and (5) also in patients without diarrhea who have pain after meals, unexplained fever, leukocytosis and anemia, or signs of protein loss such as hypoalbuminemia, hypocalcemia, and fluid retention.

Physical signs that suggest regional enteritis are the flat or moderately distended abdomen with visible small intestinal pattern and peristalsis, an elongated mass in the right lower quadrant, a perianal abscess or fistula, rectovaginal fistula, or a cutaneous fistula that develops in the incision of an abdominal operation. Clubbing of the fingers and toes is not uncommon in long-standing cases.

Supportive laboratory evidence consists of iron deficiency anemia, and mild or moderate leukocytosis sometimes with mild eosinophilia and hypoproteinemia. To rule out other diarrheal disease, the stool should be cultured and exam-

Enteritis

ined microscopically for parasites. The stool culture in regional enteritis usually grows no specific pathogenic organism.

Diagnosis: A firm diagnosis almost always rests on roentgenographic study of the small intestine. If the radiologist is familiar with small intestine disease, has been alerted that a small-bowel lesion is suspected, and employs fluoroscopic spot films and standard roentgenograms at half-hour or hourly intervals after a barium meal, then the diagnosis is quite reliable. It is important to continue the study until the entire small bowel has been visualized and the barium has entered the colon. Routine motility films frequently fail to show the terminal loops of ileum, with the result that the diagnosis can be missed. The oral barium studies should be supplemented with a barium enema study of the colon and the terminal ileum.

The initial roentgenographic signs of regional enteritis are spasm, narrowed lumen, and coarsened mucosal pattern resulting from edema in the wall. Mesenteric edema causes the small bowel loops to spread apart. Hypermotility is the rule in the early stages. At a later stage, the mucosal pattern is distorted and even obliterated; thickening of the wall narrows the lumen and produces rigidity which interferes with motility. This may go on to cause a high degree of obstruction, although it is seldom complete.

In advanced cases there may be roentgenographic evidences of fistula formation with tracts between loops of small bowel or connecting the small intestine with the colon, sigmoid, urinary tract, or the skin surface.

Although the terminal loops of ileum are the site of involvement in most cases, any level of the small intestine may show changes. Multiple segments may be diseased with intervening areas of normal intestine.

Other Forms: In ileocolitis, the disease in the terminal ileum extends to involve the cecum and ascending colon. This is a more severe, intractable form of ulcerative colitis with more severe diarrhea, toxicity, fever, leukocytosis, and anemia. The rectum and left colon usually are uninvolved. These cases, and others with only segmented involvement of the colon, have puzzled clinicians for some time and usually have been considered to be variant forms of chronic ulcerative colitis.

Pathologists have noted that some of these lesions show granuloma formation similar to that of regional enteritis. It is this group that some now consider to be a distinct ulcerative disease of the colon which should be considered regional enteritis of the colon.

Although the segregation of granulomatous colitis from chronic ulcerative colitis has been strongly advocated by some pathologists and clinicians, particularly in England, the concept has not been generally accepted. The question involves the confusing similarity and clinical overlapping of regional enteritis and chronic ulcerative colitis, and probably will not be resolved until more is known of the basic etiology of these conditions.

The diagnosis of regional enteritis of the colon is based largely upon the roentgenographic examination. Involvement of both the small and large intestine is the most reliable evidence. Segmental involvement of the colon and absence of disease in the left colon and rectum are highly suggestive. Complicating strictures and fistulae are considered to be quite diagnostic.

Treatment: The treatment of regional enteritis is empirical and nonspecific mainly because the etiology remains obscure. Since no specific organism or virus has been incriminated, antibiotics are ineffective except to control secondary infection. A plan of therapy must be based on what we know of the pathologic anatomy and physiology as they occur at different levels and in the various stages of the disease.

Supportive therapy starts with a diet adequate in calories, high in protein, and as low as possible in residue in order that the volume of the intestinal content be minimal. Foods that stimulate motility (fruit juices, ice cold liquids, alcohol, condiments) are best avoided. Milk intolerance is common in regional enteritis as it is in chronic ulcerative colitis, and milk as a beverage is best omitted. The result is essentially a meat and potato diet, but attractive, acceptable meals can be worked out with care and ingenuity. Supplemental vitamins C, A, and D can be given in concentrated form.

Salicylazosulfapyridine (Azulfidine), a compound consisting of salicylic acid and sulfapyridine, has been used extensively in the treatment of ulcerative colitis and it appears to benefit some patients with regional enteritis as well. The nature of its therapeutic activity is still unknown. No suppression of the fecal microflora has been found. Salicylazosulfapyridine is rapidly absorbed into connective tissue and is subsequently secreted in the intestinal lumen, and its main beneficial action may be an anti-inflammatory effect at the site of the active disease.

Anti-inflammatory therapy in the form of steroid medication is our most direct approach to modifying the basic disease process. ACTH and the adrenocorticosteroids have been more effective clinically than any other measure tried so far. Although use of steroid hormones is not without some hazards, the medication is indicated in all cases of active enteritis. The effective dose of prednisone ranges from 20 to 50 mg per day. It is not a curative agent; it simply reduces tissue reaction, possibly by modifying the immune reaction which is not conjectured to be the initial pathologic change.

On the theory that an immune disturbance is the primary pathologic disorder, other immunosuppressant drugs have been tried recently. Antimetabolites and folic acid antagonists such as nitrogen mustard and mercaptopurine have been tried in chronic ulcerative colitis with clinical improvement in some cases.[1] There have also been some attempts to use mercaptopurine in the treatment of regional enteritis.[2] Since hepatic toxicity, skin rashes, and bone marrow suppression have been observed, this form of immunosuppressive treatment is still in the experimental stage and is too crude and hazardous for clinical application.

Complications: The remarkable tendency of regional enteritis to result in perforation leads to many of the complications of the disease. Fistulas are an outstanding feature and are sometimes the most prominent manifestation. Perianal and rectovaginal fistulas are the most common, but connections between the small-bowel lumen and an abscess cavity, other loops of small intestine, colon, or urinary tract are characteristic complications.

Chronic, gradually developing small-intestine obstruction is another common complication which usually occurs in long-standing cases with chronic granulomatous changes, rigid and thickened intestinal wall, and contracted lumen.

When To Use Surgery: Since regional enteritis was first described by Crohn and associates in 1932, it has been considered at times to be a medical disease, and at other times to be primarily a surgical problem. More recently, especially since the advent of steroid therapy, it has been handled as a medical disorder which required surgery only for complications. Excision of the involved loop of small bowel to eradicate the disease has been followed by such a high incidence of recurrence (30 to 40%) that it now appears that surgery should be considered a palliative measure and not a

cure. Since regional enteritis is a systemic disease, the excision of locally involved tissue even well beyond the apparent limits of the process does not prevent recurrence. It is now thought that granulomatous ulcerative colitis should not be treated surgically except for complications.

When uncomplicated but intractable disease causes chronic invalidism from severe diarrhea, protein exudation, and blood loss, excision of the more seriously involved areas may be palliative. A clear indication for this procedure may be quite difficult to establish.

Chronic partial obstruction of the small bowel usually is a clear indication for surgical by-pass or removal of obstructed areas.

Fistulas, both external and internal, rarely close without surgical removal of the perforated loop and the associated abscess or inflammatory mass. The symptoms of perianal and rectovaginal fistula may subside if the inflammation of the intestine goes into remission, and usually it is advisable to defer surgery until an attempt has been made to achieve a remission and material reduction of diarrhea. It is now thought that carcinomatous degeneration does not occur in granulomatous colitis in distinction from chronic ulcerative colitis involving the left colon and rectum.

Colcock and Vansant have reported the complications that were indications for surgery in 304 cases.[3] At least one of the indications was obstruction in 84%, internal or external fistula in 35%, abdominal mass in 17%, bleeding in 9%, acute perforation in 3%, and acute abdominal pain in 3%.

Ferguson[4] reported experience with 55 surgical cases, and concluded that although there may be recurrences in 50% of the cases, surgery does offer a chance—and for some patients the only chance—for rehabilitation if not cure. He reports that 80% of the patients return to active life as a result of combined medical and surgical therapy.

Conclusion: With the help of the surgeon in dealing with complications and special situations, the management of regional enteritis should be a conservative medical endeavor to produce and maintain remission of the active inflammation in the intestinal wall by symptomatic, supportive, and anti-inflammatory measures. Management is not a short-term effort, but must be rigidly maintained over a period of years. The outlook for these patients is not hopeless. Although chronic semi-invalidism or complete invalidism may be unavoidable for some, a gratifying percentage of patients will improve to the point where they can live quite successfully with their disease. Wherever gastrointestinal diseases are treated, one can find a number of apparently healthy and asymptomatic patients who, on roentgenographic examination, are found to have extensive and often striking structural changes in the small intestine as the result of arrested or "burned out" regional enteritis.

REFERENCES

1. Bowen, G E, et al: Early Experiences with Azothioprine in Chronic Ulcerative Colitis, JAMA 165:460 (Feb 7) 1966.

2. Stebbin, P M, and Pearson, C: Ulcerative Colitis and Regional Enteritis; Results of Treatment with Immunosuppressive Drugs (Antimetabolites), Bull Mason Clin 22:112 (Sept) 1968.

3. Colcock, B P, and Vansant, J H: The Surgical Treatment of Regional Enteritis, New Eng J Med 262:435 (March 3) 1960.

4. Ferguson, L K: Concepts in the Surgical Treatment of Regional Enteritis, New Eng J Med 264:748 (April 13) 1961.

Dr. Kiefer, Laconia Clinic, Laconia, NH 03246.

JAMES W. NIXON, MD

Complete Transection of

Although blunt trauma causes rupture of the duodenum fairly frequently, most such injuries involve laceration or incomplete transection of that hollow viscus. In this case, blunt trauma resulted in complete transection of the duodenum, a less frequent injury requiring special technical considerations in its repair.

CASE REPORT: A 26-year-old white man was admitted to another hospital on Aug 13, 1967, following an automobile accident; three days later he was transferred to Santa Rosa Medical Center. Since the accident, he had suffered abdominal pain which was of maximum intensity in the right lower quadrant. His abdomen was not rigid. His white blood cell count was 12,300/cu mm with 77% polymorphonuclear leukocytes; hemoglobin 14 gm/100 ml; and the hematocrit 44%. Serum electrolyte values were normal. Radiographs of the abdomen showed no free air, no evidence of free intraperitoneal fluid, and no air in the retroperitoneal space. Because of abdominal pain and tenderness laparotomy was advised, but the patient refused operation until three days later, six days after his original injury.

Laparotomy was performed on Aug 19. There was a large quantity of bile-stained fluid in the right lower quadrant of the abdomen. It was escaping from the retroperitoneal space via a small rent in the posterior peritoneum at the level of the bifurcation of right common iliac artery. Exploring the retroperitoneal space, we found that the third part of the duodenum was completely transected two inches proximal to the ligament of Treitz. The two open ends of the transected bowel were approximately three-fourths of an inch apart. No other visceral injuries were present. The duodenum was repaired by end-to-end anastomosis utilizing a single row of interrupted cotton sutures.

The postoperative course was complicated by a duodenal fistula which was apparent by the seventh postoperative day. This was treated by a sump drain attached to continuous water suction and closed in ten days. The patient was discharged Sept 7, apparently fully recovered. Two weeks later he was readmitted with hema-

temesis. His hemoglobin was 9.0 gm/100 ml and hematocrit 30%. Bleeding responded to transfusion of three units of whole blood, and upper gastrointestinal studies subsequently revealed no cause for the bleeding episode. He was discharged after five days, and when seen three months later was completely recovered.

This patient's abdominal injury presented several unusual features: The duodenum had been completely transected. Operation could not be accomplished until six days after injury, yet the patient survived. Despite the long interval between injury and operation allowing leakage of both air and fluid, the plain abdominal radiograph was nondiagnostic.

Discussion: Duodenal rupture resulting from blunt trauma often causes the symptoms and signs of rupture of any intra-abdominal hollow viscus—namely pain, vomiting, leukocytosis, tenderness, and rigidity. However, findings may

Duodenum by Blunt Trauma

be less specific and the diagnosis may be delayed if rupture and extravasation of intestinal content is confined to retroperitoneal space. Plain abdominal radiographs often are a diagnostic aid. Donovan and Hagen[1] found that the abdominal scout film was definitive in seven of ten patients with blunt injury of the duodenum. Free intraperitoneal air was present in four and retroperitoneal gas in three. Cocke and Meyer[2] reviewed 48 cases of retroperitoneal duodenal rupture. Free intraperitoneal air was demonstrable by roentgenograms in only three cases, but blurred psoas shadows or retroperitoneal gas bubbles were present in 17 additional cases. If the injury is suspected and the plain films are nondiagnostic, radiographic examination of the duodenum using an absorbable nonirritating contrast medium given by mouth may demonstrate extravasation and provide evidence of rupture.

Complete transection is an uncommon form of duodenal trauma. A review of the more recent literature suggests its infrequency. Estes and Bowman[3] in 1952 reported a complete laceration of the third portion of the duodenum. Hansen and Williams,[4] Webb and associates,[5] and Cleveland and Waddell[6] have reported other cases. Burrus and others[7] reported that of 86 patients with duodenal injuries treated surgically from 1940 to 1969, three had complete duodenal transection. More recently, Morton and Jordan[8] reported an extension of this series to 131 duodenal injuries of which four, or 3%, were complete transections. The type of trauma was not given. Oglesby[9] found only two cases in the American literature, to which he added one of his own.

The injury, although uncommon, occurs with sufficient frequency that techniques for its repair should be clearly defined.

Complete transection of the duodenum does not lend itself to techniques of repair used for lesser injuries of that hollow viscus. Incomplete lacerations can be repaired primarily, anastomosed to a loop of jejunum, or a primary suture repair can be buttressed by sewing the serosa of an adjacent loop of jejunum over it. Hansen and Williams[4] closed both ends of a completely transected duodenum and carried out a gastroenterostomy with recovery of the patient. Complete transection not associated with pancreatic injury is best repaired by end-to-end anastomosis of the divided ends. Because of the intimate relationship of the duodenum to pancreas, this implies careful dissection of sufficient cuff of bowel to allow for a secure anastomosis. Concomitant injury to pancreas or common bile duct requires more extensive repair, which may involve pancreaticoduodenal resection and reimplantation of pancreatic or bile duct, or both, into the bowel.

REFERENCES

1. Donovan, A J, and Hagen, W E: Traumatic Perforation of the Duodenum, Amer J Surg 111:341 (March) 1966.

2. Cocke, W M, Jr, and Meyer, K K: Retroperitoneal Duodenal Rupture; Proposed Mechanism, Review of Literature and Report of a Case, Amer J Surg 108:834 (Dec) 1964.

3. Estes, W L, Jr, et al: Non-Penetrating Abdominal Trauma, with Special Reference to Lesions of the Duodenum and Pancreas, Amer J Surg 83:434 (March) 1952.

4. Hansen, R W, and Williams, F R: Retroperitoneal Rupture of the Duodenum Due to Blunt Trauma, Amer J Surg 94:816 (Nov) 1957.

5. Webb, H W, et al: Surgical Experiences in the Treatment of Duodenal Injuries, Internat Abst Surg 106:105 (Feb) 1958.

6. Cleveland, H C, and Waddell, W R: Retroperitoneal Rupture of the Duodenum Due to Nonpenetrating Trauma, Surg Clin N Amer 43:413 (April) 1963.

7. Burrus, G R, et al: Traumatic Duodenal Injuries: An Analysis of 86 Cases, J Trauma 1:96 (March) 1961.

8. Morton, J R, and Jordan, G L, Jr: Traumatic Duodenal Injuries, Review of 131 Cases, J Trauma 8:127, 1968.

9. Ogelsby, J E, and Smith, O E: Transection of the Duodenum by Blunt Trauma, Amer J Surg 116:914 (Dec) 1968.

Dr. Nixon, 1121 Nix Professional Bldg, San Antonio, Tex 78205.

Campbell's Soups... wide variety...for limited appetites

Many people lose interest in food as they grow older. Some of them are fussy eaters—with only a few favorite foods. Others become indifferent to foods—because planning and preparing meals becomes a chore. Here Campbell's Soups can help —for these four very good reasons:

Appeal With a variety of tastes, textures, aromas, and colors, Campbell's Soups can add interest and appetite appeal. And they're easy to eat—ingredients are tender, bite-size. Even patients on special diets will find soups they can enjoy among the more than 50 different varieties available.

Nourishment Campbell's Soups contain selected meats and sea foods, best garden vegetables—carefully processed to help retain their natural flavors and nutritive values.

Convenience Within 4 minutes a bowl of delicious soup is heated and ready to eat.

Economy Campbell's Soups are inexpensive—an important consideration to those whose budgets are limited.

Recommend Campbell's Soups . . . and, of course, enjoy them yourself. Remember, *there's a soup for almost every patient and diet . . . and for every meal.*

NOW IS THE TIME... TO GIVE HER TIME WITH OVULEN-21®

Each tablet contains ethynadiol diacetote 1 mg., mestronol 0.1 mg.

The new mother needs time . . .
to adjust to motherhood,
to give her new baby all the love
and attention he requires.
She needs time for her husband . . .
and for herself as well . . .
so that she can come to terms
with the increased cares
and responsibilities now facing her.
She needs time to decide
when she will have additional children
and how many she will have.

OVULEN-21®

Each tablet contains ethynodiol diacetate 1 mg., mestranol 0.1 mg.

GIVES HER TIME

Your prescription for Ovulen-21 gives the new mother time to meet her family's present needs...to plan for her family's future.

She can take Ovulen-21 confidently and comfortably month after month. Its dependability is enhanced by its simplicity of use. A woman needs little or no time to learn the simple Ovulen-21 regimen: three weeks on—one week off. And the automatic record-keeping of the petite, virtually "patient-proof" Ovulen-21 Compock® helps to maintain her schedule...helps put time on her side.

Immediately post partum is the time

It is the time when motivation is highest—when a new mother needs expert advice for the future, so she can space her children and limit her family.

It is also the most opportune time, since she is conveniently present in the hospital, for her to be given both instructions and a prescription.

Non-nursing mothers may begin Ovulen-21 immediately after delivery, on the day of departure from the hospital or at the first postpartum visit, as desired. It is recommended that nursing mothers begin Ovulen-21 four weeks after delivery.

A small fraction of the hormonal agents in oral contraceptive pills has been identified in the milk of mothers receiving these drugs. The long-range effect on the nursing infant cannot be determined at this time.

Actions—Ovulen acts to prevent ovulation by inhibiting the output of gonadotropins from the pituitary gland. Ovulen depresses the output of both the follicle-stimulating hormone (FSH) and the lutenizing hormone (LH).

Special note: Oral contraceptives have been marketed in the United States since 1960. Reported pregnancy rates vary from product to product. The effectiveness of the sequential products appears to be somewhat lower than that of the combination products. Both types provide almost completely effective contraception.

An increased risk of thromboembolic disease associated with the use of hormonal contraceptives has now been shown in studies in both Great Britain and the United States. Other risks, such as those of elevated blood pressure, liver disease and reduced tolerance to carbohydrates, have not been quantitated with precision.

Long-term administration of both natural and synthetic estrogens in subprimate animal species in multiples of the human dose increases the frequency of some animal carcinomas. These data cannot be transposed directly to man. The possible carcinogenicity due to the estrogens can be neither affirmed nor refuted at this time. Close clinical surveillance of all women taking oral contraceptives must be continued.

Indication—Ovulen is indicated for oral contraception.

Contraindications—Patients with thrombophlebitis, thromboembolic disorders, cerebral apoplexy or a past history of these conditions, markedly impaired liver function, known or suspected carcinoma of the breast, known or suspected estrogen-dependent neoplasia, and undiagnosed abnormal genital bleeding.

Warnings—The physician should be alert to the earliest manifestations of thrombotic disorders (thrombophlebitis, cerebrovascular disorders, pulmonary embolism, and retinal thrombosis). Should any of these occur or be suspected the drug should be discontinued immediately.

Retrospective studies of morbidity and mortality in Great Britain and studies of morbidity in the United States have shown a statistically significant association between thrombophlebitis and pulmonary embolism and the use of oral contraceptives. There have been three principal studies in Britain[1-3] leading to this conclusion, and one[4] in this country. The estimate of the relative risk of thromboembolism in the study by Vessey and Doll[3] was about sevenfold, while Sartwell and associates in the United States found relative risk of 4.4, meaning that the users are several times as likely to undergo thromboembolic disease without evident cause as nonusers. The American study also indicated that the risk did not persist after discontinuation of administration, and that it was not enhanced by long-continued administration. The American study was not designed to evaluate a difference between products. However, the study suggested that there might be an increased risk of thromboembolic disease in users of sequential products. This risk cannot be quantitated, and further studies to confirm this finding are desirable. Retrospective studies in Great Britain have shown a statistically significant association between cerebral thrombosis and embolism and the use of oral contraceptives. This has not been confirmed in the United States.

Discontinue medication pending examination if there is sudden partial or complete loss of vision, or if there is a sudden onset of proptosis, diplopia or migraine. If examination reveals papilledema or retinal vascular lesions, medication should be withdrawn.

Since the safety of Ovulen in pregnancy has not been demonstrated, it is recommended that for any patient who has missed two consecutive periods pregnancy should be ruled out before continuing the contraceptive regimen. If the patient has not adhered to the prescribed schedule the possibility of pregnancy should be considered at the time of the first missed period.

A small fraction of the hormonal agents in oral contraceptives has been identified in the milk of mothers receiving these drugs. The long-range effect to the nursing infant cannot be determined at this time.

Precautions—The pretreatment and periodic physical examinations should include special reference to the breasts and pelvic organs, including a Papanicolaou smear since estrogens have been known to produce tumors, some of them malignant, in five species of subprimate animals. Endocrine and possibly liver function tests may be affected by treatment with Ovulen. Therefore, if such tests are abnormal in a patient taking Ovulen, it is recommended that they be repeated after the drug has been withdrawn for 2 months. Under the influence of progestogen-estrogen preparations preexisting uterine fibromyomas may increase in size. Because these agents may cause some degree of fluid retention, conditions which might be influenced by this factor, such as epilepsy, migraine, asthma, cardiac or renal dysfunction, require careful observation. In breakthrough bleeding, and in all cases of irregular bleeding per vaginam, nonfunctional causes should be borne in mind. In undiagnosed bleeding per vaginam adequate diagnostic measures are indicated. Patients with a history of psychic depression should be carefully observed and the drug discontinued if the depression recurs to a serious degree. Any possible influence of prolonged Ovulen therapy on pituitary, ovarian, adrenal, hepatic or uterine function awaits further study. A decrease in glucose tolerance has been observed in a significant percentage of patients on oral contraceptives. The mechanism of this decrease is obscure. For this reason, diabetic patients should be carefully observed while receiving Ovulen therapy. The age of the patient constitutes no absolute limiting factor, although treatment with Ovulen may mask the onset of the climacteric. The pathologist should be advised of Ovulen therapy when relevant specimens are submitted. Susceptible women may experience an increase in blood pressure following administration of contraceptive steroids.

Adverse reactions observed in patients receiving oral contraceptives—A statistically significant association has been demonstrated between use of oral contraceptives and the following serious adverse reactions: thrombophlebitis, pulmonary embolism and cerebral thrombosis.

Although available evidence is suggestive of an association, such a relationship has been neither confirmed nor refuted for the following serious adverse reactions: neuro-ocular lesions, e.g., retinal thrombosis and optic neuritis.

The following adverse reactions are known to occur in patients receiving oral contraceptives: nausea, vomiting, gastrointestinal symptoms (such as abdominal cramps and bloating), breakthrough bleeding, spotting, change in menstrual flow, amenorrhea during and after treatment, edema, chloasma or melasma, breast changes (tenderness, enlargement and secretion), change in weight (increase or decrease), changes in cervical erosion and cervical secretions, suppression of lactation when given immediately post partum, cholestatic jaundice, migraine, rash (allergic), rise in blood pressure in susceptible individuals and mental depression.

Although the following adverse reactions have been reported in users of oral contraceptives, an association has been neither confirmed nor refuted: anovulation post treatment, premenstrual-like syndrome, changes in libido, changes in appetite, cystitis-like syndrome, headache, nervousness, dizziness, fatigue, backache, hirsutism, loss of scalp hair, erythema multiforme, erythema nodosum, hemorrhagic eruption and itching.

The following laboratory results may be altered by the use of oral contraceptives: hepatic function: Increased sulfobromophthalein retention and other tests; coagulation tests: increase in prothrombin factors VII, VIII, IX and X; thyroid function: increase in PBI and butanol extractable protein bound iodine, and decrease in T^3 uptake values; metyrapone test and pregnanediol determination.

1. Royal College of General Practitioners: Oral Contraception and Thromboembolic Disease, J. Coll. Gen. Pract. *13*:267-279 (May) 1967.
2. Inman, W. H. W., and Vessey, M. P.: Investigation of Deaths from Pulmonary, Coronary, and Cerebral Thrombosis and Embolism in Women of Child-Bearing Age, Brit. Med. J. 2:193-199 (April 27) 1968.
3. Vessey, M. P., and Doll, R.: Investigation of Relation Between Use of Oral Contraceptives and Thromboembolic Disease. A Further Report, Brit. Med. J. 2:651-657 (June 14) 1969.
4. American Journal of Epidemiology (to be published).

Where "The Pill" Began

G. D. SEARLE & CO., P.O. Box 5110, Chicago, Ill. 60680 SEARLE

972R

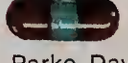
for the vitamin deficiency that diet alone doesn't satisfy...

Thera-Combex H-P®

This high-potency vitamin C and B-complex combination starts where diet stops

Kapseals®

Each Kapseal contains: ascorbic acid, 500 mg.; thiamine mononitrate, 25 mg.; riboflavin, 15 mg.; pyridoxine hydrochloride, 10 mg.; cyanocobalamin, 5 mcg.; niacinamide, 100 mg.; *dl*-panthenol, 20 mg.; Taka-Diastase® (Aspergillus oryzae enzymes), 2½ gr.



The Brown capsule with Green band is a Parke-Davis trademark.

Parke, Davis & Company, Detroit, Michigan 48232

PARKE-DAVIS

335R68

Since the objective of gastric surgery for peptic ulcer is to cure the ulcer, the most disheartening postoperative sequel is recurrence of another ulcer. Its prevention can never be assured by any operation short of total gastrectomy so long as the true cause of peptic ulcer is unknown and operations quantitatively reduce only one of the dynamic principles involved—namely hydrochloric acid secretion.

Postgastrectomy Recurrent Peptic Ulcer

DOLPH L. CURB, MD

INCIDENCE OF RECURRENT ULCERATION: The longer the follow-up on a postoperative series of patients, the higher will be the incidence of ulcer recurrence, although most recurrences will develop within five or six years. Figures which are not based on long follow-up periods must be evaluated with caution. Also, the criteria used in establishing nonrecurrence are important. Experienced clinicians are aware of the difficulty of proving anastomotic ulcer by roentgenograms, yet in many reported series, recurrences are counted only if so proven, or if operated—hence, actual recurrence probably is higher than reported.

The frequency of recurrent ulceration varies with the nature of the original ulcer. Gastric ulcer almost never recurs unless duodenal ulcer was present concomitantly. For example, at the Houston Veterans Hospital, among 121 patients operated on for gastric ulcer during 12 years ending in 1960, only two later developed marginal ulcers, and both of them had associated duodenal ulcer.[1]

Recurrence varies with the type of operation, being higher after the Billroth I than the Billroth II procedure, and in the prevagotomy days there was an inverse relationship of recurrence to the extent of the partial gastrectomy, with lower recurrence rates following high (three-quarters) resections than hemigastrectomy. With the advent of vagotomy and drainage procedures, recurrence rates improved over resection alone operations, but not much—the rate was still as high as 10 to 13%. For this reason, the operation of choice has become vagotomy combined with a limited resection of at least the antrum, but no more than half of the stomach. The reported recurrence rates in series of this sort range from none to around 1 or 2%. Johnston and others,[2] in 1964 reported that in a follow-up of 300 cases of hemigastrectomy and vagotomy for duodenal ulcer there were no demonstrated recurrences, although there was clinical suspicion of recurrence in two cases. Dr. Paul Jordan, Baylor College of Medicine, has unpublished data on his current study series of carefully evaluated cases; 96 cases of vagotomy and drainage procedures (mostly pyloroplasty) with five recurrences contrast with 92 vagotomies with resections (mostly antrectomy) with only one recurrence, despite a number whose insulin tests for vagal influence remain positive.

Clinical Manifestations of Recurrent Ulceration: When a definitive operation fails to cure peptic ulcer, signs of trouble may appear early or late. Early recurrence is a bad sign, indicating the operation has fallen far short of sufficiently reducing the acid-peptic secretory capability of the gastric stump. Such is uniformly the history in Zollinger-Ellison syndrome; in this condition it is apparent early that the ulcerogenic process has been little affected by the conventional ulcer operation. On the other hand, when recurrent symptoms appear late—many years after the operation—there is a significant possibility that the trouble may not be peptic ulcer but some other disease, possibly carcinoma.

Postgastrectomy Recurrent Peptic Ulcer

The recurrent peptic ulcer is characteristically located on the margin of the gastroduodenal or gastrojejunal anastomosis, or just beyond in the jejunum. Rarely does the original duodenal ulcer, if left in situ, fail to heal or become active later. Furthermore, peptic ulcer rarely arises in the stomach proper after an ulcer operation.

The symptoms of postoperative recurrence are the same as those of primary peptic ulcer: pain, obstructive symptoms, or complications such as perforation or hemorrhage. Pain is the most common symptom. Unlike the pregastrectomy ulcer pain, however, pain after surgery often lacks the familiar food-relief rhythm, or it may be aggravated by eating, and antacid relief is often lacking. Location of pain is variable, but it seldom is exactly where the preexisting pain was; not infrequently it radiates to the back, due to posterior penetration of the ulcer.

Nausea and vomiting are common and presuppose some type of interference at the outlet of the stomach such as obstruction at the stoma, which may be caused by edema about the ulcer. However, vomiting also is common in the absence of actual obstruction, and in such cases the vomited material usually does not contain retained food as it does in obstruction.

Hemorrhage from recurrent ulcer, as in preexisting ulcers, may occur after other symptoms of ulcer activity, particularly pain, or it may appear suddenly, unheralded by such symptoms. For some poorly understood reason, hemorrhage is more common in postgastrectomy ulcer recurrence in persons who had hemorrhage with their preoperative ulcers. Like preoperative ulcer bleeding, severity increases with repeated episodes and with advancing age, and so may often force consideration of additional surgical treatment.

Differential Diagnosis: When troublesome stomach symptoms develop in a person who has had an earlier operation for peptic ulcer, the most important differential diagnoses are: (1) recurrent peptic ulcer; (2) dysfunction due to the operation itself: "dumping," diarrhea, malabsorption, afferent and efferent loop obstruction, and psychosomatic dysfunction; (3) unrelated new disease in adjacent organs: gallstones, liver disease, hiatal hernia, carcinoma of the pancreas, and pancreatitis; and (4) disease of the gastric stump: carcinoma of the residual stomach, benign tumor of the gastric stump, and gastritis.

The more common extragastric diseases such as gallstones, liver disease, and hiatal hernia are fairly readily recognized by their characteristic symptoms and appropriate laboratory tests or x-rays. It should be noted that hiatal hernia is common in the postgastrectomy patient, even without symptoms. Pancreatitis can be a real problem; its diagnosis is difficult at best even when existing alone, and much more so when confused by problems of the gastrectomized stomach. When there are the classical acute attacks of severe pain and vomiting, often provoked by alcohol, associated with sharp rise in serum amylase, and perhaps supported by radiographic evidence of calcification in the pancreas, diagnosis of pancreatitis is apparent. More often, these diagnostic features are not present. The secretin test should be helpful, but its application is hampered by difficulty in getting the peroral tube into the duodenum; however, we recently succeeded in this with one of my patients.

Pancreatic carcinoma is an even greater problem; it lacks typical symptoms, and even when it does exhibit such features as weight loss and steatorrhea, these are similarly found in postgastrectomy dysfunction. Usually the diagnosis is not considered seriously until obstructive jaundice ensues.

Gastritis in the postoperative stomach remains

a poorly defined concept to me. I so often see gastroscopically what looks like an inflamed gastric lining in the postgastrectomy stomach that I find difficulty in correlating it with symptoms. So often I have seen a diagnosis of postoperative gastritis by x-ray or gastroscopy turn out to be something else more serious that I seldom will accept it as a working diagnosis.

Diagnosis: The laboratory aids us principally in giving an evaluation of the acid secretory activity of the stomach. A high level of hydrochloric acid output certainly shows failure of the objective sought by the operation, and hence the patient is at least a prime candidate for recurrent peptic ulcer. In practice there is often difficulty in securing pure gastric contents undiluted by regurgitated alkaline juices from the small intestine, and thus gastric analysis results are most significant if they give high levels, and are less reliable if levels are low.

Radiology: The clear demonstration of an unequivocal crater at the margin of the stoma, or just beyond in the jejunum, is a great help. Unfortunately such demonstration is achieved in a minority of proved cases of recurrent ulcer. More often only a "suspicious" barium collection is seen, and not at all rarely, no hint of any ulcer at all is seen in the barium study. The experienced clinician is not misled by negative radiologic studies in the face of strong clinical suspicion.

Endoscopy: The positive findings here again are convincing. The advent of the more flexible fiberoptic gastroscope with maneuverable tip has increased considerably the visualization of the foreshortened gastric pouch, which has been difficult with older instruments. Addition of intragastric photography also aids considerably, especially in convincing others of what one has seen. Still there are limits, as not all the gastric pouch can be seen, and while marginal ulcers at the stoma may be seen, jejunal ulcer can be seen only if it is directly opposite the stoma.

With all such aids, the diagnosis of recurrent ulcer after gastrectomy probably is not proven in much more than one-half of the cases; in the final analysis, the diagnosis often depends on the judgment and experience of the clinician in evaluating the symptoms. When, after an interval of good relief following gastrectomy done for a duodenal ulcer, a patient develops stomach symptoms which seem convincingly organic, and other extragastric diseases are ruled out by appropriate studies, the diagnosis of recurrent peptic ulcer is highly probable, even if x-rays and endoscopy fail to show the lesion.

In such cases, trial of medical-dietary treatment is in order. Not infrequently this is ineffectual, and after a reasonable period of trial additional surgery may have to be considered. What a "reasonable period" of treatment is often has to be decided by the patient—it will be when the magnitude of symptoms and their interference with the effectiveness of his life become intolerable to him. Of course, in cases of life-threatening complications such as hemorrhage, impending perforation, or significant suspicion of malignancy, the physician must exert a more positive role in his influence in the direction of surgery.

REFERENCES

1. Angel, R T, et al: A Current Evaluation of the Problem of Gastric Ulcers, Amer J Surg 114:730 (Nov) 1967.

2. Johnston, R H, et al: Hemigastrectomy and Vagotomy for Duodenal Ulcer, Arch Surg 88:860 (May) 1964.

Dr. Curb, Diagnostic Clinic of Houston, 6448 Fannin, Houston, Tex 77025.

Clinicopathologic Conference

The patient was a 47-year-old white hypertensive woman who was brought to the Emergency Room in coma and died soon afterward. A discussion of the central nervous system complications of hypertension is presented as well as a differential diagnosis as to the most likely cause of her hypertension.

CASE PRESENTATION: *Dr. Shropshire:* This was the first Parkland admission for the patient, a 47-year-old white beautician, who was brought to the Emergency Room in an unresponsive state; she died 24 hours later.

The patient had been hospitalized elsewhere nine years previously for an abdominal hysterectomy. At that time she was reportedly in good health except for occasional menorrhagia, and gave no history of other hospitalizations or injuries. Physical examination showed a blood pressure of 155/100 mm Hg; the optic fundi were normal, and there was no reported cardiomegaly or edema. Values for hematocrit, hemoglobin, white blood cell count (WBC), and serum electrolytes were within normal limits, as were results of urinalysis and a chest roentgenogram.

Reserpine and thiazides were prescribed and the patient was discharged, but she was seen occasionally as an outpatient when she had blood pressures continuing to be 150-160/100-110 mm Hg. She complained of intermittent abdominal discomfort and obtained relief periodically from antacids and aspirin, which she took in "copious amounts" (this could not be quantitated).

Six years before her last admission she sustained a second-degree burn of the left forearm while pouring coffee, and was admitted to the hospital. Her husband had noted slurring of her speech, but this was not corroborated. Her blood pressure was recorded as 165/100 mm Hg. Her blood counts and serum chemistry values were again normal. Urinalysis revealed proteinuria (1+) and 20-30 WBCs/high power microscopic field. A urine culture was sterile, and an intravenous pyelogram and upper gastrointestinal series were within normal limits.

She was discharged on a regimen of Reserpine, thiazides, and Apresoline 25 mg daily, but continued to have intermittent abdominal pain, occasionally associated with eating, and her diastolic blood pressure consistently remained above 105 mm Hg.

She was admitted to the hospital again one year ago with numbness of the right side of the face and hand, but records of this admission could not be obtained. Because of problems with alcoholism, follow-ups were discontinued and she failed to continue her medications. She had frequent headaches and had sporadic spells of early morning vomiting.

The morning of her last admission she complained of right-sided headache and later was found lying on the floor. She was intelligible initially but became progressively comatose, and arrived in the Emergency Room apneic, with dilated and fixed pupils. Her blood pressure was 280/140 mm Hg, pulse 88/minute, and respirations were cluster in character, with periods of apnea. No "doll's eye" movements, ciliospinal, or caloric reflexes were elicited, and bilateral papilledema was present. Deep pain stimulus produced decerebrate posturing. Her neck was supple, her lungs clear, her heart unenlarged, and abdominal examination revealed no organomegaly. There was no edema. Tendon reflexes were 3+ bilaterally, corneal reflexes were present, and Babinski's sign was present bilaterally.

Her cerebrospinal fluid (CSF) was bloody. She was not anemic, but her serum electrolyte val-

Mr. Robert Haley
Spencer Shropshire, MD
Omkar N. Markand, MD
J. Richard Crout, MD
Norman M. Kaplan, MD
Edwin H. Eigenbrodt, MD, Guest Editor

ues were: sodium 133 mEq/liter; potassium 2.9 mEq/liter; chloride 91 mEq/liter; and bicarbonate 22 mEq/liter. In an attempt to diminish cerebral edema, the patient received hyperventilation with 40% oxygen, and resultant blood gas determinations were oxygen tension 277, carbon dioxide tension 30, oxygen saturation 100%, and serum pH 7.6. Five milligrams of Decadron was given intravenously on two occasions.

Her temperature rose to 106° F despite aspirin and ice baths, and her blood pressure rose to 190/140 after an initial fall to 120/80 mm Hg. She was given 500 mg of methyldopa intravenously without apparent change in blood pressure, and died 24 hours after admission.

Ward diagnoses were: (1) hypertensive vascular disease, and (2) cerebral hemorrhage into ventricles and subsequent tonsillar herniation.

Clinical Discussion: *Dr. Markand:* We can be fairly certain that this is a case of complications of hypertension. The patient's history of hypertension was documented for at least nine years.

There was sudden onset of right-sided headache prior to admission and progressive loss of consciousness, so when she arrived at the hospital she was deeply comatose and had dilated and fixed pupils.

When admitted in the Emergency Room, she already showed signs of brain stem compression, because she had dilated and fixed pupils, absence of "doll's eye" head phenomena, and absence of ciliospinal and caloric responses. All these signs, as well as the decerebrate posturing, show severe dysfunction of the brain stem.

The CSF was bloody and because the patient had a rapid downhill course, it appears that she had a severe intracerebral hemorrhage which probably ruptured into the ventricles.

There were no focal neurological signs to indicate the origin of the hemorrhage. This is not unusual in patients with rapid intracerebral hemorrhage who quickly become unconscious.

However, in hypertension about 45% of the cases show hemorrhage in the putamen. These putamenal hemorrhages manifest themselves by hemiplegia and hemianesthesia on the contralateral side. If the hemorrhage is severe it may rupture into the lateral ventricle and sometimes into the third ventricle. The hemorrhages may occur in the cerebellum, brain stem, and thalamus with an incidence of 10% each. In the remaining 25% of the cases, the hemorrhage can occur anywhere in the subcortical white matter.

There are certain clues in the patient's history which show that she had previous central nervous system (CNS) difficulties that were probably related to hypertension. The first trouble appeared six years ago as an episode of slurred speech. Her second episode was one year ago and was characterized by numbness of the right side of the face and hand. We do not have any more details of either episode.

However, there are several mechanisms by which hypertension could produce episodes like this. First, if the episodes lasted from a few seconds to a few hours they probably represent transient ischemia. Atherosclerosis is an important complication of hypertension; with involvement of small arteries, transient ischemia attacks are not uncommon. Moreover, these attacks can occur in hypertension without atherosclerosis, since a sudden rise in blood pressure may cause arteriolar narrowing sufficient to produce transient ischemia.

The second mechanism which could be implicated is a small slit hemorrhage. The hemorrhage may be so small and restrictive that the patient may recover completely, and the episode clinically may resemble cerebrovascular thrombosis.

The third possibility could be a lacunar infarct. In hypertension these small infarcts are quite common. They occur in the distribution of the perforating arteries and are most common in the basal ganglia, the subcortical white matter, and the brain stem, particularly in the pons. Their pathogenesis is quite interesting. The perforating arteries, because of the hypertension, may show extensive atherosclerosis with a resultant occlusion producing the infarcts. Lacunar infarcts usually are multiple and may not produce any clinical symptoms, but sometimes they produce minimal symptoms. Fisher has reported four syndromes produced by lacunar infarcts in cases of hypertension. Some cases have "pure sensory hemiplegia."[1] This probably is a poor term, but it emphasizes that the patient can have symptoms limited to a unilateral sensory deficit which may last for several days. There may not be any motor deficit. On the other hand, the patient may have pure motor hemiplegia.[2] The third syndrome which he described is dysarthria—a "clumsy hand" syndrome.[3] The fourth syndrome is ataxia of the leg and slight weakness of the arm.[4] I think what can be emphasized is that these lacunar infarcts are so small that they may involve only a portion of the corticospinal or sensory pathways. Similarly, symptoms may be confined to portions of one side of the body and the neurological deficit completely disappears within a few days.

This patient presumably had a severe cerebral hemorrhage, and when seen in the hospital was comatose and had papilledema. The question arises, "Should we do a lumbar puncture or not?" I think there will be a difference in opinion, but I believe it should be done. Fisher states that any time there is a strong suspicion of blood or pus in the CSF, lumbar puncture is justified even if papilledema is present.[5] However, you must have valid reasons for doing a lumbar puncture in a patient with papilledema, and I think that the suspicion of blood or pus in the CSF is the only indication.

Dr. Crout: When this lady arrived in the Emergency Room, her condition appeared to be clinically unsalvageable. I want to focus on what happened before she came, because that is when we might have been able to do something about the basic pathophysiology of her disease.

When one sees a patient with serious hypertension, the first problem is to identify the etiology. Let us assume that this patient had essential hypertension. Superficially this seems to be a perfectly adequate diagnosis, and indeed she may have been the victim of a common disease —cerebral hemorrhage with essential hypertension. Now, what features in this patient might *not* fit with this diagnosis?

First, she was only 47 years old and seems to have had cerebrovascular disease disproportionate to other organ damage. This is not unheard of, but it is a bit unsettling.

Second, for someone with this degree of hypertension she had relatively little end organ damage. She had no evidence of left ventricular hypertrophy and her kidney function was normal. She had papilledema, but it is not recorded whether her eyegrounds also showed any signs of chronic hypertensive disease, namely arteriovenous (A-V) nicking and segmental constriction. This would have been an important observation, because A-V nicking and segmental restriction would confirm longstanding chronic hypertension.

Third, her blood pressure rose sharply some time before she arrived in the Emergency Room. Was the papilledema caused by cerebral hemorrhage, or did this patient have some disease which suddenly superimposed malignant hypertension onto a previously stable course?

So, I think there are hints that this lady may not have had essential hypertension, and therefore we must go down the list of secondary

hypertensions in search of other possible etiologies.

I think we can dismiss the most common cause of secondary hypertension—chronic renal parenchymal disease. The intravenous pyelograms did not show shrunken kidneys, chronic pyelonephritis, or polycystic kidneys. She was not azotemic. The possibility of chronic analgesic abuse seems to be thrown in as a red herring, but this too can be ruled out by the absence of papillitis and azotemia. In short, there is no evidence of renal parenchymal disease.

The second most common cause of secondary hypertension is renal vascular disease, and in middle-aged white women this is most often the result of fibromuscular hyperplasia or dysplasia. The Cleveland Clinic group recently reported that hyperplasia of muscle in these lesions actually is quite rare, and that most patients actually show only intimal, medial, or subadventitial fibroplasia.[6] The latter two lesions are especially common in young and middle-aged white women. Renal vascular disease in general is rare in blacks. Hypertension of renal vascular origin is caused by an outpouring of renin from the underperfused kidney, which in turn causes secondary aldosteronism, salt retention, and hypokalemic alkalosis. The diagnosis of renal vascular hypertension is made by demonstrating the lesion on renal arteriograms and by showing that plasma renin activity in renal vein blood from the involved side is at least twice that in blood draining the "good" kidney. We do not have evidence on these points in this patient, and therefore can neither diagnose nor rule out fibromuscular dysplasia.

The next most common cause of secondary hypertension probably is aldosteroma. I think we can exclude this simply because the patient never had attacks of weakness, and her serum potassium level was normal until the day she died. While there is such a thing as normokalemic aldosteroma it is quite rare, and it would not be expected to produce hypertensive disease of this severity.

Next is pheochromocytoma, and this patient could have had one. She had hypertension for 8 or 9 years, a period which, in adults, is not at all out of line for pheochromocytoma. I have seen several adults with pheochromocytoma who had symptoms for 5 to 10 years, and one of our patients had been having attacks for 20 years before his tumor was removed. On the other hand, children and young adults typically present with symptoms of only a few months' duration. She also had attacks of abdominal pain, nausea, and vomiting. This again is a typical story for adults with pheochromocytoma. Finally, it is important to recognize that she died of stroke, which is common in pheochromocytoma. Graham's review article in 1951[7] provides us with the kind of data you aren't supposed to get any more—namely, the causes of death in untreated patients with pheochromocytoma. It is of some interest that 27% of the deaths in his 72 cases were unrelated to tumor. This is not an inevitably lethal disease and undiagnosed tumors may be found at autopsy, although this is becoming less frequent. This disease takes a terrible toll on the brain and the heart. No form of hypertension kills by stroke with a greater frequency than pheochromocytoma (26% of deaths). The other major causes of death are cardiac failure (21%) and "attacks" (19%). The latter are severe episodes of hyperpyrexia and shock due to gross overproduction of norepinephrine and epinephrine; the patient has hypermetabolism, acidosis, constriction of all vessels, and is in coma as a result of tissue underperfusion and CNS damage. For reasons that are not clear, the kidney is rarely involved in pheochromocytoma; uremia accounts for only 1% of deaths. I think the history of this patient and her course after arrival in our Emergency Room could indicate pheochromocytoma.

The diagnosis of pheochromocytoma can be established or excluded in 95% of the cases by a single determination in a 24-hour urine sample of either the metanephrines, vanilmandelic acid (VMA), or free catecholamines,[8,9] and we use the metanephrines assay as a screening procedure. If the result is at all equivocal, we analyze the same urine sample for free catecholamines or VMA. The reason that one metabo-

lite may be relatively more elevated than another is that some of the norepinephrine and epinephrine synthesized by these tumors is metabolized in situ, so that the tumor puts out an admixture of vasoactive catecholamines and the metabolites, normetanephrine, metanephrine, and VMA. The net result is some variation in the pattern of metabolites in the urine, so one cannot be dogmatic about which is the best test to run; a patient with a small pheochromocytoma will show only borderline elevations of these compounds in the urine. These chemical tests are far more reliable and innocuous than pharmacological tests. Phentolamine, phenoxybenzamine, and propranolol are useful drugs in treating problems like hypertension and arrhythmias, but they no longer deserve a place as diagnostic agents in this disease.

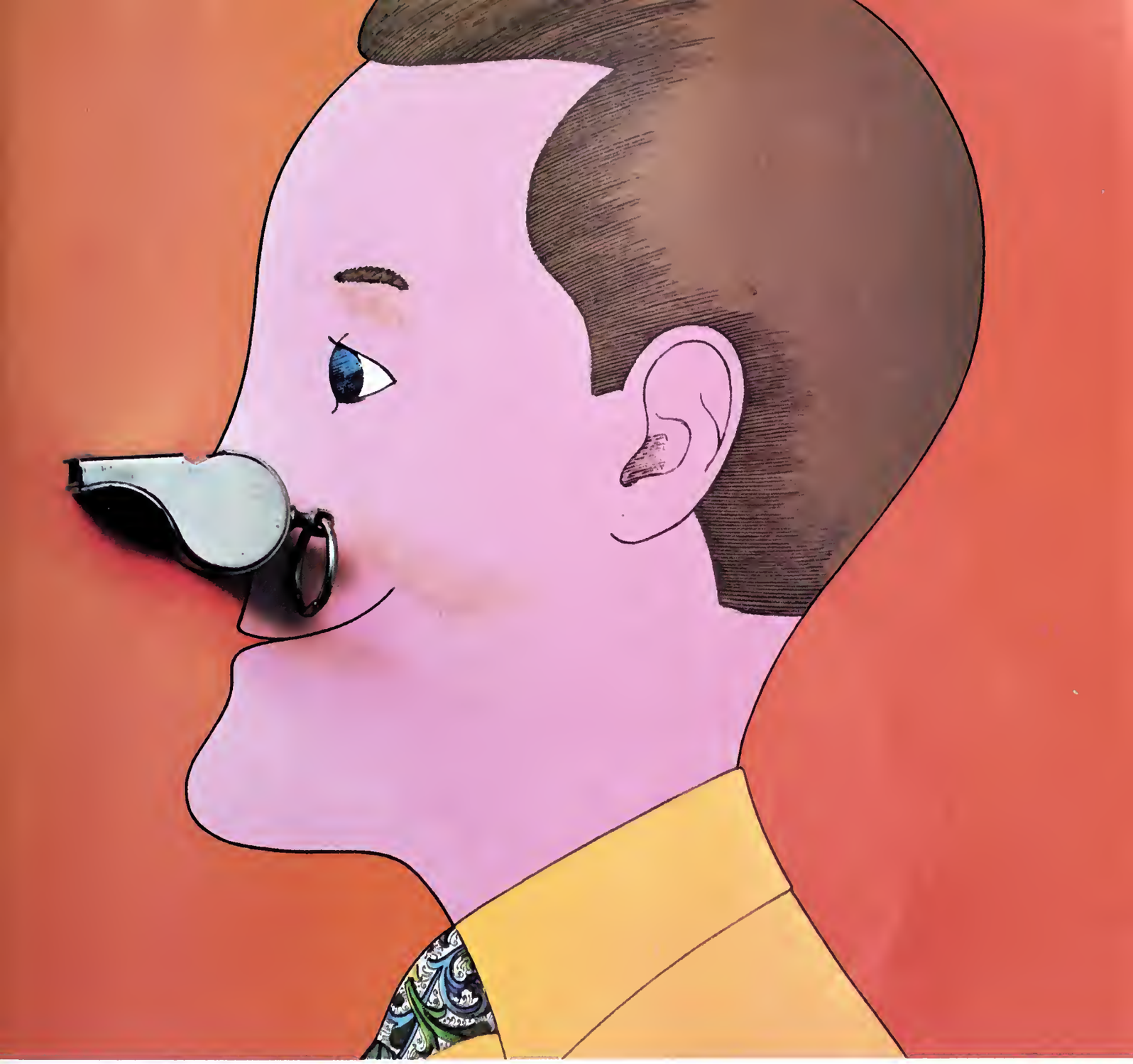
Finally, of 15 patients with pheochromocytoma who have been operated upon at this hospital in the past six years, only 7 have a total cure of their disease—that is, normal urinary catecholamines postoperatively and no hypertension. Three have some residual or malignant pheochromocytoma; one has died, but the other two simply have minimal elevations of urinary catecholamines and they have not had further surgery. Fascinatingly enough, however, the remaining 5 are hypertensive, although their catecholamine excretions are normal. They have been examined carefully since surgery and have, for all intents and purposes, what you'd call essential hypertension. This tends to support the idea that once hypertension is started by any cause, it tends to stay even after the cause is removed. I didn't use to believe that, but our surgical experience with pheochromocytoma has *not* been universally successful. This is why I think we should speak of some secondary hypertension as surgical hypertension rather than curable hypertension; the two are not the same.

To summarize, there are three important underlying diagnoses to consider: pheochromocytoma, fibromuscular dysplasia, and essential hypertension. We lack the evidence to make any critical decision among these. She should have been examined more thoroughly in 1963. If she had essential hypertension then, her blood pressure should have been treated more vigorously; the risk of stroke in hypertensive patients is minimized by effective therapy.

Dr. Kaplan: This woman probably did not have malignant hypertension, and her papilledema was related to acute intracranial bleeding. However, if she had been in the malignant phase of hypertension, this would be compatible with *all* the various causes of hypertension which Dr. Crout listed, as well as with all other causes of diastolic hypertension. Any form of hypertension can present in a malignant phase as defined by papilledema with necrotizing arteriolitis. We consider primary aldosteronism to be one of the least common causes of a malignant form of hypertension, and our reported case in 1963 was the first of only about three subsequent reports.[10] I have heard, however, that others have uncovered more cases by finding low plasma renin levels in patients with malignant hypertension, wherein renin should be quite high.

I agree that these patients should not be assumed to have "curable," but rather "secondary" hypertension. In patients with primary aldosteronism the cure rate, based on a normal blood pressure one year postoperatively, is about 60 to 70%. For renal vascular hypertension the results have not been that good in many series, but I believe the reason may be relatively poor selection of patients for surgery.[11] That is, there have been a number of patients operated upon who have renal vascular *disease* and essential hypertension, where the hypertension is not caused by the vascular lesions in their renal vessels. The removal of a functionally insignificant vascular lesion in a patient with essential hypertension would not relieve the hypertension.

The best technique now available to establish the diagnosis and the "curability" of renal vascular disease is measurement of renin activity in venous blood from the two kidneys by percutaneous catheterization. This is a relatively simple procedure which can be performed by



Nose clear as a whistle

(THANKS TO DIMETAPP®)

Dimetapp Extentabs® does an outstanding job of helping to clear up the stuffiness, drip and congestion of colds and upper respiratory allergies and infections. Each Extentab keeps working up to 12 hours. And for most patients drowsiness or overstimulation is unlikely. Try Dimetapp. It clearly works.

FOR UPPER RESPIRATORY ALLERGIES AND INFECTIONS

Dimetapp Extentabs®

Dimetane® (brompheniramine maleate), 12 mg.; phenylephrine HCl, 15 mg.; phenylpropanolamine HCl, 15 mg.

UP TO 12 HOURS CLEAR BREATHING ON ONE TABLET

Indications: Dimetapp is indicated for symptomatic relief of the allergic manifestations of respiratory illnesses, such as the common cold and bronchial asthma, seasonal allergies, sinusitis, rhinitis, conjunctivitis, and otitis.
Contraindications: Hypersensitivity to antihistamines. Not recommended for use during pregnancy.
Precautions: Until patient's response has been determined, he should be cautioned against engaging in operations requiring alertness. Administer with care to patients with cardiac or peripheral vascular diseases or hypertension.
Side Effects: Hypersensitivity reactions including skin rashes, urticaria, hypotension and thrombocytopenia, have been reported on rare occasions. Drowsiness, lassitude, nausea, giddiness, dryness of the mouth, mydriasis, increased irritability or excitement may be encountered.
Dosage: 1 Extentab morning and evening.
Supplied: Bottles of 100 and 500.

A.H. ROBINS COMPANY
RICHMOND, VA. 23220

A·H·ROBINS

Hasn't the driver had enough excitement for one day?

For the patient who has been through an accident, the worry and anxiety following the mishap may actually heighten the perception of pain. This is why there's a classic ¼ grain *sedative* dose of phenobarbital in Phenaphen with Codeine—to take the nervous "edge" off, so the rest of the formula can control the pain more effectively.

Driver Escapes Serious Injury When Truck Jackknifes

SHENANDOAH, JULY 16. Roger Sherman of Waynesboro suffered head lacerations but escaped serious injury when the tractor-trailer he was driving skidded on Deep Run Bridge and jackknifed. It took rescue workers thirty minutes to remove him from the cab which was dangling over the edge of the bridge. Sherman is resting comfortably in University Hospital where his condition is listed as satisfactory.

Frankhouser called my attenti

Phenaphen® with Codeine

Phenaphen with Codeine Nos. 2, 3, or 4 contains: Phenobarbital (¼ gr.), 16.2 mg. (warning: may be habit forming); Aspirin (2½ gr.), 162.0 mg. Phenacetin (3 gr.), 194.0 mg.; Hyoscyamine sulfate, 0.031 mg. Codeine Phosphate, ¼ gr. (No. 2), ½ gr. (No. 3), or 1 gr. (No. 4) (warning: may be habit forming).

The compound analgesic that calms instead of caffeinates

Indications: Phenaphen with Codeine provides relief in severer grades of pain, on low codeine dosage, with minimal possibility of side effects. Its use frequently makes unnecessary the use of addicting narcotics. **Contraindications:** Hypersensitivity to any of the components. **Precautions:** As with all phenacetin-containing products excessive or prolonged use should be avoided. **Side effects:** Side effects are uncommon, although nausea, constipation and drowsiness may occur. **Dosage:** Phenaphen No. 2 and No. 3—1 or 2 capsules every 3 to 4 hours as needed; Phenaphen No. 4—1 capsule every 3 to 4 hours as needed. For further details see product literature.

A. H. Robins Company, Richmond, Va. 23220 A·H·ROBINS

most radiologists and vascular surgeons. Renin assays are now done by commercial laboratories.

Another problem in assessing cure rate is the lack of adequate follow-up, particularly by surgeons who seldom, if ever, have the chance to see their patients again. Surgery has a nonspecific antihypertensive effect, since hypertension can be "cured" for six months by an abdominal hysterectomy, for example.

A few comments should be made about the patient's hypokalemia. This patient did have a serum potassium value of 2.9 mEq/liter on the final admission. In our experience with plasma using the automated technique of analysis, the lower limit of potassium is around 3.0 mEq/liter. Our pathologists have tested 100 normal medical students, and found their mean plasma potassium to be 4.0 with two standard deviations from 3.2 to 4.8 mEq/liter. Even more representative of our patient population are the levels found in 107 blood donors, who had a mean value of 3.6 with two standard deviations from 3.0 to 4.1 mEq/liter.[12] Data in the literature clearly point out that plasma has a mean level of potassium of about 0.9 mEq/liter lower than serum.[13] Thus when a patient such as this one presents with a level of 2.9 mEq/liter I think we should be concerned about it, but it certainly does not prove that she had significant hypokalemia, as usually seen with primary aldosteronism. In view of her low serum sodium, it's more likely that she had secondary aldosteronism occurring from renal ischemia as part of her basic hypertensive process.

If she had hypernatremia along with this hypokalemia, the possibility of primary aldosteronism would be greater. If her condition had permitted, her urinary potassium excretion should have been measured as the next screening procedure. If the urinary potassium had been above 30 mEq per day, additional work-up would have been indicated, and we would then have done a two-hour upright ambulatory plasma renin level test. If it had been above a level that is not definitely suppressed (which we have found by experience to be 300 ng%) I think primary aldosteronism would be excluded. I know of only one reported case of a normal renin level in primary aldosteronism, and the patient had been on a low-salt diet for about eight days.[14] But as far as this patient is concerned—despite the interesting possibilities of primary aldosteronism or secondary aldosteronism related to renal vascular disease—the most likely diagnosis is essential hypertension, with the terminal episode being an intracranial hemorrhage.

Pathological Findings: *Mr. Haley:* Postmortem examination showed the acute cause of death to be essentially as predicted. Externally, the brain showed significant hemorrhage in the basal cisterns and cisterna magna emanating from the foramina of Luschka and Magendie. There was left-sided temporal lobe herniation and slight uncal herniation on the right with compression of the midbrain. There was herniation of the cerebellar tonsils, which had been strangulated, infarcted, and partially sloughed through the foramen magnum. Indeed, bits of necrotic cerebellar tissue and clotted blood lay over the spinal cord throughout its entire length. The cerebral cortex was diffusely soft and dark brown, reflecting the autolytic process which results from the diminution or cessation of cerebral blood flow by raised intracranial pressure (usually over 300 mm Hg). This condition is seen especially in these patients when life is maintained terminally by respiratory assistance.

Upon sectioning the brain, we found a massive intracerebral hemorrhage, presumably arising in the area of the left external capsule and dissecting medially into the left lateral ventricle, completely obliterating the region of the basal ganglia on the left. This massive tissue destruction obliterated evidence of the patient's earlier neurological symptoms, which probably were caused by small, nondissecting hemorrhages in this area. Sectioning of the brain stem revealed secondary pontine hemorrhage. This lesion, which is often the terminating consequence of an expanding supratentorial mass, is thought to result from stretching and shearing of the small perforating vessels entering the brain

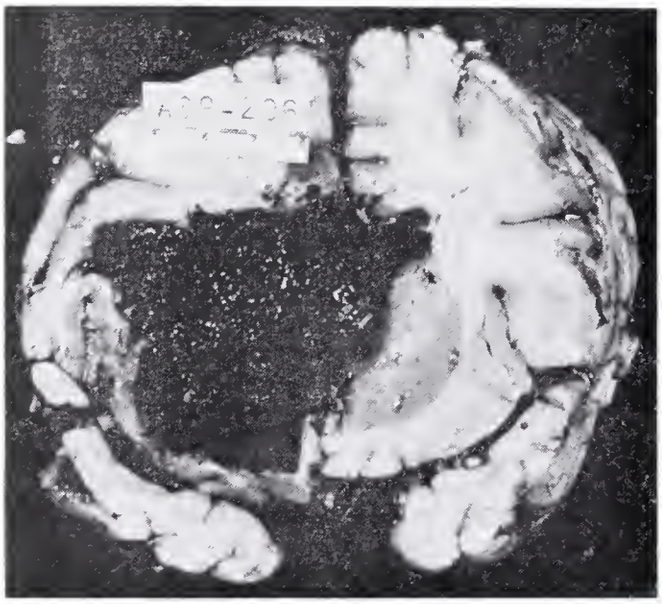


Fig 1. Gross photograph of cross-section of brain shows extensive cerebral hemorrhage extending into the left lateral ventricle.

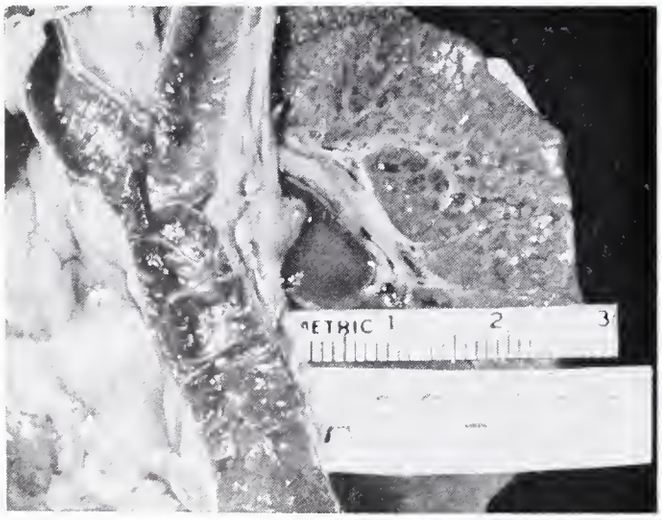


Fig 2. Gross photograph of bisected right renal artery. The fibromuscular dysplasia has caused multiple trabeculations which intrude on the lumen.

stem from the basilar artery, which remains stationary while the brain stem is displaced caudally. Therefore, the acute cause of death was a massive intracerebral hemorrhage with its consequences, occurring possibly as the result of chronic hypertension.

The clinical diagnosis of hypertension was further substantiated by left ventricular hypertrophy and arteriosclerosis of the abdominal aorta accelerated beyond a degree commensurate with the patient's age. However, there was one other significant finding.

Examination of the renal arteries showed concentric trabeculation of the arterial wall—the characteristic appearance of fibromuscular dysplasia. This trabeculated structure is what gives the renal arteries the beaded or sausage-link appearance on renal arteriogram. The caliber of the artery is not increased in the "beads," thus indicating significant narrowing of the arterial lumen by the trabeculations between the "beads." Fibromuscular dysplasia of the renal arteries was first described in 1938,[22] although it was not widely recognized until after 1958.[23] As in this case, it usually spares the first centimeter or so of the renal artery[15,20] and is thought to be a slowly progressive process which becomes bilateral, as here. in 40% of cases.[15,21] With about the same frequency, it extends out into the peripheral branches of the renal arteries[21] as seen minimally in this case. It has been reported rarely to involve other arteries, for example, the superior mesenteric, ciliac, or iliacs in cases with accompanying renal artery involvement, and the carotids both intra- and extracranially as an isolated lesion; such diverse involvement was not present in this case.[21,24]

Microscopically, longitudinal sections of the renal arteries showed pathological involvement

confined mainly to the arterial media. The intima was essentially normal with only occasional small arteriosclerotic plaques. The internal elastic membrane was generally intact, though focally frayed and reduplicated. The adventitia was normal except for a few longitudinally oriented smooth-muscle fibers which normally may be present.[15,27] Corresponding to the concentric trabeculae seen grossly, areas of normal or thinned media alternated with focal areas of thickening and disorganized hyperplasia. In the normal renal artery, the media is composed of concentrically arranged smooth muscle fibers and no more than 40-50% fibrous tissue.[27] In these hyperplastic areas, however, the smooth muscle fibers were haphazardly arranged, and fibrous tissue comprised from 40 to 70%. Furthermore, in some places the media was thinned or absent and the internal elastica bulged into or even through the adventitia producing microaneurysms. In less than 10% of cases,[21] this process progresses to the formation of sizeable saccular aneurysms.[15]

Fig 3. Low-power photomicrograph of renal artery shows tremendously thickened media alternating with thinned areas of the vessel wall. These thickened areas correspond to the trabeculations seen grossly.

This gross and microscopic appearance represents one of the several types of renal artery dysplasia which are variously classified.[15,18] Generally, there can be fibrous or fibromuscular thickening of the intima, the media, the adventitia, or combinations in various patterns. Fibroplasia of the intima seems to occur both as a congenital lesion[19] and as a manifestation of arteriosclerosis. Periadventitial fibrosis generally results from perirenal inflammatory processes such as pyelonephritis and perinephric abscess.[15] The type described in this case is four times more common in females, and seems especially prevalent in multiparous women ages 20 to 50.[15,17] In fact, in many cases, the hypertension has been discovered during or shortly after pregnancy.[28] These and other facts have led to speculation about the possible etiological

role of hormonal factors or even of mechanical stretching of the artery during pregnancy.[17] In support of the latter hypothesis, the more mobile right kidney usually is more severely involved.[15,17,21] Similar lesions have been produced in dogs by chronic stretching of the renal arteries.[25,26] The fact that fibromuscular dysplasia of renal arteries causes renal vascular hypertension was recently discussed along with principles of diagnosis and treatment.[17]

It has been suggested that fibromuscular dysplasia of the renal arteries, though producing renal vascular hypertension, provides the kidney some protection from the deleterious effects of the hypertension.[19] In this case, microscopic examination of the renal tissue showed moderate hyaline arteriolosclerosis with areas of tubular degeneration and scarring typical of chronic benign hypertension, and widely scattered foci of coagulation necrosis of glomerular capillary tufts consistent with early acute malignant hypertension. Whether these changes are commensurate with the duration and severity of the patient's hypertensive process is difficult to assess.

Incidental findings at autopsy included hepatomegaly with fatty metamorphosis and fibrosis of the liver, chronic pancreatitis without evidence of acute inflammation, and a healed chronic peptic ulcer.

In summary, this is a case of a middle-aged multiparous woman who died from a massive intracerebral hemorrhage and its consequences, resulting from fibromuscular dysplasia of the renal arteries and renal vascular hypertension.

REFERENCES

1. Fisher, C M: Pure Sensory Stroke Involving Face, Arm, and Leg, Neurology 15:76 (Jan) 1965.
2. Fisher, C M, and Curry, H B: Pure Motor Hemiplegia of Vascular Origin, Arch Neurol 13:30 (July) 1965.
3. Fisher, C M: A Lacunar Stroke; The Dysarthria-Clumsy Hand Syndrome, Neurology 17:614 (June) 1967.
4. Fisher, C M, and Cole, M: Homolateral Ataxia and Crural Paresis; A Vascular Syndrome, J Neurol Neurosurg Psychiat 28:48 (Feb) 1965.
5. Fisher, C M: Intracerebral Hemorrhage, presented at the World Neurological Congress in New York, 1969.
6. McCormack, L J, et al: A Pathologic-Arteriographic Correlation of Renal Arterial Disease, Amer Heart J 72:188 (Aug) 1966.
7. Graham, J B: Pheochromocytoma and Hypertension; Analysis of 207 Cases, Internat Abstr Surg 92:106, 1951, in Surg Gynec & Obstet (Feb) 1951.
8. Crout, J B: Diagnosis of Pheochromocytoma, Dallas Med J 54:584 (Dec) 1968.
9. Crout, J R: Catecholamine Metabolism in Pheochromocytoma and Essential Hypertension, in Manger, W M, Ed: Hormones and Hypertension, Springfield, Ill, Charles C Thomas, 1966, pp 3-40.
10. Kaplan, N M: Primary Aldosteronism with Malignant Hypertension, New Eng J Med 269:1282 (Dec 12) 1963.
11. Page, I H, and McCubbin, J W: Renal Hypertension, Chicago, Year Book Publishers, 1968.
12. Kaplan, N M: Secondary Aldosteronism, with Observations on the Normal Range of Plasma Potassium, unpublished data.
13. Hultman, E, and Bergstrom, J: Plasma Potassium Determination, Scand J Clin Lab Invest 14 (Suppl 64) 87, 1962.
14. Brown, J J, et al: Plasma Electrolytes, Renin, and Aldosterone in the Diagnosis of Primary Hyperaldosteronism, Lancet, 2:55 (July 13) 1968.
15. Crocker, D W: Fibromuscular Dysplasias of Renal Artery, Arch Path 85:602 (June) 1968.
16. Fletcher, F W, et al: Segmental Fibromuscular Dysplasia of the Renal Artery with Secondary Hypertension, Wisc Med J 68:185 (May) 1969.
17. Foster, J H, et al: Hypertension and Fibromuscular Dysplasia of the Renal Arteries, Surgery 65:157 (Jan) 1969.
18. Harrison, E G, et al: Morphology of Fibromuscular Dysplasia of the Renal Artery in Renovascular Hypertension, Amer J Med 43:97 (July) 1967.
19. Heptinstall, R H: Hypertension due to Renal Artery Stenosis, in: Pathology of the Kidney, Boston, Little, Brown and Company, 1966, pp 153-159.
20. Hunt, J C, et al: Idiopathic Fibrous and Fibromuscular Stenoses of the Renal Arteries Associated with Hypertension, Proc Mayo Clin 37:181 (March 28) 1962.
21. Kincaid, O W, et al: Fibromuscular Dysplasia of the Renal Arteries, Amer J Roentgen 104:271 (Oct) 1968.
22. Ledbetter, W F, and Burkland, C E: Hypertension in Unilateral Renal Disease, J Urol 39:611 (May) 1938.
23. McCormack, L J, et al: Obstructive Lesions of the Renal Artery Associated with Remedial Hypertension, Amer J Path 34:582, 1958.
24. Palubinskas, A J, et al: Fibromuscular Hyperplasia; An Arterial Dysplasia of Increasing Clinical Importance, Amer J Roentgen 98:907 (Dec) 1966.
25. Palubinskas, A J, and Wylie, E J: Roentgen Diagnosis of Fibromuscular Hyperplasia of the Renal Arteries, Radiology 76:634 (April) 1961.
26. Rothfield, N J H: Experimental Fibromuscular Arterial Dysplasia, Radiology, 91:1233 (Dec) 1968.
27. Wellington, J S: Fibromuscular Hyperplasia of Renal Arteries in Hypertension, Amer J Path 43:955 (Dec) 1963.
28. Wylie, E J, et al: Fibromuscular Hyperplasia of the Renal Arteries, Ann Surg, 156:592 (Oct) 1962.

Mr. Haley, The University of Texas (Southwestern) Medical School, 5323 Harry Hines Boulevard, Dallas, Tex 75235.

Dr. Shropshire, Parkland Memorial Hospital, 5201 Harry Hines Boulevard, Dallas, Tex 75235.

Dr. Markand, Department of Neurology; Drs. Crout and Kaplan, Department of Internal Medicine; and Dr. Eigenbrodt, Department of Pathology, The University of Texas (Southwestern) Medical School, 5323 Harry Hines Boulevard, Dallas, Tex 75235.

Senior Consultants
Perry C. Talkington, M.D.
Charles L. Bloss, M.D.

Psychiatrist-in-Chief
Howard M. Burkett, M.D.

Medical Director
James K. Peden, M.D.

Associate Psychiatrists
Jerry M. Lewis, M.D.
Claude L. Jackson, M.D.
Dode Mae Hanke, M.D.
Thomas H. Allison, M.D.
Maurice S. Green, M.D.
Doyle I. Carson, M.D.
Stanley L. Seaton, M.D.
Keith H. Johansen, M.D.
Charles G. Markward, M.D.
Joe W. King, M.D.
Claude R. Nichols, M.D.
Larry E. Tripp, M.D.
Aretta J. Rathmell, M.D.
Donald N. Offutt, M.D.

Clinical Psychology
David H. Lipsher, Ph.D.
John T. Gossett, Ph.D.
Dale R. Turner, Ph.D.
Robert W. Hagebak, Ph.D.

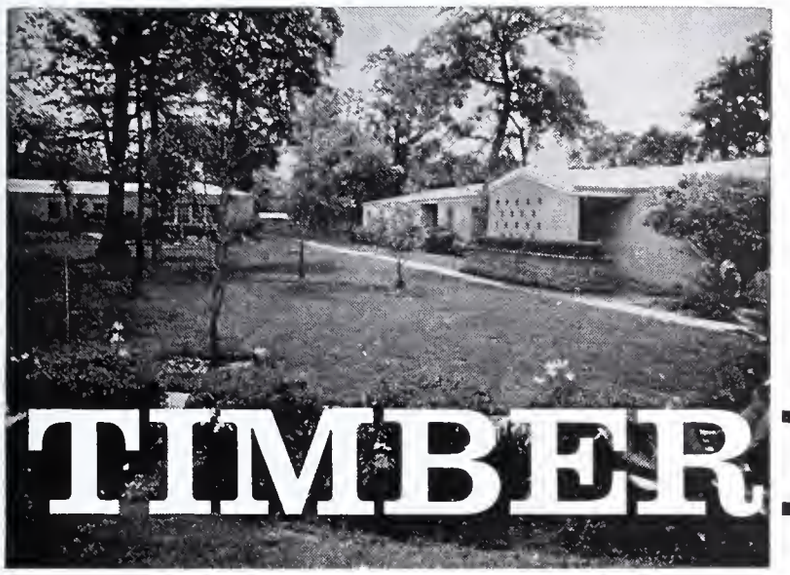
Social Work
Sally Stansfield, M.S.W.
Robert O'Connor, M.S.S.W.
Kathleen Wood, M.S.W.
Margie W. Buell, M.S.S.W.
Robert P. Stewart, M.S.S.W.
Cecilia Coffelt, M.S.S.W.

Occupational Therapy
Geraldine Skinner, B.S., O.T.R., Director

Recreational Therapy
Lois Timmins, Ed.D., Director

Director of Nurses
Mae Belle James, R.N.

Business Manager
Ralph M. Barnette, B.B.A.



PSYCHIATRIC HOSPITAL

DAY HOSPITAL

DEPARTMENT OF OUT PATIENT PSYCHIATRY

DEPARTMENT OF ADOLESCENT PSYCHIATRY

Narcotic Cases Not Admitted

TIMBERLAWN
PSYCHIATRIC HOSPITAL

381-7181 Dallas, Texas 75223 P. O. Box 11288

KELSEY-SEYBOLD CLINIC

6624 FANNIN STREET HOUSTON, TEXAS 77025

526-2671

INTERNAL MEDICINE

Endocrine and Metabolic Diseases
Mavis P. Kelsey, M.D., F.A.C.P.
Alfred E. Leiser, M.D., F.A.C.P.
E. Peter Pequegnat, M.D., F.R.C.P.(C)

Pulmonary Diseases
H. Irving Schweppe, Jr., M.D., F.A.C.P.
Stanton P. Fischer, M.D., F.A.C.P.

Gastrointestinal Diseases, Gastroscopy
John R. Kelsey, M.D., F.A.C.P.
Philip S. Bentlif, M.D., F.A.C.P.
Ralph D. Eichhorn, M.D., F.A.C.P.
F. Scott O'Neil, M.D. F.A.C.P.
James W. McBee, M.D., F.A.C.P.

Heart Disease and Cardiac Catheterization
Earl F. Beard, M.D., F.A.C.P.
Efrain Garcia, M.D., F.A.C.P.
Wayne E. Dear, M.D.

Arthritis and Rheumatic Diseases
James W. Kemper, M.D., F.A.C.P.

*Military Service

Hypertension and Peripheral Vascular Diseases
Gene E. Burke, M.D.

Cancer Chemotherapy
Carlos F. Taboada, M.D.

Nephrology
Francis X. Schloeder, M.D., F.A.C.P.

Hematology
Jerome B. Bart, M.D.

Infectious Diseases
Stuart Riggs, M.D., F.A.C.P.

Occupational Health Services
Paul E. Wright, M.D., M.P.H., F.A.C.P.
Maurice B. Johnston, M.D., F.A.C.Pr.M.
Richard M. Fenno, M.D., M.P.H., F.A.C.P.
Cannon A. Owen, M.D., F.A.C.S.
Edward A. Anderson, M.D., F.A.C.Pr.M.
William E. Froemming, M.D., F.A.C.P., F.A.C.Pr.M.

GENERAL & THORACIC SURGERY
William D. Seybold, M.D., F.A.C.S.
James D. McMurrey, M.D., F.A.C.S.
Jerry L. Doggett, M.D.

OBSTETRICS & GYNECOLOGY
Melville L. Cody, M.D., F.A.C.S.
William A. Johnson, III, M.D.

PSYCHIATRY
Chester G. Cochran, M.D.
*Ricardo Daichman, M.D.
William H. Boylston, M.D.

PEDIATRICS

Rheumatology
Earl J. Brewer, Jr., M.D., F.A.A.P.

Allergy
Charles W. Ewing, M.D., F.A.A.P.

OTO-LARYNGOLOGY
J. Charles Dickson, M.D., F.A.C.S.
James L. Smith, M.D., F.A.C.S.
Joseph S. Weycer, M.D.

NEUROLOGY
Robert R. Pierce, M.D.

DERMATOLOGY
Wilson M. Fraser, M.D., F.A.A.P.
Donald W. Owens, M.D.

UROLOGY
Don W. Pranke, M.D., F.A.C.S.
J. David Wright, M.D.

ORTHOPEDIC SURGERY
W. Malcolm Granberry, M.D.
Jesse H. Dickson, M.D.

OPHTHALMOLOGY
Henry E. Wahlen, M.D., D.A.B.O.

RADIOLOGY
David M. Rulfs, M.D.
John D. Brooks, M.D.

PATHOLOGY
Robert A. Jordan, M.D.

DENTISTRY
Eugene W. Gray, D.D.S.

PSYCHOLOGY
Mrs. Ruth Blackman, M.A.
Robert de von Flindt, Ph.D.
Cheryl McBride, M.A.

SPEECH PATHOLOGY AND AUDIOLOGY
Donna R. Fox, Ph.D.
Carolyn C. Garcia, M.S.

CONSULTANTS

Maxillo Facial Surgery
Edward C. Hinds, M.D., D.D.S., F.A.C.S.

Psychiatry
Albert Owers, M.D.

Ophthalmology
W. Eugene Alford, M.D.

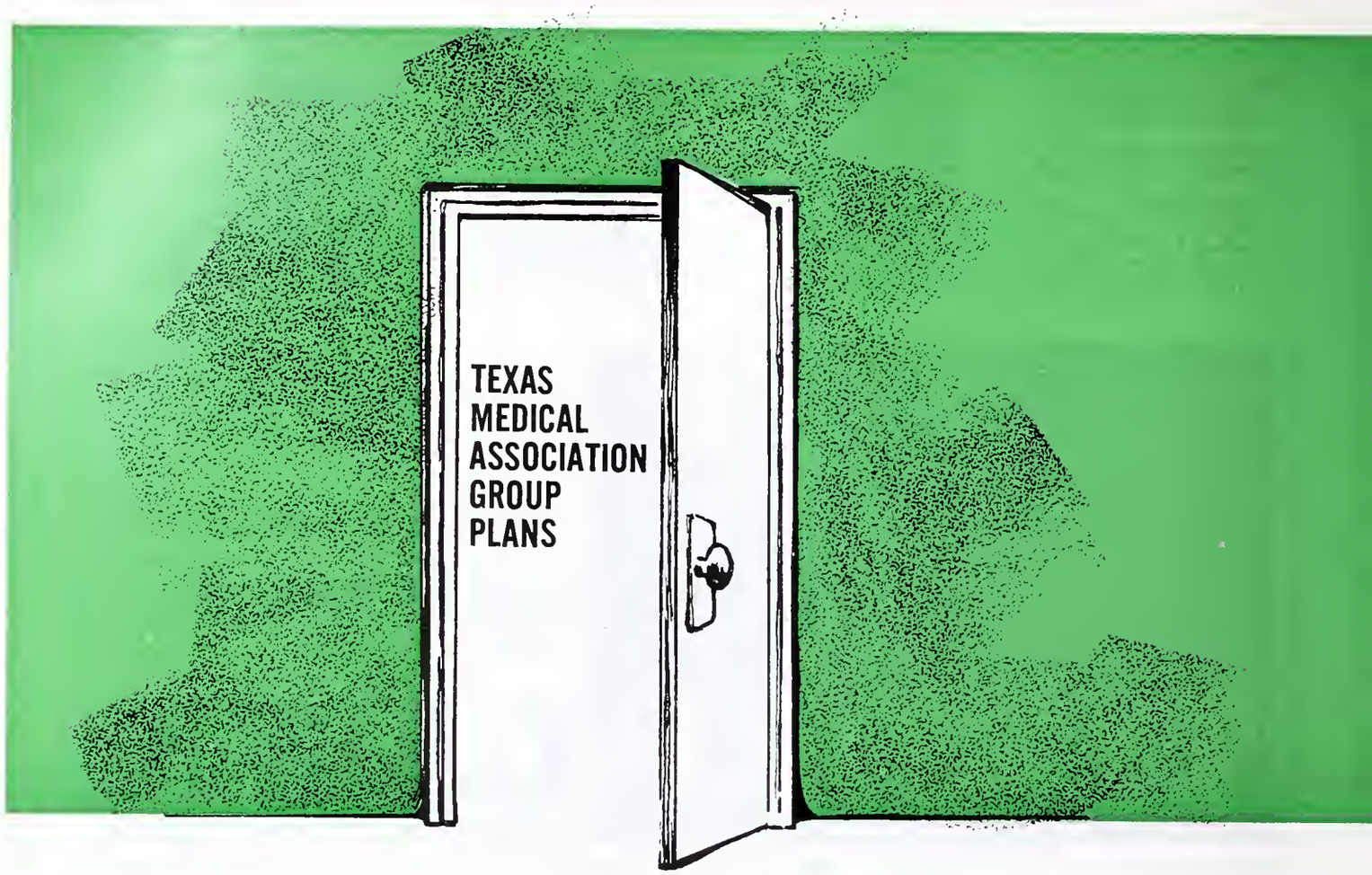
Infectious Diseases
Fred F. Barrett, M.D., F.A.A.P.

Gastrointestinal Diseases, Gastroscopy
Theodore Hersh, M.D.

Occupational Medicine
Valliant C. Baird, M.D., F.A.C.Pr.M.

SPECIAL FACILITIES
Radioisotope Laboratory
Registered Dietitian
Electroencephalography
Electrocardiography
Vectorcardiography
Registered Physiotherapist
Pulmonary Function Laboratory
Regional Immunization Center
FAA Examinations
Complete Endoscopy
Audiology Laboratory
Electrolysis

ADMINISTRATOR
James A. Bakken



THE DOOR IS STILL OPEN...

The Charter Enrollment period for Texas Medical Association Group Plans is over

BUT...

You can still enroll, providing you submit satisfactory medical evidence.

If interested, contact your Texas Medical Association office at 1801 North Lamar Blvd., Austin, Texas 78701.

the Prudential
INSURANCE COMPANY OF AMERICA
SOUTHWESTERN HOME OFFICE HOUSTON, TEXAS

LIFE INSURANCE • HEALTH INSURANCE • ANNUITIES • GROUP INSURANCE • GROUP PENSIONS

NEWS

1970 Annual Session Promises Fun for Athletic, Agile, or Artistic MDs

Tennis shoes, golf shoes, and dancing shoes may all be needed to keep the fun-filled pace during this year's Annual Session of the Texas Medical Association April 30-May 3 in Dallas.

Entertainment activities in the offing range from an elegant dinner dance to casual sports events and from festive class reunions and fraternity and alumni parties to a nerve-soothing art exhibit.

Those who spend "Saturday Night at the Fairmont" on May 2 in the hotel's Regency Ballroom will enjoy cocktails at 8 p.m., a dinner to delight a gourmet's taste at 8:30 p.m., and dancing from 9 p.m. to 12:30 a.m. The dinner menu will include shrimp rosita en aspic, crabmeat, sliced avocado, papaya, heart of palm, Boston lettuce, cherry tomatoes, larded sirloin of beef, sauce bearnaise, selected fresh vegetables, chocolate mousse with fresh strawberries, petits fours, bakeries, and beverages. Dance music will be provided by a well-known Dallas orchestra and a Dixieland band called the Mad Medics Plus Three, composed in part of four TMA members from Wichita Falls. (The Mad Medics are featured on pp. 102-103 of this issue.) Those attending are invited to bring their own liquor, and wine lists will be available. Dress for the evening is optional; and total cost per person is $17.25, including cocktails, dinner, entertainment, set-ups, tax, and gratuity.

Physicians and their wives will be able to warm up for Saturday's climactic gala at class reunions scheduled for 6:30 p.m. Thursday, April 30; fraternity parties at 6:30 p.m. Friday, May 1; and alumni events on Saturday, May 2, from 6-8 p.m.

If the sports-minded remain to be satisfied, they will be able to choose between tennis, golf, and skeet shooting; and the truly enthusiastic may decide to participate in all three activities. A tennis tournament will begin at 9 a.m. Thursday, April 30, at the Samuell Grand Recreational Center Tennis Courts and will continue all day, with the finals probably to be held on Friday, May 1. A $5 entry fee will be charged for any or all events, including men's singles through 45, men's singles over 45, men's doubles, women's singles, and women's doubles. A participant may enter any two events and should bring his own racquet, tennis shoes, and a new can of Wilson tournament balls, which may be bought, however, from the club pro. Lunch will be provided at the club house as part of the entry fee. For more information or to pre-register, write to Dr. R. Gordon Long, 712 N. Washington, Dallas 75246.

Tee off times for the TMA Golf Tournament on Wednesday, April 29, at the Great Southwest Golf Club are scheduled between 8 a.m. and 1 p.m. Participants should arrange their own games if possible or check in at the golf shop for starting times and bearings. The entry fee will be $10, including green fees. Players with certified handicaps should report these to the tournament chairman in the golf shop or submit them to Dr. Arthur T. deLarios, 3631 Fairmount, Dallas 75219, with advanced registration. Merchandise prizes will be awarded on the basis of low gross and low net scores.

The Dallas Gun Club will be the site of a skeet and trap shoot Thursday, April 30, starting at 1 p.m. The facility will provide 50 skeet targets, 25 trap targets, and 25 handicap targets; and entry fee will be $10.50. Capable handicappers will be present to handicap properly for the last round of trap shooters who do not have established handicaps. Ammunition will be available at the club, or shooters may bring their own. Trophies will be awarded for each event and for overall high score for men and women, and merchandise gifts will be given by various druggists to winners of the events. Additional information and pre-registration material are available from Dr. James H. Herndon, 1330 Medical Arts Bldg., Dallas 75201.

Providing entertainment for those not so athletically inclined and relaxation even for those who are will be the Physicians' and Wives' Annual Art Exhibit. Eight categories will include oil painting—classical; oil painting—modern; water color—classical; water color—modern; sculpture—classical; sculpture—modern; drawings and prints; arts and crafts; and photography. Judges for the event are Otis Dozier, a well known Dallas artist who has been on the senior teaching staff at the Dallas Fine Arts Museum for many years, and DeForrest Judd, professor of art at Southern Methodist University in Dallas. Award winners will receive ribbons and certificates, and the entry judged "best of show" will win a plaque for its creator. Information concerning the art exhibit may be obtained from Dr. Howard C. Coggeshall, 3710 Swiss Ave., Dallas 75204.

The source of intellectual and professional stimulation during the 1970 Annual Session has been bolstered by the addition of four more out-of-state guest speakers since the speakers were listed in October and December issues of *Texas Medicine*, and there is a possibility that a few more speakers will be obtained. Newly confirmed speakers are Dr. John A. Mohr of Oklahoma City; Dr. Merrill A. Bender of Buffalo, N.Y.; Dr. Colin B. Holman of Rochester, Minn.; and Dr. Fred L. Allman of Atlanta, Ga. Dr. Mohr, sponsored by the Texas chapter of the American College of Chest Physicians and TMA, will speak to his sponsoring organization on recovery of virus-like particles from human bronchioli-alveolar carcinoma. Dr. Bender, chief, department of nuclear medicine, Roswell Park Memorial Institute, will give a luncheon address at the organizational meeting of the Texas Association of Physicians in Nuclear Medicine. He will be sponsored by that association and TMA. Assistant professor of radiology at the Mayo Foundation Graduate School, Dr. Holman will present two papers before the TMA Section on Radiology; and Dr. Allman, an orthopedic surgeon, will be the guest of the Texas Society of Athletic Team Physicians.

An all-day session on "The Face," with topics covering aspects of facial injuries, has been planned as the first program to be conducted by the newly formed Section on Physical Medicine and Rehabilitation. The section will meet jointly with the Texas Industrial Medical Association, Texas Physical Medicine and Rehabilitation Society, and Texas Traumatic Surgical Society. A panel discussing industrial rehabilitation and surgical aspects of the face and a slide presentation on "The Face as a Mirror of Disease" will be included.

The complete Annual Session program is featured in this issue of *Texas Medicine* on pages P-1-P-84 at the back of the journal.

Needed Library Addition Gets Academy's Approval

A four-story addition to the Jesse H. Jones Library Building in the Texas Medical Center was approved by the Houston Academy of Medicine at its annual meeting in January, announced Dr. James H. Sammons of Baytown, retiring president of the academy. The academy owns the building and its medical library.

The addition will provide some badly needed space for the Houston Academy of Medicine Library for the Texas Medical Center and will enable the library to handle the greatly increased needs of The University of Texas Medical Branch at Galveston, Baylor College of Medicine, Texas Woman's University School of Nursing, and a number of other institutions which use the library, in addition to practicing physicians and hospital staffs throughout the area.

Financing of the more than $1,000,000 addition, which has been planned for several years, has been underwritten by several foundations and institutions, the Houston Academy of Medicine, and the Texas Medical Center. Construction is scheduled to begin this year.

Capitol Hosts Program On Glaucoma Detection

The State Capitol Building in Austin was the site on Jan. 10 of a demonstration of glaucoma detection sponsored by the Texas Society for the Prevention of Blindness.

The demonstration was one of 70 special exhibits arranged by the Texas Committee for the Rehabilitation, Education, and Employment of the Handicapped to honor Senator Criss Cole when he was inaugurated as "Governor-for-a-day" during the absence of the governor and lieutenant governor.

Of approximately 4,000 people who visited the exhibits, 111 people were tested during a four and a half hour period for visual acuity and intraocular pressure. Among those tested, 13 were referred for further medical examination. Three were referred because of abnormality of their intraocular pressure and ten, because of grossly impaired visual acuity. The number of referrals showed the value of early detection and the high case-finding rate of such a detection program, said Dr. Otto Lippmann of Austin, regional medical chairman, Texas Society for the Prevention of Blindness.

Dr. Lippmann compared the number of people screened in previously reported similar programs with the number of participants in the Capitol program. He noted that the percentage of people availing themselves of the convenient opportunity for appraisal was only about 2.8% of the total number of people attending each exhibit.

Unlike community-wide mass screening programs, however, the Jan. 10 glaucoma detection exhibit was designed primarily as an education demonstration for state employees, legislators, and special visitors. The project was approved by the Travis County Medical Society and was carried out by local ophthalmologists, members of the Woman's Auxiliary to the county society, and local graduate nurses.

Statistics for 1969 Show Mortality Rate Decline

Mortality rate in the United States decreased slightly from 1968 to 1969, statisticians of Metropolitan Life Insurance Company have reported.

They estimate that the national death rate for 1969 was about 9.5 per 1,000 people. The decline since 1968 marks the 22nd year in succession in which a death rate below ten per 1,000 was registered in this country.

The combined mortality rate from influenza and pneumonia is estimated to have been about 40 per 100,000 people in 1969 or about 10 percent higher than in 1968. The death rate from influenza was distinctly higher in 1969 than in 1968 because of the widespread outbreaks that reached a high level in December of 1968 and continued into early 1969. The impact of these outbreaks also raised death rates among persons with chronic cardiovascular and respiratory disease, particularly among the elderly.

The 1969 death rate from heart diseases, which currently account for nearly two fifths of all deaths in the United States, was fractionally below the 1968 level. The mortality rate for ischemic heart disease, primarily coronary, had decreased since 1968 by about 2 percent. Deaths from cerebral vascular disease also declined by about 3½ percent.

Cancer, which ranks second only to heart disease as a cause of death, was fatal to more people in 1969 than in the year preceding. The death rate from diabetes declined about 2 percent; and the number of deaths from cirrhosis of the liver continued to rise, increasing about 4 percent. Infant mortality, which had reached a new record low of 22 per 1,000 live births in 1968, was slightly lower in 1969 and may have set a new record low.

Provisional data indicate that the number of motor vehicle accident fatalities in 1969 was about 3 percent above the 1968 total. The combined death toll from all types of accidents will probably be slightly greater in 1968, according to Metropolitan statisticians.

Dr. Cole's Speech Put In Congressional Record

Texas Medical Association President Dr. Charles Max Cole's speech before the 1970 TMA Conference on Medical Service was carried in the Feb. 4 Congressional Record.

Entitled "The 1970's; New Vistas and Challenges for Texas Medicine," the speech was termed "compelling" by the Hon. James M. Collins of Texas, who recommended its inclusion in the record of the proceedings and debates of the second session of the 91st Congress. In the speech Dr. Cole cited the roles that doctors and medicine should play in this challenging new decade.

Family Practitioners Take Certification Examination

The first certifying examination in the new specialty of family practice was taken Feb. 28-March 1 by more than 2,000 physicians. Those that passed the examination will be certified as diplomates of the American Board of Family Practice.

Most participants in the examination are members of the American Academy of General Practice, and each was required to have been in practice or have been a medical school teacher for at least six years or to have served a residency in a specialty before deciding to enter family practice. Qualifications for taking the examination also included satisfactory completion of at least 300 hours of postgraduate study approved by AAGP. Those who become diplomates will have to be recertified every six years.

Offered simultaneously at 36 academic centers throughout the United States under the auspices of the American Board of Family Practice, the test was devised with the cooperation of the National Board of Medical Examiners and was administered by Science Research Associates of Chicago.

The advent of the new broad-scale specialty, approved just a year ago by the American Medical Association and the Advisory Board for Medical Specialties, now offers the family doctor specialty status and the confidence of full-scale residency training. It should also insure the entrance of more young physicians into the field of primary care.

TMA ANNUAL SESSION

TEXAS MEDICAL ASSOCIATION
1970 ANNUAL SESSION DALLAS
APRIL 30—MAY 3

PLAN NOW TO ATTEND!
USE THESE HANDY FORMS TO REGISTER IN ADVANCE, BUY TICKETS AND MAKE HOTEL RESERVATIONS

TEXAS MEDICAL ASSOCIATION
DALLAS HOUSING BUREAU
1507 PACIFIC AVENUE
DALLAS, TEXAS 75201

38 GUEST SPEAKERS

plus 225 special and TMA-member speakers

JOHN ADRIANI, M.D.
New Orleans, anesthesiology

STEPHEN M. AYRES, M.D.
New York, internal medicine

KURT BENIRSCHKE, M.D.
Hanover, N.H., pathology

WILLIAM J. BROWN, M.D.
Atlanta, preventive medicine

WILLIAM D. DAVIS, JR., M.D.
New Orleans, internal medicine

JAMES L. DENNIS, M.D.
Oklahoma City, pediatrics

PHILIP P. ELLIS, M.D.
Denver, ophthalmology

ROBERT J. FREEARK, M.D.
Chicago, surgery

JACK CHANDLER HUGHSTON, M.D.
Columbus, Ga., orthopaedic surgery

STANLEY E. GITLOW, M.D.
New York, internal medicine

ALAN F. GUTTMACHER, M.D.
New York, obstetrics and gynecology

CARL V. GRANGER, M.D.
Boston, physical medicine and rehabilitation

J. WILLIAM HILLMAN, M.D.
Nashville, orthopaedic surgery

BARRETT KENNEDY, M.D.
New Orleans, dermatology

THOMAS J. KIRBY, M.D.
Rochester, Minn., ophthalmology

BARBARA M. KORSCH, M.D.
Los Angeles, pediatrics

JOHN L. LEWIS, JR., M.D.
New York, obstetrics and gynecology

ROSS L. McLEAN, M.D.
Austin, internal medicine

DELBERT OBERTEUFFER, Ph.D.
Columbus, Ohio, Editor,
The Journal of School Health

FRANCIS X. PALETTA, M.D.
St. Louis, plastic and reconstructive surgery

WILLIAM G. REESE, M.D.
Little Rock, psychiatry

GEORGE P. ROSEMOND, M.D.
Philadelphia, surgery

ANTHONY RUPPERSBERG, M.D.
Columbus, Ohio, obstetrics and gynecology

MAYNARD I. SHAPIRO, M.D.
Chicago, Immediate Past President American Academy of Gen. Practice

JAMES L. SHEEHY, M.D.
Los Angeles, otolaryngology

GABRIEL F. TUCKER, M.D.
Philadelphia, otolaryngology

P. V. SIEGEL, M.D.
Washington, D.C., federal air surgeon

MARVIN STEIN, M.D.
Brooklyn, psychiatry

FRANK L. WEAKLEY, M.D.
Cleveland, proctology

LUNCHEON SPEAKERS

GERALD D. DORMAN, M.D.
New York, President,
American Medical Association

MAJ. GEN. J. B. MEDARIS, USA (Ret.)
Winter Park, Fla.
Former Commanding General,
US Army Ordnance Missle Command

HAVE YOUR TICKETS READY FOR YOU WHEN YOU GET TO DALLAS

Avoid the lines, the last minute rush, and the possibility of missing out on the TMA functions listed below. Fill out this form, mail it to TMA your check, and your tickets will be waiting for you.

GENERAL MEETING LUNCHEON—FRIDAY, MAY 1, Statler-Hilton Hotel. Featured speaker will be Maj. Gen. J. B. Medaris (Ret.), former commanding general, US Army Ordnance Missle Command.

GENERAL MEETING LUNCHEON—SATURDAY, May 2, Statler-Hilton Hotel. Featured speaker will be Gerald D. Dorman, M.D., president, American Medical Association.

"SATURDAY NIGHT AT THE FAIRMONT"—A fabulous cocktail party, dinner, and dance, Saturday, May 2, in the Regency Ballroom of the elegant new Fairmont Hotel. Dress is optional. Price includes cocktail party, dinner, entertainment, and [illegible] dinner. This be the party of the year!

CONTINENTAL BREAKFAST [illegible] Y, MAY 1, [illegible] mont Hotel. There is no [illegible] ited and tic necessary. Have jui[illegible] speaker, t participate in the [illegible]

CURBSTON[illegible], and Sa day, A[illegible] round t se[illegible] served.

NUMBER OF TICKETS

FUNC[illegible]

_____ _____

_____ _____

AIRMONT" @ $17.25 each _____

AL BREAKFAST ROUND TABLES (see list at right) No Charge
2. ☐ 3. ☐ 4. ☐ 5. ☐ 6. ☐ 7. ☐

_____ CURBSTONE CONSULTATIONS—FRIDAY No Charge

_____ CURBSTONE CONSULTATIONS—SATURDAY No Charge

Check enclosed for total $_____

Mail to: Texas Medical Association, 1801 North Lamar Blvd., Austin, Texas 78701

CONTINENTAL BREAKFA
ROUND TABLES
Friday, May 1 8:15-10 a

1. *Treatment and Evaluat*
Shock
Stephen M. Ayers, M.D
New York, internal me
2. *Ocular Complications*
Systemic Medications
Philip P. Ellis, M.D.
Denver, ophthalmology
3. *Pitfalls in the Diagnosi*
the Acute Surgical Abo
Robert J. Freeark, M.D.
Chicago, surgery
4. *Sports Medicine—*
Orthopaedic Oriented
Jack Chandler Hughsto
Columbus Ga., orthopa
surgery
5. *The Interview and the*
Pediatric Patient
Barbara M. Korsch, M.
Los Angeles, pediatrics
6. *Acute Injuries of the H*
Francis X. Paletta, M.D
St. Louis, plastic and
reconstructive surgery
7. *Thyroid Nodule*
George P. Rosemond, M
Philadelphia, surgery

Physicians Find Clinical References on Various Diseases Convenient to Use

Renal Disease in Childhood, John A. James, 371 pp., illus., St. Louis, The C. V. Mosby Co., 1968, $18.50.

WRITTEN IN an agreeable, facile manner, this book is a concise, practical guide to pediatric nephrology for pediatricians, urologists, general practitioners, and residents. The sophisticated nephrologist will find it lacking depth. Chapter references and standard texts listed as general references are readily available to most physicians interested in more detailed discussions of specific renal disorders. The format is handy; headings and subdivisions are convenient and add to the easy readability; and illustrations are clear.

The text begins with traditional descriptions of anatomy, physiology, and embryology but also includes some of the unique features of renal physiology in the neonatal period. It then proceeds to sections conveniently divided into various major categories of renal disease, with limited descriptions of etiology and pathology included but with emphasis placed upon diagnosis and treatment.

The large sections on glomerulonephritis and renal failure should provide a good foundation for those called upon to treat these entities. The author reveals no hesitancy in recommending urography in cases of chronic glomerulonephritis or atypical acute glomerulonephritis in order to avoid the pitfall of congenital anomalies which may simulate or complicate these diseases.

Sections on treatment are replete with helpful suggestions learned only through extensive experience and often not found in textbooks, as is well illustrated in the description of peritoneal dialysis. Throughout the book the author's humane understanding of the day to day problems encountered in dealing with sick children and their families is evident. Such problems seem to be handled in a practical manner affecting treatment without undue discomfort or invalidism.

MYRON G. FINE, M.D.,
Dallas.

Essentials of Gastroenterology, J. Ned Smith, Jr., 326 pp., illus., St. Louis, The C. V. Mosby Co., 1969, $14.75.

WRITTEN FOR medical students as an introduction to gastroenterology, according to the author's preface, this book fulfills its author's intended goal and will also serve the busy practitioner who needs a brief, quick reference source. It presents the etiology, diagnosis, and treatment of most common gastrointestinal disorders in a very readable, concise fashion. The book benefits from consistency in thought as a result of the single-author approach, which is so unusual in medical writing today. The choice and quality of x-ray reproductions are excellent.

Devoted to gastrointestinal history, the first chapter is superbly written and contains many useful personal observations which are rarely taught medical students and usually have to be learned by experience. The approach to psychosomatic problems, such as nonulcer dyspepsia and irritable bowel syndrome, is refreshingly complete. The references at the end of each chapter are excellent and current.

The main drawback in the book is provided by the brief and incomplete physiologic introductions to the sections about each organ system. It is not possible to cover the physiology of the large and small bowel in four pages or fat absorption in two paragraphs. Since physiology is the cornerstone to the appreciation of gastrointestinal disease, it should have been omitted entirely rather than risk the misconception that these few paragraphs represent the essentials of gastrointestinal physiology. This space could then have been used to advantage in expanding the coverage of blind loop syndrome, disaccharidase deficiencies, and vascular disease of the bowel.

Entertaining and well written, the book reads easily and is an informative introduction to gastroenterology.

KERMIT B. KNUDSEN, M.D.,
Temple.

Benign Diseases of the Vulva and Vagina, Herman L. Gardner and Raymond H. Kaufman, 359 pp., illus., St. Louis, The C. V. Mosby Co., 1969, $23.50.

DRS. GARDNER AND KAUFMAN have brought together in one volume a comprehensive treatise of both the common and rare benign conditions of the vulva and vagina. For many years there has been a great need for a single volume of this sort; and it will be especially welcomed by the obstetrician-gynecologist as well as the dermatologist, urologist, general practitioner, and perhaps the pathologist.

The text is logically separated into 24 chapters, including an excellent chapter on anatomy and embryology and a very helpful glossary of terminology used that may not be familiar to all practitioners. The authors present all known means of therapy for each of the various conditions discussed but generally indicate their own preferences. They are to be commended on their inclusion at the end of each chapter of extensive bibliographies which should facilitate further study of specific conditions.

The book is liberally illustrated with excellent black and white reproductions of both gross and microscopic pathology. Additional color photographs would have been more helpful but would probably have pushed the price of the book out of reach for many.

A valuable addition to a physician's library for frequent reference, this book should become a classic in its field.

L. C. POWELL, JR., M.D.,
Galveston.

MAD MEDICS PLUS THREE JAZZ IT UP FOR OWN FUN AND OTHERS' PROFIT

Armed with the slogan "We won't let Dixieland die!" and uniformed in straw skimmers and striped blazers, the Mad Medics Plus Three promise to do more than make toes tap and hands clap when they appear at this year's Annual Session. They will be featured during the May 2 dinner dance at Dallas' Fairmont Hotel.

These music makers consist of four Wichita Falls physicians and three businessmen who have almost as much fun playing as their audiences do listening to their repertoire of Dixieland jazz classics. Although they first organized solely for their own pleasure, the Mad Medics have become so popular that they can no longer book all of their invitations; and their performance at the Fairmont will cap scores of public and benefit appearances.

When the wife of Dr. L. Nolan Simmons gave him a clarinet for Christmas several years back to replace one he had lost many years ago, Dr. Simmons so enjoyed playing again that he passed the word along to former cornet player Dr. Victor C. Saied. Dr. Saied later mentioned his own love of Dixieland to a patient's husband, who just happened to be an ex-trombone player himself. Well, from these coincidences the idea of the band was conceived; and it wasn't long before a few more friends who had played various instruments in the past were assembled for the first rehearsal of the Mad Medics Plus Three.

Weekly practice sessions followed, usually at a member's home and almost always with a small group of friends providing an audience; and the group had so much fun that its members began to consider playing to entertain others. The Mad Medics debuted as intermission entertainment at a medical society dinner dance. Since then, they have played, for example, at a Wichita Falls Symphony Orchestra benefit party, an intermission show for a dance at a Texas Heart Association meeting, intermission shows for several Woman's Auxiliary dances, Wichita General Hospital and City National Bank employee parties, a Texas Volunteer Services convention banquet, Northside Girls Club in Wichita Falls, Wichita Falls State Hospital, Colonial Manor convalescent home, and various other convention and church banquets. In addition the group has recorded two albums, the first without a title and the second entitled "Operation Dixieland."

Besides just knowing how and liking to play, some of the Mad Medics actually have substantial musical backgrounds! Dr. John Worthen, player of the bass fiddle, even has a bachelor of science degree in music from North Texas State University and plays principal viola in the Wichita Falls Symphony Orchestra. The general practitioner, who was graduated from The University of Texas Southwestern Medical School at Dallas in 1956, has been

playing violin since childhood; and he learned to play double bass especially for the Mad Medics.

Obstetrician-gynecologist Dr. Simmons plays the clarinet for the combo. He took both piano and clarinet lessons as a boy, however; and he played both clarinet and saxophone for country bands in Victoria and around East Texas. He was graduated from Baylor College of Medicine in 1939.

Cornet player is Dr. Saied, who first played at Wellington High School and later was a member of the UT at Austin Longhorn band. He helped organize a Dixieland band composed of doctors while he was a physician at Sheppard Air Force Base, and he played in that group before the Mad Medics got started. A 1955 graduate of the UT Medical Branch at Galveston, Dr. Saied is an anesthesiologist and has always relaxed from his medical practice by playing his instrument for fun at home.

Born into a musical household, Dr. Edwin C. Bebb, banjo player for the band, is a man of diverse musical ability. He also plays guitar, has studied organ and piano, and used to sing tenor with a quartet. He was graduated in 1941 from Baylor College of Medicine, and he practices general surgery.

The "Plus Three" band members include Ed Baggett, owner of a car dealership; Herb Wagnon, a chartered life underwriter; and Nathan Brown, businessman active in real estate and investments. Baggett has been plunking piano since he was nine years old; has been heard on radio programs in Wichita Falls and Raleigh, N. C.; has taught music in Oklahoma; and used to be pianist for the Stamps Quartet. He still plays for Wesley Methodist Church services. Trombonist for the Mad Medics, Wagnon worked his way through the University of Oklahoma by playing in a campus dance band and by playing during summer vacations. He also played trombone with OU's symphony orchestra. As well as having been drummer for the Texas

Tuned up and ready to play are, from left to right, Dr. John Worthen, Ed Baggett (seated), Dr. Edwin C. Bebb, Dr. L. N. Sammons, Dr. V. C. Saied, Nathan Brown, and Herb Wagnon.

Wesleyan College band, Brown helped pay for his college education by playing drums for various local combos. He got his start as the Wichita Falls High School band drummer; and now he sets the beat that keeps his musical, medical cohorts together. He also once played for the Charlie Barnett Band.

Not only do the Mad Medics Plus Three provide entertainment for others and relaxation for themselves, but they also have formed a nonprofit corporation for the purpose of establishing scholarship funds for deserving medical and nursing students. Donations from their public appearances and proceeds from their album sales are placed in the fund. As their schedules permit, they also make benefit appearances to help various organizations raise money for other worthwhile causes.

PAMPHLETS

A colorful, low-calorie recipe brochure on dieting with seafood is now available by request from the Texas Parks and Wildlife Department for free distribution in medical clinics and doctors' offices.

The publication is entitled *Stay Slim with Seafood* and includes nine flavorful, low-fat recipes featuring marine fishes that are commonly landed in Texas. Four recipes are of an "official" nature since they are considered "legal" by Weight Watchers International, an organization for dieters that advocates eating fish at least five times each week. Other recipes give the number of calories per serving.

Also included in the publication is a "Dieter's Guide to Good Seafood," which tells how to recognize a fresh fish, how much to buy, how long to cook, and how to distinguish between various market forms. Certain facts about the nutritional properties of fish are given as well.

The publication is free and may be obtained in quantity by writing on business letterhead to "Stay Slim," Texas Parks and Wildlife Department, Austin 78701. Brochures come packed in a self-contained, disposable distribution tray (175 per tray) that can be attractively displayed on a desk, counter, or coffee table. The colorful piece is also well suited for waiting room literature racks. Although individual requests should be limited to six trays per physician, there is no limit on the number of times a physician may reorder.

Twelfth in a series developed by the American Medical Association's Committee on Rating of Mental and Physical Impairment, *Guides to the Evaluation of Permanent Impairment—The Skin*, like all the others in the series, has been designed primarily for use by physicians. However, it should be of interest and use to all concerned with the medical, administrative, or judicial aspects of programs for the disabled.

Previously published guides in the series deal with the extremities and back; the visual system; the cardiovascular system; ear, nose, throat, and related structures; the central nervous system; the digestive system; the peripheral spinal nerves; the respiratory system; the endocrine system; mental illness; and the reproductive and urinary systems.

A limited number of copies of this latest guide, which was recently published in *JAMA*, may be obtained without charge upon written request to the Committee on Rating of Mental and Physical Impairment, 535 N. Dearborn St., Chicago 60610.

PERSONALS

W. B. Carrell Scottish Rite Professor of Orthopedics and chairman of the division of orthopedic surgery at The University of Texas Southwestern Medical School at Dallas, **Dr. Charles F. Gregory,** was reelected president of the American Board of Orthopaedic Surgery at its annual meeting in January in Chicago.

Dr. Abe G. Rodriguez of Austin and **Dr. John F. Stokes** of San Antonio will be installed as fellows of the American College of Obstetricians and Gynecologists at its annual meeting April 12-18 in New York City.

Dr. C. Harold Beasley of Fort Worth has been appointed state medical chairman of the Texas Society for the Prevention of Blindness; and **Dr. James H. Scruggs, Jr.,** of Waco will be vice medical chairman.

New president of the American Board of Oral Surgery is **Dr. Robert V. Walker** (DDS), chairman, division of oral surgery, The University of Texas Southwestern Medical School at Dallas.

Dean of The University of Texas Medical School at San Antonio, **Dr. F. C. Pannill, Jr.,** was named chairman of the Southern Regional Deans' Group at a recent meeting in Chicago of the American Association of Medical Colleges.

New officers of the Houston Radiological Society for 1970 include **Dr. Edward S. Singleton,** president; **Dr. Albert W. Jester,** vice president; **Dr. Kenneth M. Jensen,** secretary; and **Dr. John M. Phillips, Jr.,** treasurer.

Dr. John T. Armstrong was recently elected president of the Houston Academy of Medicine for 1970, succeeding **Dr. James H. Sammons** of Baytown, who retired from that office but who will continue to serve as a trustee. Vice president will be **Dr. Joseph T. Ainsworth,** and secretary-treasurer will be **Dr. Robert D. Moreton. Dr. Arthur T. Talley, Jr.,** was elected to succeed **Dr. Jack R. Hild,** retiring trustee of the academy; and **Dr. Byron P. York** was reelected to the board of trustees.

Buchanan professor and chairman of the department of internal medicine at The University of Texas Southwestern Medical School at Dallas, **Dr. Donald W. Seldin,** recently completed a three-week lecture tour of six cities in Australia and New Zealand. The honorary professor of the Australasian Society of Nephrology spoke on various aspects of kidney function and disorders. He also addressed medical audiences in Rome, Munich, and Madrid before returning to Dallas.

Recent Deaths

Dr. D. von Briesen

El Paso radiologist, Dr. Delphin von Briesen, 62, died Jan. 28, 1970, in an El Paso hospital. He had been a resident of that city since 1910.

Born in Clifton, Va., on June 4, 1907, Dr. von Briesen was the son of Felix and Daisy Penland von Briesen. He attended the Texas College of Mines, now The University of Texas at El Paso, and was graduated from The University of Texas at Austin in 1931 with a bachelor of science degree. He received his MD degree in 1933 from the UT Medical Branch at Galveston. He interned and served a residency at the State University of Iowa and began his practice in El Paso in 1935. During World War II he served with the US Navy from 1941 to 1945, attaining the rank of commander.

A former president of the El Paso County Medical Society, the Texas Radiological Society, and District I of the Texas Medical Association, Dr. von Briesen was certified in radiology by the American Board of Radiology and was a fellow in the American College of Radiology. He was a member of the American Roentgen Ray Society, Radiological Society of North America, Rocky Mountain Radiological Society, Southwestern Radiological Society, and American Medical Association. He belonged to St. Clement Episcopal Church, and he was a 32nd degree Mason and a member of the El Maida Temple Shrine.

Dr. von Briesen is survived by his wife, the former Mary Emma Luckett; two sons, Delphin, Jr., and Gates; a daughter, Suzanne; and a sister, Mrs. John Melton, all of El Paso.

DR. VON BRIESEN

Dr. W. W. Klatt

Dr. Wesley William Klatt, 71, Waco pathologist, died Jan. 19, 1970, in a Waco hospital. Cause of death was arteriosclerotic cardiovascular disease.

Born Oct. 6, 1899, in Riesel, Tex.,

DR. KLATT

Dr. Klatt was the son of Robert O. and Emelia Krueger Klatt. He was graduated from Baylor University in 1921 with a BA degree and from The University of Texas Medical Branch at Galveston in 1926 with an MD degree. He interned at Providence Hospital in Waco and became house physician there. He then practiced general medicine in a private partnership, but he returned to Providence Hospital in the early 1930's as pathologist. During World War II he was pathologist at both Providence and Hillcrest Baptist hospitals in Waco, but since 1953 he had practiced pathology only at the latter hospital.

Dr. Klatt was a member of McLennan County Medical Society, Texas Medical Association, and American Medical Association. He had belonged to Austin Avenue United Methodist Church for many years.

Survivors are his wife, the former Helen Guinn; one son, Jack G. Klatt of Corpus Christi; one daughter, Mrs. John H. Smith of Bowie, Tex.; and one brother, Lee Klatt of Riesel.

Dr. J. D. Harrell

Austin psychiatrist Dr. J. Douglas Harrell died Feb. 10, 1970, at his home. He was 38.

A member of Travis County Medical Society, Texas Medical Association, and American Medical Association, Dr. Harrell was also a member of Phi Chi medical fraternity, Delta Theta Phi law fraternity, and Phi Beta Kappa. He belonged to Grace Covenant Church.

Born July 13, 1931, in Wilson, N.C., Dr. Harrell was the son of Jasper and Myrtie Mattox Harrell. He was graduated in 1953 from the University of North Carolina at Chapel Hill with a bachelor of science degree, and he received his MD degree in 1956 from the University of North Carolina School of Medicine at Chapel Hill. He interned at Moses H. Cone Memorial Hospital in Greensboro, N.C., from 1956 to 1957; and he was a captain in the US Air Force from 1957 to 1959, serving as a flight surgeon in Japan. He was graduated from The University of Texas School of Law in 1964 and then returned to the University of North Carolina School of Medicine to serve a residency in psychiatry. He began private practice in Austin in 1967.

Surviving Dr. Harrell are his wife, the former Judy Allison; a son, Clayton Harrell; two daughters, Miss Lynn Harrell and Miss Sandy Harrell, all of Austin; and his mother, Mrs. Myrtie M. Harrell of Chapel Hill, N.C.

Dr. R. G. Spann

Corpus Christi general surgeon and one of the founders of Thomas-Spann Clinic and Hospital in Corpus Christi, Dr. Roy Gayle Spann, died Jan. 7, 1970, after suffering a heart attack. He was 58.

Born March 30, 1911, in Granite, Okla., and raised in Plainview, Tex., Dr. Spann was the son of C. R. and Edna Freeman Spann. He attended Texas Tech University and was graduated from The University of Texas Medical Branch at Galveston in 1935 with an MD degree. He interned at Hurley Hospital in Flint, Mich., from 1935 to 1936 and practiced medicine at Plainview from 1936 to 1938 and at Freer, Tex., from 1938 to 1942. He did postgraduate work at the University of Pennsylvania Graduate School in 1942 and 1943 and served a residency in general surgery at Lankenau Hospital in Philadelphia from 1943 to 1945. He practiced medicine in Philadelphia from 1945 to 1947, and he resumed his practice at Freer from 1947 to 1949. In 1949 he and his medical partner, Dr. J. H. Thomas, moved to Corpus Christi and built Thomas-Spann Clinic with a group of six physicians.

Dr. Spann was the first president and a charter member of the Southside Rotary Club and was vice president of the Southwest Medical Society in 1954. He had formerly served a three-year term on the board of trustees of the University of Corpus Christi and was a member of the First Baptist Church. A diplomate of the American Board of Surgery and a fellow of the American College of Surgeons, he was a member of Nueces County Medical Society, Texas Medical Association, American Medical Association, Texas Surgical Society, and Corpus Christi Surgical Society.

Surviving Dr. Spann are his wife, the former Joyce Shaw; a son, Michael G. Spann of Houston; a daughter, Mrs. Kenneth B. Jacobs of Jackson, Miss.; two sisters, Mrs. H. J. Harvis of Plainview, and Mrs. E. R. Sorrenson of Tulia, Tex.; and four grandchildren.

DR. SPANN

DR. STUBBLEFIELD

Dr. M. L. Stubblefield

Baird, Tex., general practitioner for 24 years prior to his retirement in 1967, Dr. Marmion Lee Stubblefield, died Jan. 27, 1970, in Dallas. He was 80.

The son of William T. and Lena Garrett Stubblefield, Dr. Stubblefield was born Oct. 3, 1889, in Jewel, Tex. He attended The University of Texas at Austin and was graduated from the UT Medical Branch at Galveston in 1918 with an MD degree. He interned at St. Mary's Hospital in Galveston and served a residency at Algiers General Hospital in New Orleans as a lieutenant in the US Navy Medical Corps. He did postgraduate work at Washington University School of Medicine at St. Louis. He practiced medicine in Carbon, Tex., from 1919 to 1920; in Gorman, Tex., from 1921 to 1945; and in Baird from 1945 to 1967.

Dr. Stubblefield was a member of American Medical Association and Texas Medical Association and was a former president and secretary of Eastland - Callahan - Stephens - Shackelford - Throckmorton Counties Medical Society. He received a 50-year service award from TMA and was elected to honorary membership in TMA in 1968. He served as Callahan County health officer from 1945 to 1967. A member of First United Methodist Church of Baird, he belonged to the American Legion for 35 years, was a member of the Callahan County Luncheon Club, and served on the Sheriff's Posse.

Surviving Dr. Stubblefield are his wife, the former Adele Poe; a son, Dr. R. L. Stubblefield of Dallas; a daughter, Mrs. Jack Bishop of Dallas; a brother, Frank Stubblefield of Carbon; five sisters, Mrs. W. F. Gilbert of Spur, Mrs. H. W. Gilbert of Carbon, Mrs. Guy Dunnam of Alvin, Mrs. H. B. Boswell of Austin, and Mrs. C. B. Braden of Houston.

Dr. R. H. Smith

Palo Pinto general practitioner for 63 years, Dr. Robert Henry Smith, 88, died Dec. 14, 1969, in a Palo Pinto hospital after a long illness. He had practiced medicine since 1903 and had retired in 1966.

A native of Ferris, Tex., Dr. Smith was born June 18, 1881, the son of the late John H. and Clara Kate Kooken Smith. He was graduated from Vander-

DR. SMITH

bilt University School of Medicine at Nashville, Tenn., with an MD degree in 1902. In 1905 he returned to Vanderbilt and received a degree in pharmacy in 1906. Further postgraduate study was done at New York Polyclinic Medical School and Hospital in 1926 and 1932.

A member of American, Southern, and Texas Medical Associations, Dr. Smith was elected to honorary membership in TMA in 1969. He served five times as president of Palo Pinto-Parker-Jack Counties Medical Society and was a charter member of District 13 Medical Society. He belonged to Palo Pinto Methodist Church and for many years served as the county health officer. A 32nd degree Mason and a Shriner, he was a past Master of the Palo Pinto Masonic Lodge and twice served as a Masonic District Deputy Grand Master.

Surviving Dr. Smith are his son, John H. Smith of Strawn; his daughter, Mrs. J. A. Stevens of Jacksboro; three grandchildren; and 12 great-grandchildren. He was preceded in death in 1968 by his wife, the former Lela Ewing.

Dr. B. P. Fleming

Long time Texas City physician Dr. Benjamin Powell Fleming, 63, died Dec. 7, 1969, in a Houston hospital.

Dr. Fleming was born June 5, 1906, in Merryville, La., the son of Dr. R. H. and Leona Powell Fleming. He attended The University of Texas at Austin and was graduated from Tulane University School of Medicine at New Orleans in 1934 with an MD degree. He interned and became assistant and then chief resident at Jefferson Davis Hospital in Houston from 1934 until 1938. From 1938 to 1947 he practiced in general medicine. In 1946 he did postgraduate study at New York University School of Medicine, after which time he specialized in obstetrics and gynecology.

A member of First Methodist Church in Texas City, Dr. Fleming also belonged to Galveston County Medical Society, Texas Medical Association, and American Medical Association.

Surviving Dr. Fleming are a sister, Mrs. Mildred F. Moreland of Houston; and three brothers, Robert J. Fleming of Columbus, Tex., Dr. J. Woodrow Fleming (DDS) of Texas City, and R. F. Fleming of Houston.

DR. TAYLOR

Dr. W. A. Taylor

Dr. Willis A. Taylor, Mount Pleasant general practitioner, died Oct. 3, 1969, of pneumonia and cerebral vascular accident. He was 83.

Born Jan. 24, 1883, in Hope, Ark., Dr. Taylor was the son of the late R. H. and Liza Powell Taylor. He attended East Texas State University at Commerce and in 1912 was graduated from the University of Louisville School of Medicine at Louisville, Ky., with an MD degree. Postgraduate work was done at Poly Clinic in New Orleans in 1918 and at Chicago Policlinic and Hospital in 1924. After practicing in Dyke, Tex., from 1913 to 1917, Dr. Taylor moved to Mount Pleasant and established the Taylor Hospital and Clinic, which he owned and operated until he joined the staff of the Titus County Memorial Hospital in 1953.

A member of Camp-Morris-Titus Counties Medical Society, Dr. Taylor was elected to honorary membership in American Medical Association in 1955 and to honorary membership in Texas Medical Association in 1958. Also a member of Tennison Memorial Methodist Church in Mount Pleasant, he was a Mason and this year was presented a 50 year membership pin by the Hella Temple Shrine.

Surviving Dr. Taylor are his wife, the former Ruth Hays, of Mount Pleasant; a son, Dr. William A. Taylor of Little Rock, Ark.; a sister, Mrs. Eldridge Hargrove of Sulphur Springs; and three brothers, Lawrence and Onie Taylor of Dyke, Tex., and B. R. Taylor of Mineola, Tex.

Dr. N. Subotnik

Abilene physician Dr. Nathan Subotnik died Nov. 11, 1969, in a Houston hospital. He was 56.

The son of Samuel and Annie Goldberg Subotnik, Dr. Subotnik was born July 21, 1913, in Paterson, N.J. He was graduated in 1937 from the University of Louisville with an AB degree, and he received his MD degree in 1945 from the University of Chicago School of Medicine. He interned at Nathan and Miriam Barnert Memorial Hospital Center in Paterson in 1944, and he served a residency at the same hospital in 1945. From 1945 to 1955 he practiced medicine in Northbrook, Ill.; and from 1950 to 1955 he also practiced at Highland Park, Ill. In 1948 he did

DR. SUBOTNIK

postgraduate work in gynecology at Cook County Graduate School of Medicine in Chicago. From 1947 to 1955 he was clinical assistant in gynecology at Fantus Clinic, Cook County Hospital, Chicago; and from 1948 to 1955 he was clinical assistant in medicine at the University of Chicago School of Medicine. From 1955 to 1957 he served as a major in the US Air Force and was stationed at Maxwell Air Force Base in Montgomery, Ala. He moved to Houston in 1957, where he practiced until he moved to Abilene in 1967. Since 1967 he had practiced medicine at the Abilene State School.

Author of several published medical articles, Dr. Subotnik was a member of Rotary International and had served on the Northbrook Chamber of Commerce. He had been a member of the Chicago Medical Society and Harris County Medical Society and was a member of Taylor-Jones Counties Medical Society, Texas Medical Association, American Medical Association, and Texas Academy of General Practice.

Surviving Dr. Subotnik are his wife, the former Minnie Brawer; a son, Henry Alan Subotnik; two daughters, Mrs. Debbie Subotnik Wallace and Bonnie Subotnik, all of Abilene; a brother, Samuel Subotnik of Paterson, N.J.; and a grandson.

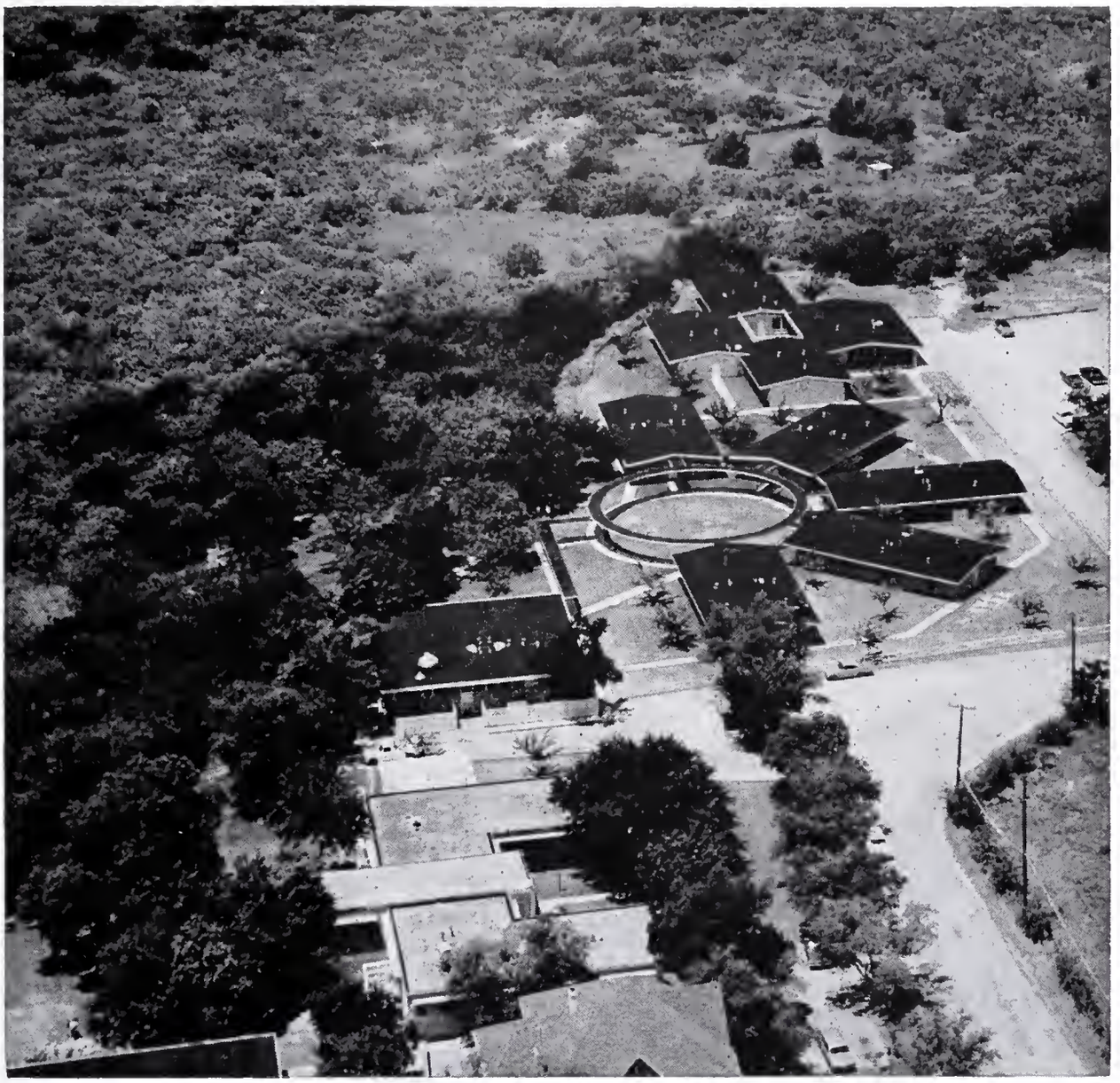
Dr. L. D. Hethcock

Dr. Lewis D. Hethcock, 37, Houston pediatrician, died Oct. 8, 1969, in a Houston hospital. He had been a Houston resident for eight years.

Born March 2, 1932, at Cooper, Tex., Dr. Hethcock was the son of William Cleo and Mary Robinson Hethcock. He was graduated from Baylor University at Waco with a BA degree in 1952 and from Baylor College of Medicine at Houston with an MD degree in 1956. He interned at Hermann Hospital in Houston from 1956 to 1957.

A member of Willow Meadows Baptist Church, Dr. Hethcock also belonged to Alpha Kappa Kappa medical fraternity, Harris County Medical Society, Texas Medical Association, and American Medical Association.

Dr. Hethcock is survived by his wife, the former Tommylu Doss; a son, Danny; three daughters, Kathleen, Becky, and Jennifer, all of Houston; his parents of Mercedes, Tex.; and a brother, Wendell Hethcock of San Marcos.



BEVERLY HILLS HOSPITAL
BEVERLY HILLS CLINIC

PSYCHIATRY
INPATIENT – OUTPATIENT

Multiple-approach treatment of thinking disorders. Established diagnostic procedures available. Secluded in-town location convenient to the medical community.

Psychiatry

Joseph L. Knapp, M.D. — Fred H. Jordan, M.D.
Jackson H. Speegle, M.D. — Joseph H. Lindsay, M.D.
Jack R. Tomlinson, M.D.

Psychology

Traudl E. Jordan-Diener, Ph.D. — R. A. Mitchell, M.S. — David K. Fooshee, M.S.

1353 North Westmoreland Avenue — Dallas, Texas 75211 — 214 331-8331

Milk from lactating patients with breast cancer, patients with a history of treated breast cancer and patients with a history of breast cancer in their immediate family is needed for special studies by physicians at The University of Texas M. D. Anderson Hospital and Tumor Institute at Houston. Doctors who might be interested in having the milk from their patients considered for the study should write to:

Dr. Gabriel Seman, Department of Virology
The University of Texas at Houston
M. D. Anderson Hospital and Tumor Institute
Houston, Texas 77025

or call collect (713) 526-5411, Ext. 383

WICHITA FALLS CLINIC-HOSPITAL

GENERAL SURGERY
W. E. Crump, M.D., F.A.C.S.
James T. Lee, M.D.
Charles H. Wilson, M.D., F.A.C.S.

ORTHOPEDIC SURGERY
Jack E. Maxfield, M.D., F.A.C.S.
Clyde W. Parsons, M.D.
Mark E. Huff, Jr., M.D.

ORAL SURGERY
R. A. Mitchell, D.D.S.
Larry J. Cason, D.D.S.

RADIOACTIVE ISOTOPES
Claude D. Wilson, M.D., D.A.B.R.
Joe D. Steed, M.D., D.A.B.R.
Julian H. Acker, M.D.
David D. Salmon, M.D., D.A.B.R.

PEDIATRICS
George W. Slaughter, III, M.D., F.A.A.P.
Joseph Bilder, Jr., M.D.

LABORATORIES
Claude D. Wilson, M.D., D.A.B.R., Radiology
Joe D. Steed, M.D., D.A.B.R., Radiology
David D. Salmon, M.D., D.A.B.R., Radiology

MEDICINE
W. B. Whiting, M.D., Cardiology
R. F. Knox, M.D., Endocrinology
P. K. Smith, M.D., F.A.C.P., Diagnosis & Internal Medicine
I. L. Humphrey, Jr., M.D., Diagnosis & Internal Medicine
Julian H. Acker, M.D., Diagnosis & Internal Medicine
Preston McCall, M.D., Diagnosis & Internal Medicine
Julian C. Sleeper, M.D., Cardiology
Eugene Jackson, M.D., Diagnosis & Internal Medicine

GENERAL PRACTICE
J. B. Hathorn, Jr., M.D.
Melvin Horany, M.D.
John E. Worthen, Jr., M.D.

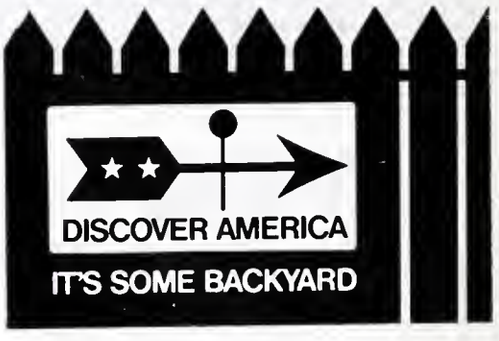
UROLOGY
Owen C. Berg, M.D., F.A.C.S.

OBSTETRICS AND GYNECOLOGY
W. L. Parker, M.D., F.A.C.S.
Warren T. Kable, M.D.
Frank J. Lee, M.D.

ADMINISTRATIVE OFFICER
Bertha McNeill, Administrator
Jesse E. Dobbs, Jr., Asst. Administrator

HOMESTEAD
CHILD PLACEMENT AGENCY
and
HOMESTEAD MATERNITY HOME
1250 W. Rosedale
335-5942 **336-7905**
Fort Worth, Texas

Licensed Adoption Service and Private, Confidential maternity care provided unwed expectant mothers. Obstetrical services by a Diplomate of THE AMERICAN BOARD. Also pediatric care furnished by a licentiate of THE AMERICAN BOARD.



ONCOLOGY

Oscar L. Morphis, M.D., F.A.C.R.
Radiation Therapy
Radium Therapy

R. P. O'Bannon, M.D., F.A.C.R.
Radiation Therapy

Norris Gilfillan, M.D., F.A.C.S.
Chemotherapy

Tom B. Bond, M.D., F.A.C.R.
Consultant

Jack M. Morgan, M.S., F.A.C.R.
Consultant-Physicist

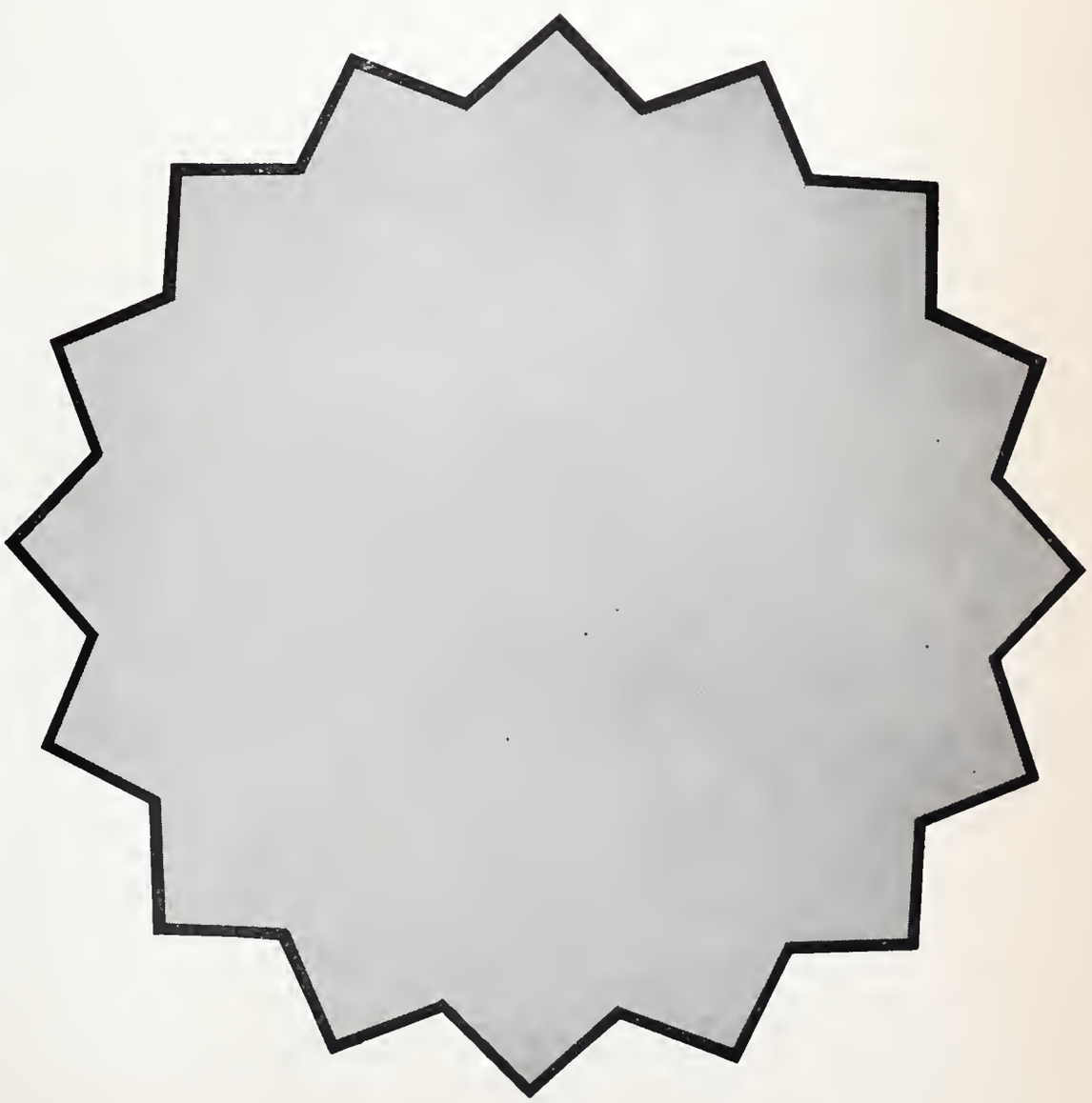
1550 West Rosedale, Suite 620 Fort Worth 336-2028

A LOOK AT TEXAS MEDICINE TODAY

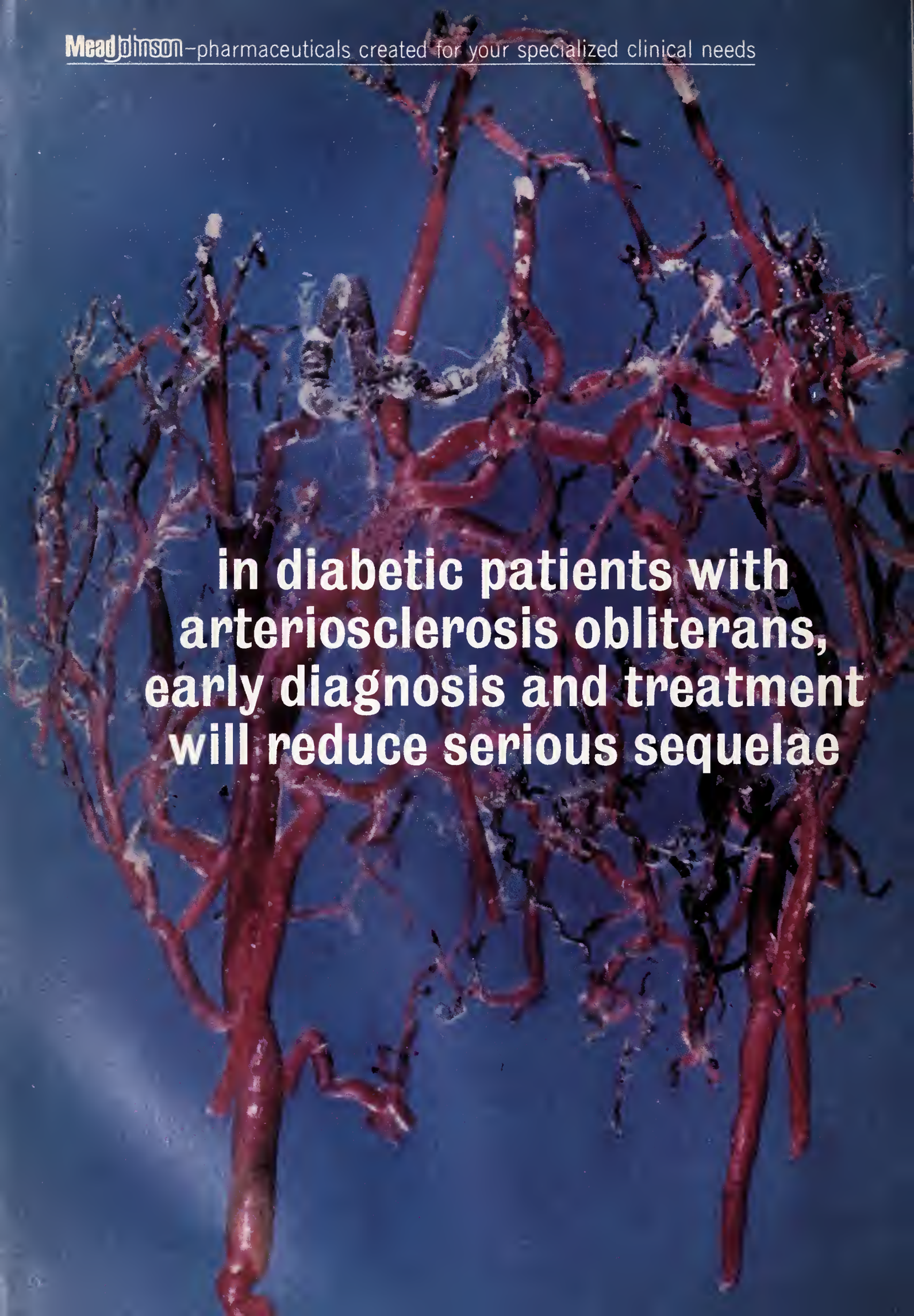
ONE OF A SERIES

Awards for Excellence

Going on 21. After that, we may lose count of our awards. We don't mean to flaunt it, believing basically in modesty, but we do feel compelled to report the truth. And the truth is that we have, in recent years, won 20 awards for editorial accomplishment, most of these from the International Council on Industrial Editors and its affiliate districts. Although good taste and limited space prevent us from going on about it, we can cite one or two of the judges' comments about TEXAS MEDICINE: "A highly professional publication. Texas medical men unquestionably get their money's worth . . . Good balance between medical information, socio-economic material and medical society news. Excellent editorial selection of material." This is a compliment to you—the reader, writer, and critic of TEXAS MEDICINE. So sound off—you are fully justified in bragging on your own publication.



Mead Johnson—pharmaceuticals created for your specialized clinical needs



in diabetic patients with arteriosclerosis obliterans, early diagnosis and treatment will reduce serious sequelae

for diabetic patients with responsive arteriosclerosis obliterans

VASODILAN®

(ISOXSUPRINE HCl)

- **acts directly to relax arterial musculature**
- **measurably increases blood flow to deep muscle arteries[1,2]**
- **does not interfere with diabetic control[3]**
- **is not contraindicated in coronary disease or peptic ulcer[3-5]**

to guide you in prescribing Vasodilan

Although not all clinicians agree on the value of peripheral vasodilators,[6-8] several investigators[4,5] have reported favorably on the effects of isoxsuprine on peripheral blood flow in skeletal muscle vessels. Effects have been demonstrated both by objective measurement[1,5,9] and observation of clinical improvement.[4,10-12]

Indications: Arteriosclerosis obliterans, diabetic vascular diseases, thromboangiitis obliterans (Buerger's disease), Raynaud's disease, postphlebitic conditions, acroparesthesia, frostbite syndrome and ulcers of the extremities (arteriosclerotic, diabetic, thrombotic). **Composition:** VASODILAN tablets, isoxsuprine hydrochloride 10 mg. **Dosage:** Oral—10 to 20 mg. (1 or 2 tablets) t.i.d. or q.i.d. **Contraindications and Cautions:** There are no known contraindications to recommended oral dosage. Do not give immediately postpartum or in the presence of arterial bleeding. **Side Effects:** Occasional palpitation and dizziness can usually be controlled by dosage reduction. As intramuscular administration of 10 mg. or more may cause brief hypotension and tachycardia, single intramuscular doses exceeding this amount are not recommended. Complete details available in product brochure from Mead Johnson Laboratories.

References: (1) Stein, I.D.: Angiology *15*:1 (April) 1964. (2) New Drugs–Evaluated by the A.M.A. Council on Drugs, Chicago, American Medical Association, 1967, pp. 295-297. (3) Samuels, S. S., and Shaftel, H. E.: J. Indiana M. A. *54*:1021-1023 (July) 1961. (4) Kaindl, F.; Pärtan, J., and Polsterer, P.: Wien.klin.Wchnschr. *68*:186-191 (March 16) 1956. (5) Kaindl, F.; Samuels, S. S.; Selman, D., and Shaftel, H.: Angiology *10*:185-192 (Aug.) 1959. (6) Myers, K. A.: Modern Treatment *4*:370-383 (March) 1967. (7) Gillespie, J. A.: Angiology *17*:280-288 (May) 1966. (8) Smit, Arne, F., *et al.*: Nordisk Medicin *20*:1260, 1959. (9) Samuels, S. S., and Shaftel, H. E.: JAMA *171*:142-145 (Sept. 12) 1959. (10) Frieh, C., and Olivier, L.: Lyon Med. *91*:891-896 (May 24) 1959. (11) Weghaupt, Von K.: Wien.klin.Wchnschr. 69:31-32 (Jan. 11) 1957. (12) Clarkson, I. S., and LePere, D. M.: Angiology *11*:190-192 (June) 1960.

© 1969 MEAD JOHNSON & COMPANY • EVANSVILLE, INDIANA 47721

Mead Johnson
LABORATORIES

Microphoto of occluded vessels in gangrenous area of a first toe amputated because of severe arteriosclerosis obliterans. Cast was made by injecting acrylic plastic into the vessels. *Used with permission. Courtesy of Margaret C. Conrad, Ph.D., Department of Physiology, Bowman-Gray School of Medicine, Wake Forest College, Winston-Salem, N. C.*

FRANCIS HOSPITELS INCORPORATED

FRANCIS CONVALESCENT CENTERS

C. B. FRANCIS
Past First Vice President
American Nursing Home Association
Past President
Texas Nursing Home Association

FRANCIS HOSPITELS, INC., has developed some of the finest convalescent centers in the nation.

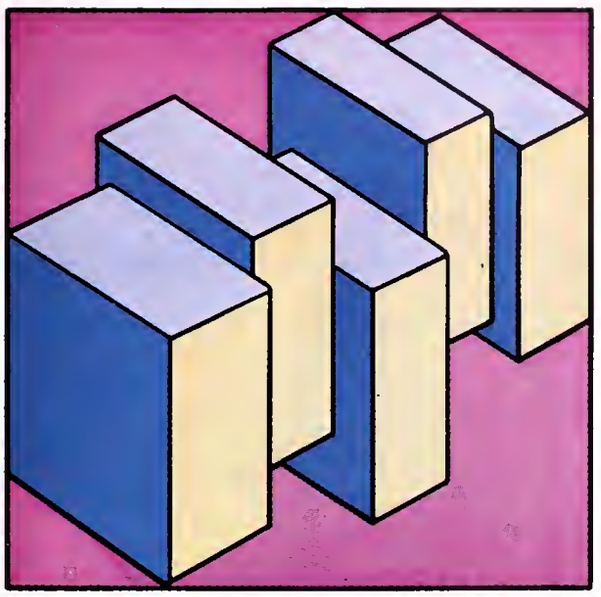
Recently they developed the "hospitel"—a new concept in intermediate hospital and convalescent care.

Now Francis Hospitels is moving into a new associated field. They are entering into the construction and management of general hospitals.

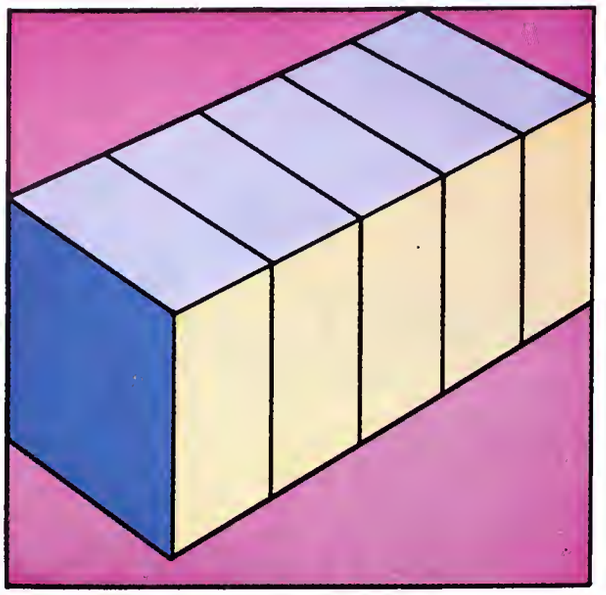
What are your community needs?
If it is one of the above, write to us today.

FRANCIS HOSPITALS, INC., 7129 Hwy. 290 East, Austin, 512 454-2725

FRANCIS HOSPITELS—WACO: Francis Hospitel, 2501 Maple Avenue, Ph. 752-0311 **FRANCIS CONVALESCENT CENTERS**—AUSTIN: Retirement Inc., 6909 Burnet Road, Ph. 452-5719; FORT WORTH: Francis Convalescent Center, 1000 6th Avenue, Ph. 335-1903; CORPUS CHRISTI: Francis Convalescent Center, 3050 Sunnybrook, Ph. 853-9981; LONGVIEW: Highland Pines, 1100 N. 4th Street, Ph. 753-7661; SAN ANTONIO: San Pedro Manor, 616 West Russell, Ph. 732-5181 **FRANCIS MANAGEMENT**—PORT ARTHUR: The Golden Triangle Convalescent Center, 3900 Highway 365, Ph. 727-1651.



from the discord of anxiety...



to emotional harmony

Before prescribing, please consult complete product information, a summary of which follows:

INDICATIONS: Indicated when anxiety, tension and apprehension are significant components of the clinical profile.
CONTRAINDICATIONS: Patients with known hypersensitivity to the drug.
WARNINGS: Caution patients about possible combined effects with alcohol and other CNS depressants. As with all CNS-acting drugs, caution patients against hazardous occupations requiring complete mental alertness (e.g., operating machinery, driving). Though physical and psychological dependence have rarely been reported on recommended doses, use caution in administering to addiction-prone individuals or those who might increase dosage; withdrawal symptoms (including convulsions), following discontinuation of the drug and similar to those seen with barbiturates, have been reported. Use of any drug in pregnancy, lactation, or in women of childbearing age requires that its potential benefits be weighed against its possible hazards.
PRECAUTIONS: In the elderly and debilitated, and in children over six, limit to smallest effective dosage (initially 10 mg or less per day) to preclude ataxia or oversedation, increasing gradually as needed and tolerated. Not recommended in children under six. Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider individual pharmacologic effects, particularly in use of potentiating drugs such as MAO inhibitors and phenothiazines. Observe usual precautions in presence of impaired renal or hepatic function. Paradoxical reactions (e.g., excitement, stimulation and acute rage) have been reported in psychiatric patients and hyperactive aggressive children. Employ usual precautions in treatment of anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation have been reported very rarely in patients receiving the drug and oral anticoagulants; causal relationship has not been established clinically.
ADVERSE REACTIONS: Drowsiness, ataxia and confusion may occur, especially in the elderly and debilitated. These are reversible in most instances by proper dosage adjustment, but are also occasionally observed at the lower dosage ranges. In a few instances syncope has been reported. Also encountered are isolated instances of skin eruptions, edema, minor menstrual irregularities, nausea and constipation, extrapyramidal symptoms, increased and decreased libido--all infrequent and generally controlled with dosage reduction; changes in EEG patterns (low-voltage fast activity) may appear during and after treatment; blood dyscrasias (including agranulocytosis), jaundice and hepatic dysfunction have been reported occasionally, making periodic blood counts and liver function tests advisable during protracted therapy.

with the aid of antianxiety

Librium®
(chlordiazepoxide HCl)

5-mg, 10-mg
and 25-mg capsules

In an age of swift change and challenge, susceptible individuals may experience varying degrees of excessive anxiety. The resulting emotional stress may precipitate significant functional disorders or complicate existing organic disease. In properly individualized maintenance dosage, Librium (chlordiazepoxide HCl) quickly helps relieve anxiety and apprehension, provides useful adjunctive therapy in psychophysiologic disorders. In long clinical experience, Librium has demonstrated a wide margin of safety.

Also available:
Libritabs®
(chlordiazepoxide)

ROCHE
Roche
LABORATORIES
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

High

...the high blood levels you want

Low

...the low cost she wants

Tetrex bidCAPS controls susceptible bacteria on an easy b.i.d. schedule at a cost lower than all other "convenience dosage" tetracyclines.

PRESCRIBING INFORMATION. For complete information consult Official Package Circular. Tet. Comb. 1-7/17/67. *Indications:* Infections of respiratory, gastrointestinal and genitourinary tracts and skin and soft tissues due to tetracycline-sensitive organisms. *Contraindications:* The drug is contraindicated in individuals hypersensitive to tetracycline. *Warnings:* Photodynamic reactions have been produced by tetracyclines. Natural and artificial sunlight should be avoided during therapy. Stop treatment if skin discomfort occurs. With renal impairment, systemic accumulation and hepatotoxicity may occur. In this situation, lower doses should be used. Tooth staining and enamel hypoplasia may be induced during tooth development (last trimeter of pregnancy, neonatal period and childhood). *Precautions:* Mycotic or bacterial superinfection may occur. Infants may develop increased intracranial pressure with bulging fontanels. In gonorrheal therapy, serologic tests for syphilis should be conducted initially and monthly for 4 months. *Adverse Reactions:* Glossitis, stomatitis, nausea, diarrhea, flatulence, proctitis, vaginitis, dermatitis, and allergic reactions may occur. *Usual Adult Dose:* 1 Gm./day in 2 or 4 divided doses. Continue therapy for 10 days in Group A Beta-hemolytic streptococcal infections. Administer one hour before or 2 hours after meals. *Supplied:* Capsules—250 mg. in bottles of 16 and 100. bidCAPS—500 mg. in bottles of 16 and 50.

A.H.F.S. Category 8:12

Tetrex® bidCAPS®

(TETRACYCLINE PHOSPHATE COMPLEX)

BRISTOL LABORATORIES
Division of Bristol-Myers Co.
Syracuse, New York 13201

LACTINEX®

TABLETS & GRANULES

■ **to help restore and stabilize the intestinal flora**

■ **for fever blisters and canker sores of herpetic origin**

Lactinex contains both *Lactobacillus acidophilus* and *L. bulgaricus* in a standardized viable culture, with the naturally occurring metabolic products produced by these organisms.

Lactinex has been shown to be useful in the treatment of gastrointestinal disturbances, and for relieving the painful oral lesions of fever blisters and canker sores of herpetic origin.[1,2,3,4,5,6,7,8]

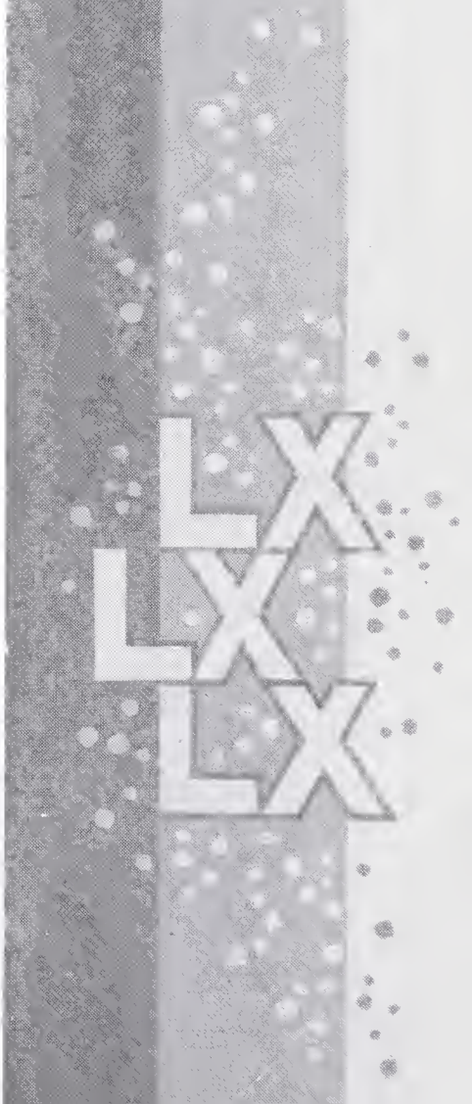
No untoward side effects have been reported to date.

Literature on indications and dosage available on request.

HYNSON, WESTCOTT & DUNNING, INC.

Baltimore, Maryland 21201

(LX-05)



References:
(1) Siver, R. H.: CMD, *21*:109, September 1954. (2) Frykman, H. H.: Minn. Med., *38*:19-27, January 1955. (3) McGivney, J.: Tex. State Jour. Med., *51*:16-18, January 1955. (4) Quehl, T. M.: Jour. of Florida Acad. Gen. Prac., *15*:15-16, October 1965. (5) Weekes, D. J.: N.Y. State Jour. Med., *58*:2672-2673, August 1958. (6) Weekes, D. J.: EENT Digest, *25*:47-59, December 1963. (7) Abbott, P. L.: Jour. Oral Surg., Anes., & Hosp. Dental Serv., 310-312, July 1961. (8) Rapoport, L. and Levine, W. I.: Oral Surg., Oral Med. & Oral Path., *20*:591-593, November 1965.

Starlite Village Clinic

Center Point, Texas

Ph.: ME 4-2426

- - - A specialized clinic dedicated to the physical, mental, and spiritual treatment of men and women suffering from alcoholic and similar disturbances.

F. E. Seale, M.D.
Medical Director

Bland Seale
Administrator

RADIOLOGY ASSOCIATES OF FORT WORTH

John S. Alexander, M.D., M.A.C.R.
Robert J. Atcheson, M.D., M.A.C.R.
Douglas E. Bibby, M.D., F.A.C.R.
James W. Buice, M.D., F.A.C.R.
Richard C. Gasser, M.D., M.A.C.R.
James A. Holland, M.D., M.A.C.R.
Paul W. Mathews, Jr., M.D., M.A.C.R.
Preston W. Nash, M.D., M.A.C.R.
Rolland F. Oakes, M.D., M.A.C.R.
Norman L. Presley, M.D., M.A.C.R.
Sanford Reitman, M.D., M.A.C.R.
Gomer W. Roberts, M.D., M.A.C.R.
Herman C. Sehested, M.D., F.A.C.R.
Glenn A. Stokdyk, M.D., M.A.C.R.
C. H. Tseng, M.D., M.A.C.R.
Claude Williams, M.D., M.A.C.R.

DIPLOMATES OF THE AMERICAN BOARD OF RADIOLOGY

Offices:

100 Medical Tower Bldg. — 336-8681
1217 West Cannon — 336-8627
900 W. Randol Mill Rd., Arlington, Texas 76010 — 277-7681

TRAVIS CLINIC ASSOCIATION AND THE NAN TRAVIS MEMORIAL HOSPITAL

JACKSONVILLE, TEXAS

STAFF

General Surgery:
L. L. Travis, M.D.
J. S. O'Hare, M.D.
R. K. Willms, M.D.

Orthopedic Surgery:
E. L. Mahon, Jr., M.D.

Urology:
H. F. Rives, M.D.

Pathology:
Harbert Davenport, Jr., M.D.

Internal Medicine:
J. T. Boyd, M.D.
F. H. Verheyden, M.D.
J. T. Scogin, M.D.
J. H. Pesnell, M.D.
Mary A. Bone, M.D.

Obstetrics and Gynecology:
J. C. Rucker, M.D.
J. D. Crawford, M.D.

Ophthalmology:
Fred Haberle, M.D.

Pediatrics:
M. L. Gray, M.D.

Radiology and Radioactive Isotopes:
L. W. Ralston, M.D.

William J. Fowler
Administrator of Nan Travis Memorial Hospital

J. G. Casey
Business Manager of Travis Clinic

MEDICAL ARTS CLINIC

Box 841
Corsicana, Texas

PEDIATRICS
JOHN W. GRIFFIN, M.D., F.A.A.P.*
JAMES E. SPEIER, M.D.
INTERNAL MEDICINE
ROBERT D. BONE, M.D., F.A.C.P.*
JAMES F. WITTEN, M.D., F.A.C.P.*
CHARLES I. BILTZ, M.D.*
OBSTETRICS & GYNECOLOGY
KELLY PAUL BURKHART, M.D., F.A.C.O.G.*
DERMATOLOGY
JOSEPH M. GLICKSMAN, M.D.
BUSINESS MANAGER
OWEN G. ELLIOTT, M.G.M.A.
SURGERY
LOUIS E. GIBSON, M.D., F.A.C.S.*
E. SCOTT MIDDLETON, M.D.
OPHTHALMOLOGY
ROBERT D. MERTZ, M.D., F.A.A.O.O.*
EAR, NOSE, THROAT
PHILLIP M. AWTREY, M.D.,* F.A.A.O.O.
DENTISTRY
ROBERT A. LANG, D.D.S.

*Diplomate of the American Board

PHYSICIANS' DIRECTORY

DIRECTORY RATES & DATA: Space is available to TMA members at $8.00 per column inch and must run six months. New listings are limited to those specialties recognized by the American Medical Association. A discount of 5% is allowed for six month's advance payment. Mail copy to Advertising Assistant, TEXAS MEDICINE, 1801 North Lamar Blvd., Austin, Texas 78701. Deadline is 20th of the month preceding publication month.

Allergy

DRS. FEIN AND KAMIN
Allergy and Immunology

Bernard T. Fein, M.D., F.A.C.A.
Fellow
American Academy of Allergy
216 Medical Prof. Bldg.
CA 6-7671

Peter B. Kamin, M.D., F.A.A.P.
Diplomate
Sub-Board Pediatric Allergy
San Antonio, Texas
CA 7-6331

HOUSTON ALLERGY CLINIC
CLINICAL ALLERGY AND IMMUNOLOGY
RICHARD L. ETTER, M.D., F.A.C.A., F.A.A.A.
RICHARD H. JACKSON, M.D., F.A.C.A.
WARREN J. RAYMER, M.D., F.A.C.A.
RAMON GARRIDO, M.D.
(Certified American Board of Pediatrics)
Suite 156, Hermann Professional Building
6410 Fannin St., Houston, Texas 77025
JA 6-3281

V. E. FRIEDEWALD, M.D., F.A.C.P.
Diplomate American Boards of Internal Medicine and Allergy
ALLERGY

2203 West Tennessee Midland, Texas 79701
MU 2-5385

McGOVERN ALLERGY CLINIC
Diagnosis and Treatment of Allergic Diseases
John P. McGovern, M.D. Theodore J. Haywood, M.D.
Orville C. Thomas, M.D. Joseph T. Queng, M.D.
Charles D. Haunschild, M.D. James A. Murray, M.D.
*Hermann Gregory, M.D.
Certified American Boards of Pediatrics and Allergy
6655 Travis Street Houston, Texas 77025 JA 8-5591
*Military Leave of Absence

HARRIS HOSEN, M.D., F.A.A.Pd.
Clinical Allergy and Immunology

2649 Procter Street Port Arthur, Texas

ALLERGY CLINIC
Saul Grossman, M.D., F.A.C.A.
Allergy-Dermatology
W. A. Crozier, M.D., F.A.C.A.
Allergy-Immunology
TU 2-3487
2530 Morgan Corpus Christi, Texas

STUART A. MASON, M.D.
Allergic Diseases

921 Eighth Avenue Fort Worth, Texas 76104
Phone: 336-1574 If no answer: 924-4231

Cardiovascular Disease

GUS SCHREIBER, M.D., F.A.C.C.
24-Hour Reception and Interpretation of Telephone-Transmitted Electrocardiograms. Matching Electrocardiographs, Transmitters, and Tape Recorders Leased to Institutions.
1430 Medical Arts Building Dallas, Texas 75201
Telephone 214 748-3715

Clinics

THE CLINIC-HOSPITAL OF SAN ANGELO
224-234 West Beauregard Avenue
SAN ANGELO, TEXAS

R. M. Finks, M.D., Pediatrics
M. D. Knight, M.D., Surgery
W. H. Brauns, M.D., Internal Medicine
Roy E. Moon, M.D., Obstetrics and Gynecology
Chas. F. Engelking, M.D., Ear, Nose and Throat
R. A. Morse, M.D., Internal Medicine
Ralph R. Chase, M.D., Pediatrics
Tom R. Hunter, M.D., Surgery
Dale W. Hayter, M.D., Ophthalmology
O. Sterling Gillis III, M.D., Obstetrics and Gynecology
Consultant in Pathology—Lloyd R. Hershberger, M.D.
Consultants in Radiology—John E. Ballard, M.D., John G. Bolen, M.D., William T. Gordon, M.D.
Robert P. Gordon, C.P.A., Administrator

THE FORT WORTH CLINIC
1221 West Lancaster Avenue
Fort Worth, Texas

John M. Church, M.D.
T. J. Coleman, M.D.
O. M. Phillips, M.D.
Robert L. Sewell, M.D.
John H. Sewell, M.D.
C. K. Holsapple, M.D.
Wm. L. Asper, Bus. Mgr.

FIFTH AVENUE CLINIC
650 Fifth Avenue
Fort Worth, Texas

MEDICINE
Sidney E. Stout, M.D.
Frank L. Bynum, M.D.
Ed Etier, Jr., M.D.

GENERAL PRACTICE
Donald S. Gibbs, M.D.

RADIOLOGY
Otto H. Grunow, M.D.

THOMAS-SPANN CLINIC
& THOMAS-SPANN HOSPITAL, INC.
1546 S. Brownlee Corpus Christi, Texas 78404
Telephone 884-3861

SURGERY
R. Gayle Spann, M.D., F.A.C.S.
J. Houston Thomas, M.D.
OPHTHALMOLOGY
L. David Wright, M.D., F.A.C.S.
GENERAL PRACTICE
Travis B. Phelps, M.D.
T. D. Harvey, M.D.
H. R. Rose, M.D.
C. L. Vernor, M.D.
ORTHOPEDICS
Carlos M. Yanez, M.D.
INTERNAL MEDICINE
William E. Morris, M.D.
Gerald A. Reeves, M.D.
Pruett Moore, Jr., M.D.
RADIOLOGY
Crysup Sory, M.D.
ADMINISTRATOR
B. J. Clark
DIRECTOR OF NURSES
Clinic - Pat Parker
Hospital - Mrs. Joyce Pettit

RUGELEY AND BLASINGAME CLINIC
Wharton, Texas

2100 North Fulton Street — 713 LE 2-1700

INTERNAL MEDICINE
R. D. Little, M.D.
D. W. Samuelson, M.D.

GENERAL PRACTICE
C. E. Woodson, M.D.

PEDIATRICS
F. W. Kolle, M.D.

NEUROPSYCHIATRY
R. R. Gleason, Jr., M.D.

DERMATOLOGY & SKIN CANCER
J. S. Stell, M.D.

GENERAL & THORACIC SURGERY
R. E. Goelzer, M.D.

GENERAL SURGERY
R. B. Caraway, Jr., M.D.

UROLOGY
H. Z. Fretz, M.D.
C. M. Collins, M.D.

OBSTETRICS & GYNECOLOGY
D. M. Voulgaris, M.D.
H. E. Secor, M.D.

OPHTHALMOLOGY
V.A. Black, M.D.

OTOLARYNGOLOGY
J. L. Holcomb, M.D.

DENTISTRY
C. J. Shumbera, D.D.S.
J. R. Kieler, Jr., D.D.S.

PATHOLOGY—CONSULTANT
H. M. Perches, M.D.

ANESTHESIOLOGY—CONSULTANT
C. G. Spears, M.D.

RADIOLOGY—CONSULTANT
L. D. O'Gorman, M.D.

ADMINISTRATION
C. H. "Ham" Rugeley
Malcolm D. Rugeley

THE CHESTER CLINIC & THE JOHN BUIST CHESTER HOSPITAL
3330 S. Lancaster Rd., Dallas, Texas
376-5411

John B. Cbester, M.D., F.A.C.S., Orthopedic Surgery
Gene W. Rogers, M.D., General Surgery
Douglas M. Hardy, M.D., Obstetrics & Gynecology
Ervin R. Miller, M.D., Cardiovascular Diseases
Ralph C. Disch, M.D., F.A.C.S., D.A.B.S., General Surgery
Catherine P. Chester, M.D., Infants and Children
Doyle L. Sharp, M.D., General Surgery
R. M. Flasdick, M.D., Diagnosis and Internal Medicine
Ben E. Moore, B.S., M.D., Pediatrics
A. P. Larson, B.S., M.S., M.D., F.A.C.S., A.A.O.S.
Garrett, W. Maxwell, M.D., General Practice
Amado E. Dominquez, M.D., Diagnosis & Internal Medicine
H. A. Mueller, M.D., Consultant in Radiology
Gerard Noteboom, M.D., Consultant in Pathology
Geneva Bratton, R.N., Superintendent of Nurses
E. B. Morgan, Administrator

LANCASTER OFFICE – LANCASTER, TEXAS
Phone 227-2151

David E. Krebs, M.D., Pediatrics & Medicine
Charles W. Waldrop, M.D., General Practice
Miles W. Davis, M.D., General Practice

COUNTRY CLUB CORNERS OFFICE
7140 Baytree — 224-1181

R. B. Curry, M.D., General Practice
Herbert M. Hinckley, M.D., General Practice

BEELER-MANSKE CLINIC
9th Avenue N. at 5th Street N.
Texas City, Texas 77590
AC 713, WI 8-8521

Obstetrics & Gynecology
G. W. Beeler, M.D.

Internal Medicine
W. T. Matlage, M.D.
C. M. Maruri, M.D.

General Surgery
B. W. Hink, M.D., F.A.C.S.

General Practice
J. H. Cochrane, M.D.
J. W. O'Bryant, M.D.
O. O. Smith, M.D.

Clinic Manager
Stan M. Sheppard

Complete X-ray, Physical Therapy and Laboratory Facilities

MALONE and HOGAN CLINIC
901 Main Street — Phone 267-6361
Big Spring, Texas 79720

Ophthalmology and Otolaryngology
P. W. Malone, M.D., F.A.C.S.
J. W. Tipton, M.D.

General Surgery
J. E. Hogan, M.D., F.A.C.S.
C. B. Marcum, Jr., M.D., F.A.C.S.

Orthopedic Surgery
P. H. Rhymes, M.D.

Internal Medicine
J. H. Burnett, Jr., M.D.
W. A. Riley, M.D.
R. S. Griffin, M.D.
R. T. Torp, M.D.

Obstetrics and Gynecology
M. A. Porter, M.D.

Pediatrics
J. M. Woodall, M.D.
M. W. Talbot, Jr., M.D., F.A.A.P

Radiology
W. R. Cashion, M.D.

Urology
G. F. Dillon, M.D.

Consultants in Pathology
Jarrett E. Williams, M.D.
B. B. Trotter, M.D.

Business Manager
R. L. Heith

DIAGNOSTIC CLINIC OF HOUSTON
6448 Fannin, Houston, Texas 77025 (713) 526-2051

Internal Medicine and Diagnosis

Cardiovascular Disease
Thomas J. Fatherree
Hugh F. Arnold, M.D.
Hugh H. Hanson, M.D.
Michael B. Raine, M.D.
Michael A. Modelski, M.D.
Sigmund W. Friedland, M.D.

Endocrinology and Metabolic Diseases
H. Leland Kaplan, M.D.
Thomas G. Vandivier, M.D.
Charles H. Gregory, M.D.
R. Frederick Gregory, M.D.

Endocrinology, Metabolic Diseases and Director of Clinical Research
Raymond L. Gregory, M.D.

Geriatrics
Frederick G. Dorsey, M.D.

Gastroenterology
Dolph L. Curb, M.D.
W. Tom Arnold, M.D.
Belton G. Griffin, M.D.
Frederick R. Lummis, Jr., M.D.
Dean C. Solcher, M.D.

Hematology
Edmund N. Gouldin, M.D.
George W. Conrad, Jr., M.D.

Hypertension and Renal Diseases
K. Ronald Bingman, M.D.
R. Robert Durrett, M.D.

Infectious Diseases
Lewie L. Travis, Jr., M.D.
Jack L. Reddin, M.D.

Internal Medicine
Jeffrey Zatorski, M.D.

Neurology
Donald J. Russell, M.D.

Oncology
Lester L. Hoaglin, Jr., M.D.
Peter Sullivan, M.D.

Pathology
Jack P. Abbott, M.D.
Paul B. Radelat, M.D.

Pulmonary Disease
William M. Donohue, M.D.
Joel E. Reed, M.D.
Gene R. Lindley, M.D.

Radiology and Nuclear Medicine
William L. Hinds, M.D.
Charles P. Eldridge, Jr., M.D.
David D. Lawrence, M.D.
Charles A. Spain, M.D.

Rheumatology
John E. Norris, M.D.

Administration
C. G. Mercy, Administrator
Robert B. Hall, Assistant Administrator

Laboratory:
Clinical Pathology
Cytology

Nuclear Medicine
Isotope uptake, Gammagram and Therapy

Roentgenology

PROCEDURES:

Bronchoscopy:
Pulmonary Functions

Cardiac Catheterization

Electrocardiography-Phonocardiography

Esophagoscopy

Gastroscopy

Proctosigmoidoscopy

CONSULTATION BY APPOINTMENT

THE LORIMER CLINIC
901 West Leuda Street
Fort Worth, Texas 76104
335-4333

SURGERY
W. S. Lorimer, Jr., M.D., F.A.C.S.
R. J. Turner, III, M.D., F.A.C.S.

INTERNAL MEDICINE
W. W. Moorman, M.D., F.A.C.P.
D. W. Johnston, M.D. F.A.C.P.
Stephen Eppstein, M.D.
A. R. Daniell, M.D.

Mrs. Evelyn Farr, Business Manager

THE AUSTIN DIAGNOSTIC CLINIC
801 West 34th Street, Austin, Texas 78705 452-9292

INTERNAL MEDICINE

HENRY RENFERT, JR., M.D.
Endocrinology
VIRGIL B. LAWLIS, M.D.
Gastroenterology
LEONARD J. SAYERS, M.D.
Hematology
HOMER R. GOEHRS, M.D.
Rheumatology
JOHN P. VINEYARD, JR., M.D.
Pulmonary and Infectious Disease
JOHN M. TYLER, M.D.
Cardiology
WALTER D. ROBERTS, M.D.
Internal Medicine
TERRY M. COLLIER, M.D.
Internal Medicine
ROBERT F. ANDERSON, M.D.
Cardiology
DENNIS E. WELCH, M.D.
Oncology
CHARLES E. FELGER, M.D.
Gastroenterology
JACK W. MONCRIEF, M.D.
Nephrology

NEUROLOGY AND ELECTROENCEPHALOGRAPHY
J. DOUGLAS HUDSON, M.D. PETER W. WERNER, M.D.

RADIOLOGY AND NUCLEAR MEDICINE
JOSEPH H. LAWSON, M.D. BETHEA W. BRINDLEY, M.D.

ADMINISTRATION
JAMES R. JEPSON

CLINIC OF THE SOUTHWEST
6437 High Star at Hillcroft
Houston, Texas 77036 PR 4-7671

INTERNAL MEDICINE
William C. Franklin, M.D.
Arthur B. Conde, M.D.

OBSTETRICS & GYNECOLOGY
Joy L. Deere, M.D.
Loren B. Goss, M.D.

PEDIATRICS
John R. Dunn, Jr., M.D.
Blanca S. Azios, M.D.

PHYSICAL THERAPY
Richard D. Tinsley, R.P.T.

GENERAL SURGERY
Harvey B. Koch, M.D.

UROLOGY
Glen E. Lewis, M.D.

DENTISTRY
Burley G. Ingram, D.D.S.

RADIOLOGY
Neil B. Longley, M.D.
Richard E. Schuette, M.D.

BUSINESS MANAGER
C. C. Walker

Colon and Rectal Surgery

MALCOLM McNATT, M.D., F.A.C.S.
Diplomate of the American Board of Colon and Rectal Surgery
Proctology
Colon and Rectal Surgery
710 Medical Arts Bldg. RIverside 2-2858
Dallas, Texas

ALVIN BALDWIN, JR., M.D., F.A.C.S.
Practice Limited to
Diseases and Surgery of the Colon and Rectum
714 Doctors Building 3707 Gaston Avenue
Dallas, Texas
Off. Tel. 824-2573 Res. Tel. 361-4500

HUGH C. WELSH, M.D.
Proctology and Abdominal Surgery
2715 Fannin Street Houston, Texas

J. WADE HARRIS, M.D., F.A.C.S.
JOHN E. COGAN, M.D., F.A.C.S.
Surgery of the Rectum and Colon
406 Hermann Professional Bldg.
Houston, Texas

C. D. L. CROMAR, M.D.
Surgery of the Rectum and Colon
617 South Tatar Street
Pasadena, Texas 77502

Dermatology

ROGER W. MANAR, M.D.
DERMATOLOGY
SUPERFICIAL X-RAY THERAPY
1400 Eighth Street Wichita Falls, Texas

BEDFORD SHELMIRE, M.D.
BEDFORD SHELMIRE, JR., M.D.
DAVID S. SHELMIRE, M.D.
Dermatology
1410 Medical Arts Bldg. Dallas, Texas

DRS. PIPKIN, RESSMANN & RICHARDSON
J. LEWIS PIPKIN, M.D.
ARTHUR C. RESSMANN, M.D.
A. W. RICHARDSON, M.D.
DERMATOLOGY
X-Ray and Radium in The Treatment of Skin Malignancies
714 Medical Arts Bldg. San Antonio, Texas

EVERETT R. SEALE, M.D.
Dermatology
Treatment of Skin Malignancies
1217 Hermann Professional Bldg. Houston, Texas

J. GILMORE BRAU, M.D.
DERMATOLOGY—SYPHILOLOGY
X-RAY and RADIUM THERAPY
Hours 9 to 1 — 3 to 5
3817 Brown Street Dallas, Texas

J. FRANKLIN CAMPBELL, M.D.
EDMUND N. WALSH, M.D.
Dermatology and Syphilology, and Treatment of Skin Cancer
Radium and X-Ray Therapy
1410 Pruitt Street Fort Worth, Texas

Leslie M. Smith, M.D. H. D. Garrett, M.D.
John C. Wilkinson, M.D.
DRS. SMITH, GARRETT & WILKINSON
Dermatology and Syphilology
X-Ray and Radium in the Treatment of Skin Malignancies
Medical Center, 1501 Arizona El Paso, Texas

WALTER B. MANTOOTH, JR., M.D.
JOE M. LEHMAN, M.D.
ROBERT LEHMAN, M.D.
Dermatology, Syphilology, and Cancer of the Skin
3801 19th St., Suite 500 Lubbock, Texas

MARVIN E. CHERNOSKY, M.D.
DERMATOLOGY AND SYPHILOLOGY
703 Hermann Professional Building
Phone JA 6-3733 Houston, Texas

THOMAS L. SHIELDS, M.D.
Dermatology and Syphilology
X-Ray Therapy in the
Treatment of Skin Malignancies
Hours 9 to 1 — 3 to 5
800 Fifth Ave. Fort Worth, Texas

DAVID R. WEAKLEY, M.D., F.A.C.P.
Dermatology
Treatment of Skin Malignancies
8548 Northwest Plaza Drive Dallas, Texas
315 North Shiloh Road Garland, Texas

M. A. (Mac) HAIRSTON, JR., M.D.
DERMATOLOGY
HAIR TRANSPLANTATION & DERMOPLANING
Memorial City Professional Bldg., 902 Frostwood, Suite 184
(Between Memorial & Katy Fwy.)
Phone: 464-6369 Houston, Texas 77024

JOHN B. McMASTER, JR., M.D.
Dermatology
222-2147
Dermabrasion & Chemosurgery
416 M & S Tower San Antonio, Texas 78205

Eye, Ear, Nose, Throat

M. Ray Harrington, M.D. Lloyd F. Ritchey, M.D.
Jack Blum, M.D.
Ophthalmology and Otolaryngology
8215 Westchester
Suite 135
Dallas, Texas

Drs. Canon, Watkins, Anderson, Nalle and Ellsasser
Eye, Ear, Nose and Throat, Broncho-Esophagology and Allergy
R. T. Canon, M.D., F.A.C.S.
M. D. Watkins, M.D., F.A.C.S., A.I.C.S.
Wm. F. Anderson, M.D., DAB Oph., F.A.C.S.
Ernest Nalle, Jr., M.D. DAB Oto., F.A.C.S., F.I.C.S.
M. G. Ellsasser, M.D., DAB Oph.
West Texas Clinic 1312 Main Lubbock, Texas

W. HUBERT SEALE, M.D.
Eye, Ear, Nose & Throat
HUBERT JAMES SEALE, M.D.
Disease & Surgery of the Eye
OR 3-3751
1321 Hickory St. Abilene, Texas

Gastroenterology

JAMES J. GORMAN, M.D., F.A.C.P.
Gastroenterology
Diagnosis Gastroscopy
1111 El Paso National Bank Bldg.
El Paso, Texas 79901

MILFORD O. ROUSE, M.D.
announces limitation of practice to consultation in hospitals. His office is now at Dallas Chamber of Commerce in Community Health Focus program. Records of his patients are with Cecil O. Patterson, M.D., and Daniel Polter, M.D., 1414 Medical Arts Building, Dallas, 742-6144.

CECIL O. PATTERSON, M.D.
GASTROENTEROLOGY, GASTROSCOPY
ESOPHAGOSCOPY
1414 Medical Arts Building
Dallas, Texas
742-6141

DRS. BAILEY, DOUGLAS AND FISHER
3434 Swiss Avenue, Suite 303, Dallas, Texas
Diseases of the Digestive System
Herbert A. Bailey, M.D. F. Clark Douglas, M.D.
John W. Fisher, M.D.

W. CROCKETT CHEARS, JR., M.D.
GASTROENTEROLOGY
GASTROSCOPY & ESOPHAGOSCOPY
1027 Medical Arts Building
Telephone 748-4975 Dallas, Texas

General Surgery

J. PEYTON BARNES, M.D., F.A.C.S.
Surgery
1000 St. Joseph Professional Bldg.
Houston, Texas 77002

L. GONZALEZ CIGARROA, M.D., F.A.C.S.
Diplomate American Board of Surgery
Practice limited to
SURGERY
1502 Logan Ave. Laredo, Texas

BURT B. SMITH, M.D.
SURGERY
Emphasizing Breast, Thyroid and Gastro-Intestinal Surgery
728 Hermann Professional Building
Phone 523-8323 Houston, Texas 77025

ADOLPH F. KAUFFMANN, M.D., F.A.C.S.
Diplomate American Board of Surgery
GENERAL SURGERY
707 Fifth Ave. Fort Worth, Texas
Phone 332-7597

BRYAN V. WILLIAMS, M.D., F.A.C.S.
Diplomate American Board of Surgery
GENERAL SURGERY
1506 St. Joseph Professional Bldg.
Houston, Texas 77002
227-5505

Internal Medicine

JOHN A. WIGGINS, JR., M.D.
Diseases of the Chest
Bronchoscopy
1105 Pennsylvania Ave. Fort Worth, Texas

HENRY N. GEMOETS, M.D., F.A.C.P., F.C.C.P.
Internal Medicine and Diseases of the Chest and Heart
THOMAS H. GEMOETS, M.D.
Internal Medicine and Diagnosis
1003 Memorial Professional Building
1010 Louisiana Houston, Texas 77002 222-7224

AS NEAR AS YOUR MAILBOX OR TELEPHONE!
TMA MEMORIAL LIBRARY
1801 North Lamar Blvd.
Austin, Texas 78701
512 477-6704

Neurology/Psychiatry

HAUSER CLINIC

Psychiatry, Neurology, and Electroencephalography

Section of Psychiatry
*Abe Hauser, M.D.
*Robert I. Hauser, M.D.
Barry M. Brown, M.D.
*Harris M. Hauser, M.D.

Section of Neurology
*Harris M. Hauser, M.D.
*Gerald Ratinov, M.D.
Robert M. Gordon, M.D.
*Abe Hauser, M.D.

Section of Social Work
Ethel Feinsilver, M.S.

Section of Psychology
Robert Langston, Ph.D.
Consultant
Joanne Borba, M.A.

Administrator
Gordon D. Keller

808 Memorial Professional Building
Houston, Texas 77002
224-5041

*Diplomate, American Board of Psychiatry and Neurology

Perry C. Talkington, M.D.
Charles L. Bloss, M.D.
Howard M. Burkett, M.D.
Jerry M. Lewis, M.D.
James K. Peden, M.D.
Ward G. Dixon, M.D.
Claude L. Jackson, M.D.
E. Clay Griffith, M.D.
Dode M. Hanke, M.D.
Doyle I. Carson, M.D.
Thomas H. Allison, M.D.
Stanley L. Seaton, M.D.
Maurice S. Green, M.D.
Joe W. King, M.D.
Keith H. Johansen, M.D.
Charles G. Markward, M.D.

practice limited to
PSYCHIATRY

4645 Samuell Blvd., Dallas, Texas
Timberlawn Sanitarium
4600 Samuell Blvd., Dallas, Texas
381-7181

STEPHEN WEISZ, M.D.
Practice Limited to
NEUROLOGY and PSYCHIATRY
1637 Medical Arts Bldg. Dallas, Texas
747-5183

ALEX K. MUNSON, M.D.
Child Psychiatry
KERBEY LANE EVALUATION
AND TREATMENT CENTER
3400 Kerbey Lane Austin, Texas 78703
Office Hours by Appointment
AC 512-454-8718

THE FORT WORTH
NEUROPSYCHIATRIC CENTER
*Bernard J. Dolenz, M.D. *Herbert G. Rush, M.D.
1066 W. Magnolia Avenue 336-5469
Fort Worth, Texas 76104
*Diplomates American Board of Psychiatry and Neurology

HOUSTON ASSOCIATES
IN
PSYCHIATRY AND NEUROLOGY
Houston, Texas

C. A. Iannucci, M.D.
Joe C. A. Eckhardt, Jr., M.D.
Alfred H. Vogt, M.D.
George M. Stevens, M.D.
Jules Bohnn, M.D.
Leroy Androes, M.D.
A. R. Martinez, Ph.D.
Ruth Searls, M.S.W.
Diana Sheer, M.S.W.
Dan DeShazo, M.S.W.
Beth Bowman, M.A.

Comprehensive Neuropsychiatric
Evaluation and Treatment
Electroencephalography

1021 Hermann Prof. Bldg. 529-5721
6812 Staffordshire 748-3780

CHAPMAN ISHAM, M.D.
Diplomate American Board of Psychiatry
Child Psychiatry and Marriage Counseling
Hypnotherapy for Smoking and Obesity
3701 21st Street Lubbock, Texas 79410
795-4023

MEDICAL NEUROLOGY AND
ELECTROENCEPHALOGRAPHY
205 Swiss Avenue Medical Building
3434 Swiss
Dallas, Texas 75204 827-3610
Sheff D. Olinger, M.D. Joseph S. Jenike, M.D.
Charles W. Barrier, M.D.
Hours by Appointment Only

DANIEL J. JOUBERT, M.D.
Diplomate American Board of Psychiatry and Neurology
PSYCHIATRY
1900 N. Oregon St. 915-532-4737 El Paso, Texas 79902
303 University Towers

Pasadena Neuropsychiatric Clinic Association
Robert E. Hazlewood, M.D. Richard M. Orr, M.D.
Practice Limited
to
Neurology and Psychiatry
Office Hours by Appointment
First Pasadena State Bank Building
1001 E. Southmore, Suite 1103
Pasadena, Texas 77502 Telephone 473-7646

LABORATORY OF ELECTROENCEPHALOGRAPHY
Jean M. B. Moure, M.D.
Diplomate American Board of Electroencephalography
522-1037
275 Hermann Prof. Bldg. Houston, Tex. 77025

Neurological Surgery

JAMES GREENWOOD, JR., M.D.
Neurosurgery
1117 Hermann Professional Bldg., Houston, Texas 77025
Office: 528-5373 Residence: 528-4038

Morris Sanders, M.D. Jack I. Woolf, M.D.
DRS. WOOLF AND SANDERS
Diplomate American Board of Neurological Surgery
Locke Medical Building, 6011 Harry Hines Blvd.
Dallas, Texas 631-1500

JACK STERN, M.D.
GARY C. HUTCHISON, M.D.
Neurological Surgery
Suite 826, Locke Medical Building
6011 Harry Hines Blvd., Dallas, Texas 75235
631-1822

Casey E. Patterson, M.D. Tom M. Nash, M.D.
Charles W. Simpson, M.D. James E. Bland, M.D.
DRS. NASH, PATTERSON & SIMPSON, ASSN.
Neurological Surgery
637-0420
Suite 557 - Locke Medical Building, 6011 Harry Hines Blvd.
Dallas, Texas 75235

ALBERT D'ERRICO, M.D.
Neurological Surgery
3707 Gaston Avenue Dallas, Texas 75246
Telephone 824-2543

RONALD SMITH, M.D.
Neurological Surgery
901 South Lake Fort Worth, Texas
Telephone 336-0551

GLENN R. CHERRY, M.D., F.A.C.S.
R. GORDON LONG, M.D.
Diplomate American Board of Neurological Surgery
712 North Washington
826-7060 Dallas, Texas

ROBT. C. L. ROBERTSON, M.D., F.A.C.S.
JOSEPH W. ROBERTSON, M.D.
Neurological Surgery
2210 Maroneal Houston, Texas 77025
523-3684

WILLIAM J. NELSON, M.D.
Certified by the American Board of Neurological Surgery
Suite 300
University Towers
915-542-0643
1900 N. Oregon St. El Paso, Texas 79902

CHARLES A. BORNE, JR., M.D.
Neurological Surgery
Suite 834, Sealy-Smith Professional Building
Galveston, Texas 77550
200 University Boulevard 713-763-1688

Nuclear Medicine

HERBERT C. ALLEN, JR., M.D.
Practice Limited to
NUCLEAR MEDICINE
526-1501
100 Hermann Professional Bldg.
Houston, Texas 77025

Ophthalmology

HOUSTON EYE ASSOCIATES
1121 Hermann Professional Building
Houston, Texas 77025
Phone 526-7261
(AC 713)
Richard S. Ruiz, M.D., F.A.C.S.
Charles E. Russo, M.D. Robert H. Stewart, M.D.
Malcolm L. Mazow, M.D. Robert B. Wilkins, M.D.

DRS. MURPHY, ALPAR, TAYLOR & HOWELL
OPHTHALMOLOGY
Weldon O. Murphy, M.D.
John J. Alpar, M.D.
Coleman Taylor, M.D.
J. Franklin Howell, Jr., M.D.
Diplomates of the American Board of Ophthalmology
2300 West 7th Avenue Amarillo, Texas

ALBERT VAISER, M.D.
WILLIAM B. SNYDER, M.D.
Diseases and Surgery of the Retina
318 Medical Arts Building
Dallas, Texas 748-0958

LIEVEN J. VAN RIET, M.D.
OPHTHALMOLOGY
Medical Surgical
224-0654
Saint Joseph Professional Building
Houston, Texas 77002

BERT C. BRYAN, M.D.
Surgery and Diseases of the Eye
1314 Medical Arts Building
747-7474 Dallas, Texas 747-2481

W. REX HAWKINS, M.D.
Detachment of the Retina
Diabetic Retinopathy
250 Hermann Professional Building
Houston, Texas 529-6727

Harold E. Caplan, M.D.
Jed Lee Howard, M.D.
R. Larry Brenner, M.D.
Ophthalmology

3320 Plainview
Pasadena, Texas
713 - 944-5700

Seabrook Professional Bldg.
2622 NASA Road 1
Seabrook, Texas
713 - 877-2571

DAVID R. STAGER, M.D.
PEDIATRIC OPHTHALMOLOGY
8226 Douglas Ave.
Dallas, Texas 75225

ARTHUR M. CLEMENTS, M.D.
Surgery and Diseases of the Eye
(214) 341-3407
Northlake Professional Building
8535 Ferndale Road Dallas, Texas 75238

Orthopedic Surgery

H. H. Beckering, M.D. George Truett James, M.D.
L. Ray Lawson, M.D. Robert D. Vandermeer, M.D.
W. B. CARRELL MEMORIAL CLINIC
2828 Lemmon Ave. Dallas, Texas

FORT WORTH BONE & JOINT CLINIC
918 8th Avenue — Fort Worth, Texas
Louis J. Levy, M.D. Cuvier P. Lipscomb, M.D.
Henry C. McDonald, Jr., M.D. Fred W. Sanders, M.D.

Ralph E. Donnell, M.D. F. Carlton Hodges, M.D.
ORTHOPEDIC ASSOCIATES
Diplomates American Board of Orthopedic Surgery
1133 N. 19th St. Abilene, Texas 79601

HOUSTON ORTHOPEDIC CLINIC
Joseph Barnhart, M.D. Donald T. Lazarz, M.D.
1817 Dryden Road Phone: 529-4389
Houston, Texas

LUBBOCK ORTHOPEDIC SURGERY CLINIC
ROYCE C. LEWIS, JR., M.D.
KENNETH C. SCHOLZ, D.D.S., M.D.
RAY E. SANTOS, M.D.
3702 21st St., Suite 9 806-763-8281
Lubbock, Texas 79410

THE EL PASO
ORTHOPEDIC SURGERY GROUP
Louis W. Breck, M.D. Oren H. Ellis, M.D.
W. Compere Basom, M.D. Wellington J. Pindar, M.D.
Morton H. Leonard, M.D.* Donald A. Shearer, Admstr.
Special attention to surgery of the hand
1220 N. Stanton St. Tel. 533-7465 El Paso, Texas 79902

B. C. HALLEY, JR., M.D.
DAVID R. WEBB, JR., M.D.
Orthopaedic Surgery
3909 Worth at Washington 821-1417
Dallas, Texas 75246

RUSS B. GRAHAM, M.D., F.A.C.S.
3607 Gaston Avenue
Dallas, Texas 75246
ORTHOPEDIC SURGERY
Telephone
824-7883

THE ORTHOPEDIC GROUP OF RICHARDSON
Charles E. Graham, M.D.
M. Gayle Glidewell, M.D.
212 South Cottonwood Suite D
Richardson, Texas 75080
ORTHOPEDIC SURGERY
231-6396

L. LEE LANKFORD, M.D.
Diplomate American Board of Orthopedic Surgery
HAND SURGERY AND
UPPER EXTREMITY RECONSTRUCTIVE
SURGERY
3707 Gaston Ave. Area Code 214
Dallas, Texas 75246 823-5351

THE ARLINGTON ORTHOPEDIC GROUP
H. W. Bendel, Jr., M.D. E. E. Rising, Jr., M.D.
C. Poindexter, M.D.
Diplomates American Board of Orthopaedic Surgery
801 West Randol Mill Road 817 - 261-8284
Arlington, Texas 76010

THE BOSWELL-EVANS ORTHOPAEDIC CLINIC
George M. Boswell, Jr., M.D., F.A.C.S. James P. Evans, M.D.
Lewis R. Thompson, M.D.
Gerald W. Schofield, M.D.
4849 W. Lawther Dr. 348-8300 Dallas, Texas 75218

Otolaryngology

TOM BARR, M.D.
Ear, Nose, and Throat,
Diseases of Larynx, and
Laryngeal Surgery
Medical Arts Building Dallas, Texas

HERBERT H. HARRIS, M.D., F.A.C.S., F.I.C.S.
Oto-Laryngology Broncho-Esophagology
and Laryngeal Surgery
907 Hermann Professional Bldg. Houston, Texas

MARVIN G. SHEPARD, M.D., F.A.C.S.
Practice limited to Otology and Otological Surgery
Medical Tower Building
712 N. Washington
Suite 514
Dallas, Texas Hours By Appt.

W. P. ANTHONY, M.D.
Otology
662 So. Henderson Fort Worth, Texas 76104

DONALD N. MATHESON, M.D., F.A.C.S.
Diplomate American Board of Otolaryngology
800 Fifth Avenue, Phone 336-7133
Fort Worth, Texas

Pathology

MARVIN D. BELL, A.B., M.D.
Clinical Pathology
1109 Medical Arts Bldg. Dallas, Texas

A. B. CAIRNS, M.D.
GERARD NOTEBOOM, M.D.
MARC GARZA, M.D.
RONALD E. BUCHANAN, M.D.
WADE M. BRANNAN, M.D.
Diplomates American Board of Pathology
1105 N. Bishop Methodist Hospital
Dallas, Texas Dallas, Texas

FORT WORTH MEDICAL LABORATORIES
John J. Andujar, M.D.
Dorothy Patras, M.D.
1404 Pennsylvania Ave. (817) 336-7137
P. O. Box 1118 Fort Worth, Texas 76101

BROWN & ASSOCIATES MEDICAL LABORATORY
Tissue Pathology, Exfoliative Cytology, Hematology, Serology, Clinical Chemistry, Bacteriology, Parasitology, Serum Protein Electrophoresis and Hemoglobin Electrophoresis
Wilson G. Brown, M.D. George V. Miller, M.D.
Walter G. Olin, M.D. John R. Thomas, M.D.
S. J. Skinner, M.D. Joe B. Haden, M.D.
Diplomates American Board of Pathology
165 Hermann Professional Bldg., 526-4031
Houston, Texas
"Mailing Containers on Request"
"Office Pickup Service in Houston"

DR. PREUSS PATHOLOGY LABORATORY
Exfoliative Cytology
and Surgical Pathology
FRED S. PREUSS, M.D., F.C.A.P.
3607 Gaston Avenue, Room 305
Dallas, Texas 75226
Telephone: 823-6912
Specimen containers on request

NUCLEAR MEDICINE LABORATORIES
OF TEXAS
6411 South Main Street
Texas Medical Center
Houston, Texas 77025
Completely equipped radioisotope laboratory for diagnostic radioactive tests in:
Hematology, Thyroidology, Endocrinology, Gastroenterology, Cardiology, Neurology, Neuro-Surgery, Urology, Ophthalmology and Obstetrics-Gynecology
Herbert C. Allen, Jr., M.D., Director
526-1501

John H. Childers, M.D. E. H. Valentine, M.D.
R. R. Rember, M.D. W. L. Crofford, M.D.
E. P. Jenevein, M.D.
MEDICAL LABORATORY SERVICE OF DALLAS
Clinical Pathology Surgical Pathology
Diagnostic Radioisotopes Exfoliative Cytology
6011 Harry Hines Boulevard Dallas, Texas 75235
637-0210
(Mailing containers available upon request)

PRUITT MEDICAL LABORATORIES
Jack Pruitt, M.D.
Diplomate, American Board of Pathology
Tissue Pathology, Exfoliative Cytology, Clinical Pathology, Medicolegal Consultation.
P. O. Box 160 Lufkin, Texas 75901
Phone 634-4453

WACO CLINICAL PATHOLOGY LABORATORY
K. P. Wittstruck, M.D., F.C.A.P.
Walter Krohn, M.D., F.C.A.P.
Clinical Pathology Exfoliative Cytology
Surgical Pathology Medicolegal Consultation
Mailing containers on request
2112 Washington Avenue 756-7226
P.O. Box 3160 Waco, Texas 76707

GEORGE J. RACE, M.D. AND ASSOCIATES
PATHOLOGISTS
George J. Race, M.D., Ph.D. William B. Kingsley, M.D.
Gwendolyn Crass, M.D. Norman G. P. Helgeson, M.D.
Marie L. Shaw, M.D. H. Richard Pascoe, M.D.
Surgical Pathology and Cytology Consultation
421 Medical Tower Building
712 North Washington, Dallas, Texas 75246
Telephone AC 214, 824-1258

Physical Medicine and Rehabilitation

TEXAS REHABILITATION HOSPITAL
OF GONZALES
WARM SPRINGS FOUNDATION, INC.
P.O. BOX 58, GONZALES, TEXAS 78629
Facilities for physical restoration.
Physical Therapy, Occupational Therapy, Speech Therapy, Recreational Therapy, School from first grade through twelfth grade.
ROBERT M. IZARD, JR., M.D. LYNN SMITH, SR.
Medical Director Administrator

Plastic Surgery

THOMAS D. CRONIN, M.D., F.A.C.S.
RAYMOND O. BRAUER, M.D.
THOMAS M. BIGGS, M.D.
Diplomates American Board of Plastic Surgery
PLASTIC SURGERY
5419 Caroline Street 523-8131 Houston, Texas 77004

WILLARD C. SELLMAN, JR., M.D.
Plastic, Maxillo-Facial and Hand Surgery
530 Locke Medical Building
6011 Harry Hines Blvd.
Dallas, Texas 75235 637-4770

BROMLEY SMITH FREEMAN, M.D., F.A.C.S.
Diplomate American Boards of Surgery and Plastic Surgery
PLASTIC AND RECONSTRUCTIVE SURGERY
Tumors of the Head and Neck
1810 The Medical Towers — Tel. 529-3579
Houston, Texas 77025 — Res. 782-1628

JOHN B. PATTERSON, M.D., F.A.C.S.
Diplomate American Board
PLASTIC SURGERY
612 Doctors Building — Fort Worth, Texas
336-0356

SIMON FREDRICKS, M.D., F.A.C.S.
Diplomate American Board of Plastic Surgery

Houston Office	*Pasadena Office*
1103 Medical Towers	904½ E. Southmore
Houston, Texas 77025	Pasadena, Texas 77502
523-5575	473-5488

DAVID A. GRANT, M.D., F.A.C.S.
Diplomate American Boards of Surgery and Plastic Surgery
PLASTIC & RECONSTRUCTIVE SURGERY
COSMETIC SURGERY
800 Fifth Avenue
Fort Worth, Texas 76104
335-4751

CARL R. COERS, III, M.D.
Diplomate American Board of Plastic Surgery
PLASTIC, RECONSTRUCTIVE & HAND SURGERY
800 Fifth Avenue
Fort Worth, Texas 76104
335-4751

MARCUS L. FINLEY, M.D., F.A.C.S.
Diplomate American Board of Plastic Surgery
PLASTIC, RECONSTRUCTIVE AND HAND SURGERY
1115A Pennsylvania Avenue
Fort Worth, Texas 76104
Telephone 335-6439

VALENTIN GRACIA, M.D.
F.A.C.S., F.I.C.S., D.A.B.
AESTHETIC SURGERY—BURNS
1001 W. Rosedale — Phone
Fort Worth. Texas 76104 — 336-0446

FRANCIS A. MORRIS, JR., M.D.
WILLIAM E. BARNES, M.D.
Diplomates American Board of Plastic Surgery
Plastic, Reconstructive and Hand Surgery
3100 Red River — 476-9149 — Austin, Texas

Plastic Surgery
JOHN R. HILL, M.D., F.A.C.S.
Diplomate, American Board of Plastic Surgery
Practice limited to Plastic, Reconstructive and Hand Surgery
Medical Center Office: 272 Hermann Prof. Bldg. Houston, Texas 77025 528-2481
Spring Branch Office: 9320 Westview Houston, Texas 77055 528-2481

E. FRANK DUNTON, M.D., F.A.C.S.
Plastic & Reconstructive Surgery and Surgery of the Hand
Telephone 824-7290 — Suite 104, 3434 Swiss Avenue, Dallas, Texas

W. W. SCHUESSLER, M.D., F.A.C.S.
Diplomate of American Board of Plastic Surgery
Plastic, Reconstructive & Maxillo-Facial Surgery
Telephone 533-6362 — Suite 4-C Medical Center, 1501 Arizona Avenue, El Paso, Texas 79902

Radiology

AMARILLO RADIOLOGICAL GROUP
Practice Limited to Radiology
ROYAL WERTZ, M.D., F.A.C.R.
WILBUR Q. BUDD, M.D., D.A.B.R.
800 Rusk Street
Amarillo, Texas 79106 — 373-8324

J. R. MAXFIELD, JR., M.D., M.A.C.R.
JACK G. S. MAXFIELD, M.D., M.A.C.R.
Radiological Center
Including Radioisotopes
2711 Oak Lawn, Dallas — 526-6661

MAURICE C. ARCHER, M.D., M.A.C.R.
MARY L. KILLINGSWORTH, M.D., M.A.C.R.
Diplomates of the American Board of Radiology
800 Fifth Avenue, Fort Worth, Texas — Doctors Building 332-3401

DRS. CARLSON AND BAREKMAN
Glenn D. Carlson, M.D., F.A.C.R.
William H. Barekman, M.D., D.A.B.R.
Agnes M. Guthrie, M.D., D.A.B.R.
X-RAY DIAGNOSIS
X-RAY AND RADIUM THERAPY
RADIOISOTOPES
1221 Medical Arts Bldg.....741-3621
6011 Harry Hines Blvd.....631-7070
3607 Gaston Ave.....823-9961
DALLAS, TEXAS

Harvey M. Lowry, M.D., F.A.C.R.
James R. Gish, M.D., D.A.B.R.
Edward A. Sheldon, M.D., D.A.B.R.
James P. Wills, M.D.
RADIOLOGY

109 Doctors Bldg.	838-4543
502 Goodhue Bldg.	838-2224
Baptist Hospital	833-6421

Beaumont, Texas

JAMES L. CLIFFORD, M.D., D.A.B.R.
Cobalt 60 Rotational Therapy
X-Ray and Radium Therapy
X-Ray Diagnosis
Radioisotopes
845 Clarksville St. — 784-4624 — Paris, Texas

DOCTORS McCONNELL, RIDINGS AND FULLER
208 Locke Medical Building — Telephone 637-0774
6011 Harry Hines Boulevard
Dallas, Texas 75235
R. W. McConnell, M.D.
Practice Limited to Nuclear Medicine
G. Ray Ridings, M.D.
D. E. Fuller, M.D.
Practice Limited to Radiation Therapy

Thoracic Surgery

Donald L. Paulson, M.D. Harold C. Urschel, Jr., M.D.
DRS. PAULSON AND URSCHEL
Thoracic and Cardiovascular Surgery
3810 Swiss Ave. 824-2503
Dallas, Texas

THORACIC AND CARDIOVASCULAR SURGERY
James O. McBride, M.D., F.A.C.S.
662 South Henderson, Suite A
P. O. Box 1407
Fort Worth, Texas 76102
332-7454 738-4594

Charles T. Meadows, M.D.
Diplomate, American Board of Thoracic Surgery
Thoracic and Cardiovascular Surgery
Broncho-esophagology
The Professional Building
673-8184
1101 North 19th Abilene, Texas

LeROY J. KLEINSASSER, M.D., F.A.C.S.
Diplomate American Board of Surgery &
The Board of Thoracic Surgery
CARDIOVASCULAR and
PERIPHERAL VASCULAR SURGERY
The Doctors Bldg., 3707 Gaston Ave.
Dallas 10, Texas

Robert R. Shaw, M.D. John L. Kee, Jr., M.D.
DRS. SHAW AND KEE
THORACIC SURGERY
The Doctors Building 3707 Gaston Avenue
Dallas, Texas 75246
826-5184

WILLIAM W. TAYLOR, M.D.
Diplomate Board of Thoracic Surgery
Thoracic, Cardiac, and Vascular Surgery
804 Locke Med. Bldg. 6011 Harry Hines Blvd.
Dallas, Texas 75235 637-4833

ELLIOTT MENDENHALL, JR., M.D., F.A.C.S.
Thoracic, Cardiac, and Vascular Surgery
Diplomate American Board of Surgery and
Board of Thoracic Surgery
598 Westwood, Suite 204 677-2221
Abilene, Texas 79603

ALLAN L. GRAHAM, M.D.
Diplomate American Board of Surgery and
Board of Thoracic Surgery
Cardiovascular and Peripheral Vascular Surgery
502 Doctors Building 800 Fifth Avenue
Fort Worth, Texas 332-7879

Urology

CECIL M. CRIGLER, M.D., F.A.C.S.
Practice limited to
UROLOGY
1519 Hermann Professional Bldg., Houston, Texas

JO C. ALEXANDER, M.D.
KARL B. KING, M.D. FOSTER FUQUA, M.D.
ELGIN W. WARE, JR., M.D.
GEORGE E. HURT, JR., M.D.
EUGENE R. TODD, M.D.
DONALD E. JOHNSON, M.D.
Urology
3707 Gaston Avenue Dallas, Texas

THE UROLOGY CLINIC
1415 Pennsylvania Ave., Fort Worth, Texas 76104
Dolphus E. Compere, M.D., M.S., F.A.C.S.
Diplomate of American Board of Urology
Grant F. Begley, A.B., M.D.
Diplomate of American Board of Urology
Hugh Lamensdorf, M.D.

H. M. GIBSON, JR., M.D., F.A.C.S.
(Certified by American Board of Urology)
Practice limited to
UROLOGY
512 University Towers Bldg. 1900 North Oregon St.
El Paso, Texas Ph. 532-8130 & 533-4765

MARVIN GREER RAPE, M.D.
Diplomate of American Board of Urology
NEWTON F. McDONALD, M.D.
Diplomate of American Board of Urology
Practice Limited to
UROLOGY
1703 St. Joseph Professional Bldg., 2000 Crawford
Houston, Texas 77002

JOHN B. TRIBLE, M.D.
Practice Limited to
UROLOGY
1209-10 Medical Arts Bldg.
222-7521 Houston, Texas 77002

ERWIN C. WINKEL, M.D.
practice limited to
UROLOGY
Northwest Professional Center 681-0343
2925 West T.C. Jester Blvd. Houston, Texas

THE UROLOGY CLINIC
1010 Louisiana, Houston, Texas 77002
227-1414
JAMES S. BOREN, M.D.
ROBERT I. COX, M.D.
Diplomates American Board of Urology

Richard H. Harrison III, M.D. John M. Baird, M.D.
F.A.C.S., D.A.B.U.
DRS. HARRISON AND BAIRD
UROLOGY
2721 Osler Blvd. 823-0011 Bryan, Texas 77801

JOHN F. COLLINS, JR., M.D.
Urology
Doctor's Park 1400 Crescent
Denton, Texas 76201 (817) 387-3828

103rd Annual Session of the
Texas Medical Association
April 30-May 3, 1970 Dallas

CLASSIFIED ADS

Physicians Wanted

WANTED—M.D.'s to do general practice with surgery, Houston area. Present doctors netting $4,000 to $8,000 monthly after six months practice. No investment required. Send resume to Ad-179, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

ORTHOPEDIC SURGEON AND TWO GP's needed by 19 doctor group. 100-bed fully accredited hospital. Salary open. Full partnership in one year. For additional details, write John B. Chester, M.D., 3330 South Lancaster Road, Dallas, Texas 75216.

GENERAL PRACTITIONER NEEDED to assume well-established practice in Milford, Texas. The community's only doctor recently suffered a heart attack and has moved. An eight room small clinic owned by the City is available rent free. Income limited only by interest and ability. Good school and churches. Twelve and 17 miles from two first-class hospitals, 48 miles south of Dallas, 48 miles north of Waco. Contact C. O. Miller, P.O. Box 546, Milford, Texas 76670, area code 214, 493-2511.

DERMATOLOGIST, EENT AND GENERAL PRACTITIONER WANTED to associate with clinic with five physicians, two dentists, one orthodontist. Also complete laboratory and x-ray facilities. Write John G. Compton, Jr., M.D., Medical Center Clinic, Waxahachie, Texas 75165.

INTERNIST, board certified or eligible to join four internists in 15-doctor, multi-specialty clinic in West Texas city of 35,000. Life and malpractice insurance, disability and retirement programs provided. Modern clinic building adjacent to accredited hospital. Starting salary $25,000. Contact Jack H. Burnett, Jr., M.D., Malone and Hogan Clinic, 901 Main Street, Big Spring, Texas 79720.

EXCELLENT OPPORTUNITY FOR PHYSICIANS in Carrizo Springs, Texas. Office space available in new professional building adjacent to hospital and nursing home. Excellent schools and housing in city. One general practitioner needed. For information write or call C. W. Vandervoort, 500 North 1st Street, Carrizo Springs, Texas 78834. Phone 876-2550.

UROLOGIST, board certified or eligible, to associate with a progressive and expanding multispecialty group in West Texas. Many fringe benefits including retirement program. No investment required. Adjoining accredited hospital. City population 35,000. Contact Ad-236, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

RADIOLOGIST, board certified or eligible, to associate with a progressive and expanding multispecialty group in West Texas. Many fringe benefits including retirement program. No investment required. Adjoining accredited hospital. City population 35,000. Contact Ad-236, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

PEDIATRICIAN, board certified or eligible, to associate with a progressive and expanding multispecialty group in West Texas. Many fringe benefits including retirement program. No investment required. Adjoining accredited hospital. City population 35,000. Contact Ad-236, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

ORTHOPEDIC SURGEON, PEDIATRICIAN, OBSTETRICIAN AND TWO GENERAL PRACTITIONERS needed by 19 doctor-group. Salary open. Full partnership in one year. 100-bed fully accredited hospital. Many fringe benefits including tax-sheltered retirement plan. For additional details write Chester Clinic and Hospital Association, 3330 South Lancaster Road, Dallas, Texas 75216, Attn: John B. Chester, M.D.

WANTED GENERAL SURGEON as an associate with GP in small town in Central Texas. Have privately owned combination clinic and hospital. Beginning salary $4,000 per month or may rent space and be on own. Dr. M. A. Childress, Goldthwaite, Texas 76844. Phone 648-2212.

PHYSICIANS NEEDED: Staff physicians, general practitioners and/or board certified specialists, for staff of Travis State School. Fringe benefits include 40 hour work week, vacation and sick leave. Present and projected salary increases make positions attractive. Contact Medical Director, Travis State School, P.O. Box 430, Austin, Texas 78767.

GENERAL PRACTITIONER OR GP-SURGEON WANTED in East Texas community of Crockett (Houston County). Office space available for solo practice or association with other physicians in area—106-bed new hospital. Center for industry, farming, livestock, and forestry operations. Excellent schools, churches, and recreational facilities available. For additional information contact Houston County Development Foundation, P.O. Box 307, Crockett, Texas 75835, area code 713, 544-2359.

GENERAL PRACTITIONER NEEDED for North Central Texas community of 1600 located only 50 miles north of Dallas in the growing Sherman-Denison Metropolitan Area. Strong agricultural economy is balanced with fast growing area industry. Modern office space available in building occupied on one side by dentist. For full details, contact Ned Culp, D.D.S., P.O. Box 308, Howe, Texas 75059.

GENERAL PRACTITIONER NEEDED to associate with well-established physician in Dallas area. Contact: Ben Capote, M.D., 308 NW 2nd, Grand Prairie, Texas 75050.

WANTED: SOMEONE WHO WANTS TO MAKE A LOT OF MONEY AND IS WILLING TO WORK: Denver City, Yoakum County, Texas, needs a general practitioner who does general surgery. Present physician is leaving to enter industrial medicine. Completely equipped clinic, modern fifty bed hospital. This is one of the most lucrative practices in the State of Texas. Retiring Doctor has left all records here and they are available. Arrangements can be made to either purchase or lease clinic that will make this most attractive. For more information call or write Manager, Yoakum County Hospital, 612 West 4th Street, Denver City, Texas 79323, or telephone AC506, 592-2121.

GENERAL PRACTITIONER WANTED to join five man clinic in growing town of Clifton, 30 miles northwest of Waco near Lake Whitney. 41-bed fully accredited hospital with plans to expand by 30 beds. Salary to start, commensurate with present requirements; partnership later. Good schools, churches and hunting and fishing facilities. Contact V. D. Goodall, M.D., Goodall & Witcher Clinic, Clifton, Texas 76634.

CHIEF OF MEDICINE: Modern chest disease hospital needs internist, preferably with respiratory experience, to assume supervision of an 11-man medical staff, and serve as consultant to the surgical division. A special program for rehabilitation of patients with chronic obstructive chest diseases operates as an integral unit of the hospital which is affiliated with The University of Texas Southwestern Medical School. Entering salary is $22,500 per annum with an additional $1,000 for board certification. Fringe benefits include dual retirement plans, paid vacations and sick leave and 40-hour week. This is a challenging position in a progressive community of 60,000 in the rolling piney woods of East Texas, 100 miles east of metropolitan Dallas. Candidates must be licensed in Texas, be board certified, or eligible for certification. Submit resume or contact Personnel Officer, East Texas TB Hospital, P. O. Box 2003, Tyler, Texas 75701. (Equal opportunity employer)

PRIVATE INDIVIDUAL PRACTICE—$30,000 guaranteed first year with little or no practice expense. Second year potential unlimited. Maximum leisure time with family. Suburban medical center with lovely residential area five minutes away. Sanford Smith, Northshore Medical Center, AC 713, 453-5454, P.O. Box 9836, Houston, Texas 77015.

PSYCHIATRIC RESIDENCY in approved three year program. Effective connections with universities, medical schools, private clinics, and community centers. Outstanding faculty, and programs. Stipends with Texas license, $13,000, $14,000 and $15,000 per year. NIMH grants available. For full information write: Anthony P. Rousos, M.D., Director of Training, Austin State Hospital, Austin, Texas 78751.

INDUSTRIAL MEDICAL CLINIC LOCATED IN DALLAS NEEDS A GENERAL PRACTITIONER. First year salary guaranteed and is based upon experience with future percentage partnership. Please reply to Charles E. Cook, M.D., 426 Medical Arts Building, 1719 Pacific Avenue, telephone 747-3712, or 650 Locke Medical Building, 6011 Harry Hines Blvd., telephone 638-2730.

WANTED: GENERAL PRACTITIONER, INTERNIST, OR PEDIATRICIAN to join professional association in East Texas town of 15,000. Good benefits. Hospital nearby. Excellent schools and churches. For full details, contact: William W. Rugeley, Manager, Huntsville Medical and Dental Clinic Association, 1433 16th Street, Huntsville, Texas 77340.

WANTED: LOCUM TENENS to do general medicine (no OB or surgery). Advise of time available. Salary open. Send medical curriculum vitae and references to Monroe Albert, M.D., 3118 Clark Avenue, San Antonio, Texas 78210.

WANTED: ASSOCIATE to associate with doctor doing internal medicine and cardiology. Equal time off. Salary for six months, then percentage on yearly sliding scale. Send medical curriculum vitae and references to Monroe Albert, M.D., 3118 Clark Avenue, San Antonio, Texas 78210.

WANTED: PARTNERSHIP to buy part, half or full interest in clinic building and practice of 21 years in metropolitan city in South Central Texas, consisting primarily of internal medicine. Large annual gross. Fair appraisal made of both before price placed on same. Send medical curriculum vitae to Ad-265, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

GENERAL PRACTITIONER to take over large, solo practice in GP and surgery. Present MD to move in June due to progressive family allergies. Recently built office, 3-bedroom, 2½ bath home, and mobile home on lake lot for sale, lease, or rent with option to buy part or all. Town of 9,000 in Lower Rio Grande Valley of Texas. 26-bed hospital, 50-bed nursing home, good schools, churches, hunting, fishing, boating, golf, near Mexico and Gulf of Mexico. Excellent opportunity for young, energetic MD. Should gross in excess of $60,000 first or second year. Offer not open to limited practitioner or semi-retired. Gene E. Bennack, M.D., 505 South 10th Street, Raymondville, Texas 78580. Phone 689-2188.

ASSOCIATE RADIOLOGIST WANTED. Expanding hospital to 200 beds. Salary open. Contact B. R. Pugh, DeTar Hospital, 506 East San Antonio, Victoria, Texas, 77901. Phone AC 512, 575-7441.

PATHOLOGY RESIDENCIES AND INTERNSHIPS available in 600-bed general hospital. Fully approved four year program in anatomical and clinical pathology. Average annual specimens and tests—348,587. Interns—$6300; residents—$8100 up. Board and laundry. Charles B. Mitchell, M.D., Director of Laboratories, Harris Hospital, 1300 West Cannon, Fort Worth, Texas 76104.

DIRECTOR PULMONARY REHABILITATION: Progressive respiratory disease hospital affiliated with The University of Texas Southwestern Medical School needs a physician experienced in pulmonary physiology to head a special program for the rehabilitation of patients with chronic obstructive chest diseases. Entering salary is $22,500 per annum, with an additional $1,000 for board certification. Fringe benefits include dual retirement plans, paid vacations, sick leave and 40-hour week. This is a challenging position in a progressive community of 60,000 in the rolling piney woods of East Texas, 100 miles east of metropolitan Dallas. Candidates must be licensed in Texas, be board certified or eligible for certification. Submit resume or contact Personnel Officer, East Texas TB Hospital, P. O. Box 2003, Tyler, Texas 75701. (Equal opportunity employer)

INTERNIST-CARDIOLOGIST NEEDED. Office complete. Growing industrial area. County population 75,000. 205 bed fully accredited hospital with 10 bed ICU unit newly completed and fully equipped for CCU. No other internist in town. Excellent opportunity. Beautiful, friendly community. Camping, boating, fishing and hunting. Near Houston. Write Mrs. G. D. Garcia, 1915 Greenbriar Avenue, Orange, Texas 77630.

CLASSIFIED AD RATES & DATA: Classified Advertising sells for $6.00 per issue for 50 words or less, payable in advance. Ad numbers can be substituted for formal addresses upon request at no extra cost. Name and address of ad number listings can not be given out unless specific permission to do so has been given. The advertising office will not contact ad number holders except by mail. Copy deadline is the 20th of the month preceding publication. Send copy to Advertising Assistant, TEXAS MEDICINE, 1801 North Lamar Blvd., Austin, Texas 78701.

MD WANTED: Small East Texas town located in growth center surrounding Lone Star Steel Company plant. Hughes Springs has a population of approximately 2,300 persons but is in a trade area of two other towns, Daingerfield and Lone Star, Texas, with a combined population of approximately 14,000 people. This area is presently served by five MDs. There is a 32-bed, ultra-modern hospital located only eight miles from Hughes Springs, The Hospital in the Pines. Hughes Springs is a 40 minute drive from Longview, Texas, an 80 minute drive from Shreveport, Louisiana, and a 95 minute drive from Dallas, Texas. The entire area is growing rapidly with the steel industry the predominant industry. There are four large lakes noted for recreation and fishing from ten to twenty miles from Hughes Springs. The city is beautifully located in the pine belt of East Texas. The terrain is hilly and covered with pine trees. There are excellent prospects for a doctor who would like to live in a more relaxed, rural setting. The Chamber of Commerce is more than willing to pay the expenses of any interested applicant to and from Hughes Springs. Please contact Mr. Bill Moore, Secretary, Hughes Springs Chamber of Commerce, P. O. Box 218, Hughes Springs, Texas 75656. Telephone AC 214, 639-2351.

ADMITTING PHYSICIAN—Vacancy in staff of five full-time physicians. Certification not required. 1300-bed teaching hospital, excellent facilities, regular scheduled hours. Write Chief of Staff, VA Hospital, Houston, Texas.

INTERNIST for group of eight in Central Texas. Percentage of practice with annual guaranteed income of $35,000. Please reply to Ad-269, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

STAFF PHYSICIAN: Chest disease hospital affiliated with The University of Texas Southwestern Medical School needs a physician, preferably with chest experience, to join an 11-man staff. Entering salary is $20,000 to $21,500 per annum, depending on experience. There is an additional $1,000 for board certification. Fringe benefits include dual retirement plans, paid vacation and sick leave and 40-hour week. This is a challenging position in a progressive community of 60,000 in the rolling piney woods of East Texas. Candidates must be licensed to practice in Texas. Suhmit resume or contact Personnel Officer, East Texas TB Hospital, P. O. Box 2003, Tyler, Texas 75701. (Equal opportunity employer)

WANTED: MD TO DO GENERAL PRACTICE AND SURGERY. Presently a two member practice, one MD leaving. Starting guarantee $2000 monthly. No investment required. New hospital and clinic in the planning phase. Contact Dr. D. V. Rodgers, Blackwell Hospital and Clinic, Gorman, Texas 76454.

PEDIATRICIAN: BOARD CERTIFIED OR ELIGIBLE, to associate with one other pediatrician in 13-man multispecialty group. Liberal fringe benefits and retirement program. Modern, newly redecorated building within one block of two hospitals. City size over 100,000. Beginning salary $25,000 per year plus percentage. Please reply to Ad-273, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

WANTED: GENERAL PRACTITIONER to assume well-established practice of 25 years in two doctor modern clinic with open staff privileges in new 50-bed hospital. City of 10,000. Excellent schools, churches, industries, recreational facilities. Present owner planning retirement. Will introduce. Please reply to Ad-271, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

GENERAL PRACTITIONER WANTED—Modern office space and hospital available. In town of 2,000; trade area of 5,000. Made up of stable economy and permanent residents. Located in the heart of the Hill Country, where excellent hunting and fishing are always available. Good schools and numerous churches. Contact immediately. Administrator, Mason Memorial Hospital, Mason, Texas 76856.

WANTED: GENERAL PRACTITIONER WITH INTEREST IN SURGERY; GENERAL PRACTITIONER WITH INTEREST IN INTERNAL MEDICINE OR INTERNIST WITH INTEREST IN CARDIOLOGY to associate with a general practitioner with training in surgery. No other active general practitioner in area of about 8,000 people. Modern clinic building for three or four doctors next to 40-bed open staff hospital. Located on Interstate 10, 60 miles from Houston. Area primarily industrial. Fine schools. Excellent hunting and fishing. Salary or partnership negotiable. Contact C. I. Shult, M.D., 1220 Bowie Street, Columbus, Texas 78934. Phone AC 713, 732-2318 or 732-2373.

Situations Wanted

MD SEEKS OPENING in state, federal, insurance, industrial, college or relief work. Experienced in private practice and industrial and institutional work. Part time or locum tenens. Please reply to Ad-195, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

GP-SURGEON completing military service summer 1970 looking for partnership in small or medium sized town. Prefer 2 or 3 man GP group. Have completed GP residency and will do OB and surgery. Reply to Ad-266, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

ORTHOPEDIC SURGEON with extensive experience. Presently, chief of active service in a Texas hospital. Desires association with established surgeon or group. Prefer Central or East Texas. Reply to Ad-267, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

RADIOLOGIST, university trained, age 41. Certified 1963, diagnosis, therapy, and isotopes. Prefer group or private practice in city of 500,000 or less. Please reply to Philip M. Platten, M.D., 502 Queens Road, Salina, Kansas 67401.

CARDIOVASCULAR SURGEON: Thoracic board certified. Age 34, university trained. Military completed October 1970. Desire partnership or association. Prefer Dallas-Fort Worth area, will consider other. Practice with cardiac surgery and teaching opportunity essential. Please reply to Ad-270, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

PHYSICIAN WITH E.C.F.M.G. Complete internal medicine training and one year of oncology. Seeking association with a group in Texas, preferably Houston or toward the north of the state. Available July 1970. Please reply to Ad-272, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

For Sale or For Rent

MEDICAL OFFICE FOR RENT: Prime location in North Dallas. Completely partitioned and available for immediate occupancy. Call area code 214, 363-6415 or 363-2770, or write Dr. Robert Londeree, 6140 Sherry Lane, Dallas, Texas 75225.

PRACTICE AND EQUIPMENT AVAILABLE. Recently vacated, completely equipped 1800 square foot medical clinic after 17 years practice, suburban Dallas. Excellent opportunity and facilities for two to three physicians to share. Area's steady and rapid growth creates urgent need for general practitioners, pediatricians, internists. Graduated rent until established. Inquire Allen Maurice Fain, M.D., 8303 Marvin Love Freeway, Dallas, Texas 75216.

AVAILABLE—Office suite designed for obstetrician or general practitioner in doctors building. Richardson, Texas. For additional information call AC 214, 363-2001, Dallas.

FOR SALE: A used stationary hip type whirlpool with rotating chair —in excellent condition. Contact Austin Bone & Joint Clinic, 1011 East 32nd Street, Austin, Texas 78705, AC 512, 477-6341.

OFFICES AVAILABLE—Highly prosperous suburb, Houston, Texas. New office suites available with established physicians. Area needs otolaryngology, orthopedics, pediatrics, general practice, obstetrics and gynecology. For information call HO 4-1557 or write James E. Cook, M.D., 9320 Westview, Houston, Texas 77055. All new physicians in this area have been successful in very short period of time.

Miscellaneous

WANTED: PHARMACY LOCATION in clinic with 18 or more doctors. Contact Robert Grantham, Jr., P.O. Box 13350, Houston, Texas 77019.

SOUTHWEST REGIONAL POISON CONTROL CENTER AND TOXICOLOGY LABORATORY. Free toxicological consultation and information on medicinal and commercial products is available by phone when your patients are poisoned. Center is open 24 hours each day, 7 days a week, with professionally trained staff present. Call area code 713, 765-1420. Toxicological analyses performed by prearrangement with Dr. Nash, AC 713, 765-2408, University of Texas Medical Branch, Galveston, Texas 77550. Supported by PHS-CPF-69-21.

FOR SALE: FINE ART. Doctors only. Antique paintings, silver, porcelains, crystal, cut glass, bronzes, persian rugs. Paintings by Robert Wood, Salinas, Grandee, Fried Pal, Rockwell, Onderdonk, Wiggins, Ryder, Cortes, Dyf, Sharp, Picasso and others. Contact Carl F. Rainone, D.D.S., 1212 West Park Row, Arlington, Texas 76010. Phone AC 817, 261-7844.

RANCH or FARM
PLANNING
CONSULTING
MANAGING

LOUIS LEE FARR III

30 YEARS EXPERIENCE

PO BOX 1782 · PHONE (915) 655-2838
SAN ANGELO, TEXAS 76901

REGISTER NOW FOR
1970 TMA ANNUAL SESSION
See forms on page 97

ADVERTISING INDEX

Arch Laboratories
Dicarbosil 22

Beverly Hills Hospital and Clinic 107

Blue Cross-Blue Shield of Texas 7

Borden, Inc.
Dairy Foods P68

The Brown Pharmaceutical Company
Android 36
Cerebro-Nicin 36

Bristol Laboratories
Tetrex bidcaps 114

Burroughs Wellcome & Company, Inc.
Empirin Compound with Codeine 42

Campbell Soup Company 75

Casualty Indemnity Exchange
Malpractice Insurance 35

Conal Pharmaceuticals, Inc.
Urised 34

Custom Home Elevator Co.
Welcolator 22

Dallas Medical & Surgical Clinic and Hospital 2nd Cover

Louis Lee Farr, III
Ranch or Farm Planning, Consulting, Managing 128

The Fort Worth Clinical Symposium 22

Francis Hospitels Incorporated
Convalescent Care 112

Harcliffe Laboratories, Inc.
StomAseptine 8

Highland Hospital 40

Hoechst Pharmaceutical Co. P62

Homestead Child Placement 108

Humco Laboratory
Vasomist 40

Hynson, Westcott and Dunning, Inc.
Lactinex 115

Ives Laboratories, Inc.
Isordil P48

Mead Johnson Laboratories
K-Lyte 38-39
Mucomyst-10 10-11
Vasodilan 110-111

Kelsey-Seybold Clinic 93

The Killgore Children's Psychiatric Center and Hospital, Inc. 15

King's Daughters Clinic Back Cover

Lederle Laboratories
Achromycin V 41
Achrostatin V P28
Declostatin 130

Eli Lilly and Company
Illosone 16

The Martin X-Ray and Radium Clinic 32

Medical Arts Clinic, Corsicana 116

The Medical Protective Company
Professional Liability Insurance 32

Merck Sharp & Dohme
Indocin P50-P52

The Wm. S. Merrell Company
Kolantyl P40

National Car Rental P64

The National Drug Company
AVC 14
Quinamm 13
Tepanil Ten-tab 43

Oncology—Fort Worth 108

Ortho Comfort Stores
Adjust-A-Bed P64

Parke, Davis & Company
Benylin Expectorant 23
Thera-Combex H-P 78

William P. Poythress & Company, Inc.
Uro-Phosphate 26

T. Rowe Price Growth Stock Fund, Inc. P64

The Prudential Insurance Company of America
TMA Group Insurance Plan 94

Radiology Associates of Fort Worth 116

A. H. Robins Company
Ambar #2 Extentabs P26
Dimetapp Extentabs 87
Phenaphen with Codeine 88

Roche Laboratories
Berocca 37, 3rd Cover
Librium 113

Scott and White Clinic Back Cover

G. D. Searle & Company
Ovulen-21 76-77

Starlite Village Clinic 116

Stuart Pharmaceuticals
Mylanta P32

Surgical Mechanical Research, Inc.
Medical and Dental Equipment P28

Terrell's Laboratories and Medical Group 1

Texas Electronic Precipitator Co. P58

Texas Medical Association
1970 Annual Session 97-100, P84
Memorial Library 12
Orient Adventure 9
Texas Medicine 109

Timberlawn Psychiatric Hospital 93

Torbett, Hutchings, Smith Memorial Hospital 2nd Cover

Travis Clinic and Nan Travis Memorial Hospital 116

Turner's Clinical & X-Ray Laboratories 32

The University of Texas M. D. Anderson Hospital and Tumor Institute
Department of Virology 108

Wichita Falls Clinic-Hospital 108

Wyeth Laboratories
Equanil 24-25

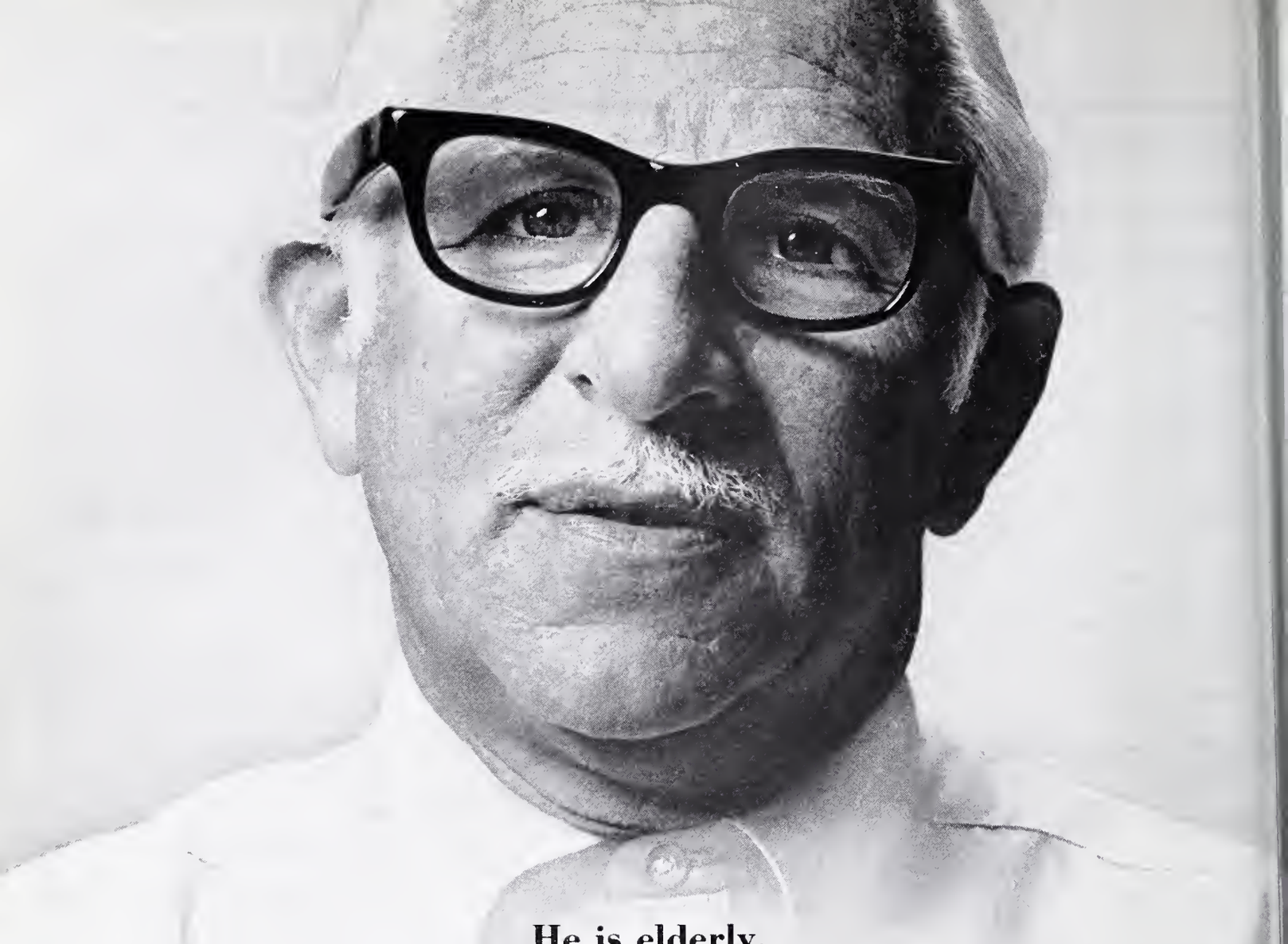
Physicians' Directory 117-126

Classified Advertisements 127-128

ADVERTISING RATES & DATA: Available on request from the Advertising Director, Texas Medicine. Advertising plates should be sent directly to the printer. Space reservations, copy and proofs should be sent to the Advertising Director. Represented nationally by the State Medical Journal Advertising Bureau, Inc., 1010 Lake Street, Oak Park, Ill. 60301.

ADVERTISING & BUSINESS OFFICES: Texas Medical Association, 1801 North Lamar Blvd., Austin 78701; Telephone: 512-477-6704.

PRINTING OFFICES: Texas Medicine, c/o Stafford-Lowdon Company, 1114 West Daggett, Fort Worth 76104.



He is elderly.
He is on corticosteroids.
When he needs an antibiotic
he may be a candidate for

DECLOSTATIN® 300

Demethylchlortetracycline HCl 300 mg and Nystatin 500,000 units CAPSULE-SHAPED TABLETS Lederle

b.i.d.

To guard susceptible patients against intestinal monilial overgrowth during broad-spectrum therapy—the protection of nystatin is combined with demethylchlortetracycline in DECLOSTATIN.

For your susceptible candidates, prescribe DECLOSTATIN—the broad-spectrum therapy that prevents monilial overgrowth.

Effectiveness: Because its antibacterial component is DECLOMYCIN Demethylchlortetracycline, DECLOSTATIN should be equally or more effective therapeutically than other tetracyclines in infections caused by tetracycline-sensitive organisms. The antifungal component, Nystatin, protects against superinfection by antibiotic-resistant fungal overgrowth (particularly monilia) in the intestinal tract.

Contraindication: History of hypersensitivity to demethylchlortetracycline or nystatin.

Warning: In renal impairment, usual doses may lead to excessive accumulation and liver toxicity. Under such conditions, lower than usual doses are indicated, and, if therapy is prolonged, serum level determinations may be advisable. A photodynamic reaction to natural or artificial sunlight has been observed. Small amounts of drug and short exposure may produce an exaggerated sunburn reaction which may range from erythema to severe skin manifestations. In a smaller proportion, photoallergic reactions have been reported. Patients should avoid direct exposure to sunlight and discontinue drug at the first evidence of skin discomfort. Necessary subsequent courses of treatment with tetracyclines should be carefully observed.

Precautions: Overgrowth of nonsusceptible organisms may occur. Constant observation is essential. If new infections appear, appropriate measures should be taken. In infants, increased intracranial pressure with bulging fontanels has been observed. All signs and symptoms have disappeared rapidly upon cessation of treatment.

Side Effects: Gastrointestinal system—anorexia, nausea, vomiting, diarrhea, stomatitis, glossitis, enterocolitis, pruritus ani. Skin—maculopapular and erythematous rashes; a rare case of exfoliative dermatitis has been reported. Photosensitivity; onycholysis and discoloration of the nails (rare). Kidney—rise in BUN, apparently dose related. Transient increase in urinary output, sometimes accompanied by thirst (rare). Hypersensitivity reactions—urticaria, angioneurotic edema, anaphylaxis. Teeth—dental staining (yellow-brown) in children of mothers given this drug during the latter half of pregnancy, and in children given the drug during the neonatal period, infancy and early childhood. Enamel hypoplasia has been seen in a few children. If adverse reaction or idiosyncrasy occurs, discontinue medication and institute appropriate therapy. Demethylchlortetracycline may form a stable calcium complex in any bone-forming tissue with no serious harmful effects reported thus far in humans.

Average Adult Daily Dosage: 150 mg q.i.d. or 300 mg b.i.d. Should be given 1 hour before or 2 hours after meals, since absorption is impaired by the concomitant administration of high calcium content drugs, foods and some dairy products. Treatment of streptococcal infections should continue for 10 days, even though symptoms have subsided.

Lederle

LEDERLE LABORATORIES
A Division of American Cyanamid Company, Pearl River, New York

345-8

Texas
Medical
Association

April 30 - May 3
Dallas 1970

ANNUAL SESSION PROGRAM

TEXAS MEDICAL ASSOCIATION

103rd ANNUAL SESSION PROGRAM

April 30-May 3, 1970

Dallas, Texas

HIGHLIGHTS

HOW TO USE THIS PROGRAM

LOOK FOR—	ON PAGE—
Presidents and Presidents-Elect	4
Services (Registration, Ticket Sales, Messages, Information, First Aid, News Room, Stenographers, Equipment)	3
Hotels and Motels	4
Special Programs	5
Entertainment (Saturday Night at the Fairmont, Fifty Year Club, Past Presidents Association, Alumni Events, Fraternity Functions, Class Reunions, Sports)	5
Business Activities (House of Delegates, Reference Committees, Board, Council, and Committee Meetings, TEXPAC)	7
Annual Session Committees	8
Guest Speakers (with all their speaking engagements, hosts, and sponsoring societies)	9
Special Speakers	14
General Meetings and Luncheons	17
Memorial Service	19
Forum of Original Research	19
Continental Breakfast Round Table Presentations	22
Curbstone Consultations	22
Section Meetings	24
Specialty Programs (Related Organizations, Other Specialty Groups, Special Programs of Association)	39
Exhibits (Art, Film Program, Scientific, Technical)	63

SERVICES

Registration and Ticket Sales

There is no registration fee for members of the Texas Medical Association, participants in the annual session program, interns, residents, or individuals in allied health disciplines, such as medical students, medical assistants, nurses, and technicians.

A registration fee of $10 is charged for all other nonmember physicians. The registration and ticket sales areas will be open during the following hours:

Fairmont Hotel
(International Ballroom Lobby—Lobby Level)

Wednesday	1:30-5 p.m.
Thursday	7:30 a.m.-5:30 p.m.
Friday	7:30 a.m.-5:30 p.m.
Saturday	7:30 a.m.-4 p.m.

Statler Hilton Hotel
(Grand Ballroom Foyer-Mezzanine)

Wednesday	1:30-7 p.m.
Thursday	7 a.m.-12 Noon

Materials for those who have preregistered may be picked up at sections designated for advance registration.

Messages and Information

Messages may be transmitted and received Thursday, Friday, and Saturday from the Message Center (located in the Coat Room, International Ballroom Lobby, Fairmont Hotel). The Message Center (telephone 748-8324) will accept emergency messages for physicians and will post lists of those receiving such messages in the meeting areas of the Association headquarters hotels. Physicians are asked to encourage their office staffs, families, and patients to keep their calls to the Message Center to a minimum and to check with their offices and homes at intervals to receive any messages. Emergency messages for Dallas physicians may be directed to 747-0145.

A Host City Information Desk will be located in the International Ballroom Lobby, Fairmont Hotel. Personnel will be able to assist registrants regarding events, directions, restaurants, and historical places in Dallas.

A Program Information Center will be located in the International Ballroom Lobby, Fairmont Hotel. Personnel will be able to assist registrants regarding speakers, topics, locations of annual session scientific programs.

The Dallas County Medical Assistants Society will assist with ticket sales and with information and messenger service to physicians throughout the session.

The Texas Medical Association will maintain an office in Room 426, Statler Hilton Hotel (telephone 747-1129). Mail and telegrams may be addressed in

care of the Texas Medical Association, Statler Hilton Hotel, Dallas 75201.

First Aid, Ambulance Service

A physician's bag equipped with first aid supplies will be available at the general registration desk in the International Ballroom Lobby, Fairmont Hotel. Ambulance service may be obtained by telephoning Sparkman-Hillcrest Ambulance Service, 826-7200.

News Room and *TMA Bulletin*

A News Room will be maintained in the Board Room, Fairmont Hotel (telephone 747-1074) Thursday-Saturday. On Sunday, the News Room will be located in Room 418, Statler Hilton Hotel.

Headquarters for *TMA Bulletin* will be located in the Regency Ballroom Coat Room (telephone 747-3462).

Stenographers' Room

The Stenographers' Room will be maintained in Room 426, Statler Hilton Hotel (telephone 747-1129).

Equipment

Requests and problems involving equipment for meeting rooms may be directed to the Crown Room, Fairmont Hotel (telephone 747-0974).

PRESIDENTS AND PRESIDENTS-ELECT

Dr. Charles Max Cole
Dallas, President
Texas Medical Association

Dr. Walter Walthall
San Antonio, President-Elect
Texas Medical Association

Mrs. Marvin P. Knight
Dallas, President
Woman's Auxiliary to the
Texas Medical Association

Mrs. Eugene P. Schoch, Jr.
Austin, President-Elect
Woman's Auxiliary to the
Texas Medical Association

AAGP ACCREDITATION

Elective credit (formerly Category II), hour-for-hour, of program content will be granted to registrants by the American Academy of General Practice for attendance at scientific lectures of the Texas Medical Association Annual Session. To insure credit, report hours directly to the Texas Academy of General Practice, 1905 North Lamar Boulevard, Austin 78701.

HOTELS AND MOTELS

The Fairmont Hotel (Ross and Akard Streets) has been designated scientific sessions headquarters. The Statler Hilton Hotel (1914 Commerce) has been designated business sessions headquarters. The Sheraton-Dallas Hotel (Southland Center) will be headquarters for the Woman's Auxiliary.

In addition to the headquarters hotels, a partial list of hotels and motels housing Association and Auxiliary members is given below:

Adolphus Hotel, 1321 Commerce
Baker Hotel, 1400 Commerce

LOCATION OF EXHIBIT AREAS AND MEETING ROOMS OF HEADQUARTERS HOTELS

Art, Scientific, and Technical Exhibit Areas: International Ballroom (Lobby Level) and Gold Room (Banquet Level), Fairmont Hotel.

Fairmont Hotel (With the exception of those indicated, all rooms are on the Banquet Level.)

Board
Century
Continental
Crown
Directors'
Executive
Far East
Florentine
Fountain (Terrace Level North)
French
Garden (Terrace Level North)
Gold
Green (Terrace Level North)
International Ballroom (Lobby Level)
Oak
Panorama (Terrace Level South)
Parisian
Patio (Terrace Level North)
Pavilion (Terrace Level South)
Regency Ballroom
Royal
State
Terrace (Terrace Level North)
Venetian (Lobby Level)
Vista (Terrace Level South)

Statler Hilton Hotel (With the exception of those indicated, all rooms are on the Mezzanine.)

Ballrooms—Grand, Junior, and Ballroom Assembly
Blue Bonnet Room
Court Room
El Corralito
Embassy East
Embassy Garden
Embassy West
Gold Room
Mustang Room
Rooms 401 through 434, Fourth Floor
Silver Room
Vista Room, Second Mezzanine

Sheraton-Dallas Hotel (With the exception of those indicated, all rooms are on the Second Floor.)

Ballroom Foyer
Chaparral Club, 37th Floor (Southland Center)
Grand Ballroom
North Concourse
Presidential Suite, 29th Floor
Sam Houston Room
Sheraton-Lounge
State Room, Third Floor

WOMAN'S AUXILIARY HEADQUARTERS

Business, social, and educational sessions of the Woman's Auxiliary to the Texas Medical Association will be held in the Sheraton-Dallas Hotel, Southland Center.

AUDIO-DIGEST TAPES

Audio-Digest Foundation, Los Angeles, will tape key lectures of the 1970 Annual Session. Information pertaining to the tapes may be secured from the Texas Medical Association Library, 1801 North Lamar Boulevard, Austin 78701.

SPECIAL PROGRAMS

In conjunction with the programs of the scientific sections and related organizations, the following special programs will be offered. Details on the various programs appear elsewhere in this program.

Forum of Original Research. A new feature of the annual session, the Forum of Original Research will include short presentations and discussions of original work in basic medical sciences and clinical medicine by TMA members and guests Friday, 9:30 a.m.- 4 p.m., Century Room, Fairmont Hotel.

Conference on School Health. The presentation of an optimum school health program and suggested action for implementation will be discussed at the Conference being sponsored by the TMA Committee on School Health Thursday, 8 a.m.- 4:30 p.m., Regency Ballroom II, Fairmont Hotel.

Symposium on Cardiovascular Diseases. "Prophylaxis of Cardiovascular Disease" will be the theme of the Symposium to be offered Thursday, 9 a.m.-4:40 p.m., Oak Room, Fairmont Hotel. The Symposium is sponsored by the TMA Committee on Cardiovascular Diseases in conjunction with the American Heart Association, Texas Affiliate.

Texas Academy of General Practice Seminar. TAGP will sponsor a seminar Thursday, 12:30-6 p.m., Parisian Room, Fairmont Hotel. Papers regarding care of elderly patients will be presented.

Medical History Presentation. "Texas History from an Anesthesiologist's Point of View" will be the keynote presentation of the TMA Committee on Medical History dinner Thursday, 6:30 p.m., Far East Room, Fairmont Hotel.

Symposium on Alcoholism. A discussion of "Sedativism" will highlight the Thursday, 8 p.m. session, to be sponsored by the Texas Commission on Alcoholism, The University of Texas Division of Extension, and Texas Medical Association, in the Parisian Room, Fairmont Hotel.

Symposium on Maternal Deaths in Texas. "Why Do Pregnant Women Die?" will be the Symposium theme Friday, 10 a.m.- 12 Noon, Royal Room, Fairmont Hotel. The factors of death—hemorrhage, toxemia, infection, abortion, anesthesia, and other causes will be discussed. The program is sponsored by the TMA Committee on Maternal Health.

Symposium on Emergency Room Care. Discussions of trauma and emergency room care in small and large hospitals will be presented, as well as the current status of disaster medical planning in Texas. The Symposium will be sponsored by the TMA Committee on Disaster Medical Care Friday, 2-5 p.m., Green Room, Fairmont Hotel.

Seminar on Medical Writing. Sponsored by the Southwestern (Texas) Chapter, American Medical Writers Association, the Seminar will be given Sunday, 9:30 a.m.- 2 p.m., Parisian Room, Fairmont Hotel. Speakers will discuss the language of medical science, ethics in medical writing, ground rules for physicians' public pronouncements, editor versus author.

Luncheon Programs. Two Texas Medical Association luncheon programs have been planned:

General Meeting Luncheon, Friday, 12:30 p.m., Embassy Garden, Statler Hilton Hotel. Maj. Gen. J. Bruce Medaris, USA (Ret.), Former Commanding General, U. S. Army Ordnance Missile Command, Winter Park, Fla., will be the guest speaker.

General Meeting Luncheon, Saturday, 12 Noon, Embassy Garden, Statler Hilton Hotel. Dr. Gerald D. Dorman, President, American Medical Association, New York, will be the guest speaker.

Members of the Association and Auxiliary and guests are invited to attend the luncheons. Tickets, at $4.50 each, will be on sale in the registration areas.

ENTERTAINMENT

Saturday Night at the Fairmont.

Texas Medical Association and the Fairmont Hotel will sponsor a cocktail party, dinner, and dance in the Regency Ballroom, Fairmont Hotel, Saturday. The cocktail party begins at 8 p.m., and the dinner at 8:30 p.m. Those attending are invited to bring their own liquor for the dinner. Wine lists will be available. Dress is optional. Cost per person (including cocktails, dinner, dance, and tax and gratuity) is $17.25. A name orchestra is being obtained. "The Mad-Medics Plus 3," a Dixieland jazz band, will alternate with the orchestra.

Fifty Year Club

Members of the Fifty Year Club and their wives will be honored Friday at the General Meeting Luncheon, 12:30 p.m., Embassy Garden, Statler Hilton Hotel. Tickets will be on sale in the registration area.

Past Presidents Association

Members of the Past Presidents Association and their wives will be honored Saturday at the General Meeting Luncheon, 12 Noon, Embassy Garden, Statler Hilton Hotel. Tickets will be on sale in the registration area.

Alumni Events

Alumni events have been arranged under the general direction of Dr. Chester E. Cook, Dallas. Information and tickets will be available in the registration area of the Fairmont Hotel.

Events planned, time, location, and person in charge are as follows:

Tulane University School of Medicine, New Orleans. Cocktail Party, Saturday, May 2, 6-8 p.m., Royal Room, Fairmont Hotel. Dr. William F. Guerriero, Dallas; Dr. Lee J. Alexander, Dallas; and Dr. M. E. Lapham, Executive Secretary, Tulane Medical Alumni Association, New Orleans, are in charge.

University of Havana, Havana, Cuba. Cocktail Party, Saturday, May 2, 6-8 p.m., Executive Room, Fairmont Hotel. Dr. G. Gonzales-Fraga, Baytown, is in charge.

University of Texas Medical Branch, Galveston. Cocktail Party, Saturday, May 2, 6-8 p.m., Parisian Room, Fairmont Hotel. Dr. Vernie A. Stembridge, Dallas, and Miss Mildred M. Robertson, Executive Secretary, Alumni Association, Galveston, are in charge.

University of Texas Southwestern Medical School, Dallas. Cocktail Party, Saturday, May 2, 6-8 p.m., Continental Room, Fairmont Hotel. Mrs. Louise B. Hipp, Executive Secretary, Alumni Association, Dallas, is in charge.

Fraternity Functions

Fraternity functions have been arranged under the general direction of Dr. Chester E. Cook, Dallas. Information and tickets will be available in the registration area of the Fairmont Hotel. Cocktail parties are scheduled Friday, May 1, 6:30 to 8 p.m., at the following locations:

Theta Kappa Psi Medical Fraternity, Continental Room, Fairmont Hotel. Dr. J. Dan Harvey, Oklahoma City, is in charge.

Class Reunions

Class reunions have been arranged under the general direction of Dr. Chester E. Cook, Dallas. Information and tickets will be available in the registration area of the Fairmont Hotel. Events are scheduled Thursday, April 30, 6:30 p.m., at the following locations:

Baylor College of Medicine Class of 1930, Cocktail Party, Terrace Room, Fairmont Hotel. Dr. Winston M. Brook, Lampasas, is in charge.

University of Texas Medical Branch Class of 1935, Cocktail Party, Dallas Club, Republic National Bank Tower. Dr. H. Earl Taylor, Dallas, is in charge.

University of Texas Medical Branch Class of 1940, Cocktails-Dinner, Continental Room, Fairmont Hotel. Dr. Marion T. Jenkins, Dallas, is in charge.

University of Texas Medical Branch Class of 1950, Cocktail Party, Royal Room, Fairmont Hotel. Dr. M. C. Culbertson, Dallas, is in charge.

Alumni Association

Officers and Board of Trustees, University of Texas Medical Branch Alumni Association, will meet Friday, 3:30 p.m., Vista Room, Fairmont Hotel.

Sports

Golf, skeet and trap, and tennis tournaments are scheduled during the annual session. Dr. George Truett James, Dallas, is general sports events chairman. Information and directions regarding tennis and skeet and trap events may be obtained at the sports events desk located in the registration area of the Fairmont Hotel.

Golf. The golf tournament will be held Wednesday, April 29, at the Great Southwest Golf Club, 612 Avenue J, Grand Prairie, Texas. Tee-off time has been scheduled between 8 a.m. and 1 p.m. Participants should arrange own games, if possible; or, make arrangements at golf shop for starting times and pairings.

The entry fee, which includes green fees, will be $10. Certified handicaps should be submitted at the golf shop, or forwarded in advance to the golf tournament chairman, Dr. Arthur T. deLarios, 3631 Fairmount Street, Dallas 75219.

Skeet and Trap. The skeet and trap shoot will be held Thursday, April 30, 1 p.m., Dallas Gun Club, Charlie O'Conner Road and Royal Lane. Entry fee will be $10.50 per shooter, which includes targets and trophies. Fee will be returned if weather unsuitable. Preregistration is necessary. Trophies will be given for each event and overall high score for men and ladies. Gift trophies also will be provided by pharmaceutical firms. Information may be obtained from the tournament chairman, Dr. James H. Herndon, 1330 Medical Arts Building, Dallas 75201.

Tennis. The tennis tournament is planned for Thursday, April 30, starting at 9 a.m. The tournament, to be held at Samuell Grand Recreational Center Tennis Courts, 6200 East Grand, will include (1) men's singles through 45, (2) men's singles over 45, (3) men's doubles, (4) women's singles, and (5) women's doubles. A participant may enter any two events.

Entry fee is $5.00 per person for any or all events. Lunch will be provided as part of the entry fee. Each participant should bring his own racquet, tennis shoes, and a new can of Wilson tournament balls. A can of balls may be obtained from the Club pro for $2.50. Interested players may preregister and receive information regarding the tournament by writing the tournament treasurer, Dr. R. Gordon Long, 712 North Washington, Dallas 75246. Dr. John L. Denman, 712 North Washington, Dallas 75246, is tournament chairman.

BUSINESS ACTIVITIES

House of Delegates

The three sessions of the House of Delegates will be held as follows in the Grand Ballroom of the Statler Hilton Hotel:

Thursday, 10:30 a.m.

Friday, 7:30 p.m.

Sunday, 9:30 a.m.

A breakfast for the House of Delegates will be held at 7:30 a.m., Friday, in the Embassy Garden of the Statler Hilton Hotel.

The agenda, with reports and resolutions available at press time, and a list of officers and committees are included in a Handbook for Delegates and may be obtained by others upon request. All members of the Association may attend meetings of the House, but may not participate in discussion or voting unless they are designated as delegates. However, all members of the Association have the privilege of appearing before reference committees of the House of Delegates in support of or in opposition to any proposal.

Reference Committees

Reference committees will hold their first meetings to consider business assigned to them by the Speaker of the House of Delegates at 2 p.m., Thursday. Additional meetings will be at such other times as the chairmen of the committees find necessary. Meeting places other than the first meeting will be assigned at the Message Center. Committee chairmen are urged to inform Message Center staff when they have called meetings so that inquiries may be answered. Meetings of reference committees Thursday at 2 p.m. will be held in the Statler Hilton Hotel as follows:

Board of Councilors, Mustang Room
Board of Trustees, Room 1704
Constitution and Bylaws, Gold Room
Legislation, Embassy West
Medical Service and Insurance, Embassy Garden
Miscellaneous Business, Embassy East
Public Relations, Vista Room
Reports of Officers and Committees, Blue Bonnet Room
Scientific Work, Silver Room

Chairmen of reference committees are asked to attend a breakfast session with the Speaker of the House of Delegates at 7:30 a.m., Thursday, in the Blue Bonnet Room of the Statler Hilton Hotel to discuss procedures and to expedite business.

Board, Council, and Committee Meetings

A number of Texas Medical Association board, council, and committee meetings are being scheduled during the annual session. Those scheduled at press time follow:

Wednesday

1 p.m. Council on Medical Education and Hospitals, Embassy West, Statler Hilton Hotel.

1 p.m. Committee on Nursing (luncheon), Silver Room, Statler Hilton Hotel.

2 p.m. Council on Medical Jurisprudence, Blue Bonnet Room, Statler Hilton Hotel.

4 p.m. Council on Scientific Advancement, Embassy East, Statler Hilton Hotel.

6 p.m. Board of Councilors (dinner), Vista Room, Statler Hilton Hotel.

6 p.m. Council on Public Relations and Public Service (dinner), Court Room, Statler Hilton Hotel.

6:30 p.m. Board of Trustees (dinner), Room 1704, Statler Hilton Hotel.

6:30 p.m. Committee on Health Careers (dinner), Room 404, Statler Hilton Hotel.

6:30 p.m. Committee on Health Insurance (dinner), Gold Room, Statler Hilton Hotel.

6:30 p.m. Council on Constitution and Bylaws (dinner), El Corralito Room, Statler Hilton Hotel.

6:30 p.m. Council on Medical Education and Hospitals (dinner), Silver Room, Statler Hilton Hotel.

6:30 p.m. Council on Medical Service and Insurance (dinner), Embassy Ballroom, Statler Hilton Hotel.

7 p.m. Committee on Aging (dinner), Blue Bonnet Room, Statler Hilton Hotel.

7 p.m. Committee on Workmen's Compensation and Industrial Health (dinner), Embassy East, Statler Hilton Hotel.

7:30 p.m. Committee on Government Health Programs (dinner), Embassy West, Statler Hilton Hotel.

Thursday

7:30 a.m. Committee on Medicine and Religion (breakfast), Silver Room, Statler Hilton Hotel.

7:30 a.m. Committee on Physicians Benevolent Fund (breakfast), Gold Room, Statler Hilton Hotel.

9 a.m. Committee on Rehabilitation, El Corralito Room, Statler Hilton Hotel.

12 Noon Council on Annual Session (luncheon), Executive Room, Fairmont Hotel.

5 p.m. Committee on Cardiovascular Diseases, Vista Room, Fairmont Hotel.

5 p.m. Committee on Mental Health (dinner), El Corralito Room, Statler Hilton Hotel.

6:30 p.m. Committee on Medical History (dinner), Far East Room, Fairmont Hotel.

Friday

7:30 a.m. Committee on Disaster Medical Care, Vista Room, Statler Hilton Hotel.

7:30 a.m. Committee on Transportation Safety (breakfast), Gold Room, Statler Hilton Hotel.

7:30 a.m. Committee on Public Health (breakfast), Silver Room, Statler Hilton Hotel.

8 a.m. Committee on Medical Care Needs of Children (breakfast), Blue Bonnet Room, Statler Hilton Hotel.

10 a.m.	Committee on Liaison with Blue Shield of Texas, El Corralito Room, Statler Hilton Hotel.
2 p.m.	Committee on Association Insurance Programs, Blue Bonnet Room, Statler Hilton Hotel.
2 p.m.	Committee on Cancer, Room 404, Statler Hilton Hotel.
2 p.m.	Committee on Liaison with State Bar of Texas, Silver Room, Statler Hilton Hotel.
2 p.m.	Committee on Rural Health, El Corralito Room, Statler Hilton Hotel.
6:30 p.m.	Special Committee on Abortion Laws in Texas (dinner), Silver Room, Statler Hilton Hotel.
7 p.m.	Committee on Nuclear Medicine (dinner), Gold Room, Statler Hilton Hotel.

Saturday

7 a.m.	Committee on School Health (breakfast), Silver Room, Statler Hilton Hotel.
7:30 a.m.	Committee on Scientific Exhibits (breakfast), Green Room, Fairmont Hotel.
8 a.m.	Committee on Professional Insurance (breakfast), El Corralito Room, Statler Hilton Hotel.
8:30 a.m.	Committee on Maternal Health (breakfast), Blue Bonnet Room, Statler Hilton Hotel.
10 a.m.	Committee on Athletics, Room 433, Statler Hilton Hotel.
11 a.m.	Committee on Hospital Accreditation, Room 434, Statler Hilton Hotel.

Blue Cross-Blue Shield Breakfast

Blue Cross-Blue Shield of Texas will have a breakfast for members of the House of Delegates on Friday at 7:30 a.m. in the Embassy Garden of the Statler Hilton Hotel. Dr. Doyle W. Ferguson, Medical Director, Blue Cross-Blue Shield, is in charge of arrangements.

TEXPAC

TEXPAC (Texas Medical Political Action Committee) will meet Saturday, 10:30 a.m., Court Room, Statler Hilton Hotel.

ANNUAL SESSION COMMITTEES

Members of the Council on Annual Session, who have coordinated plans for the annual session, are Drs. O. A. Fly, Jr., Houston, Chairman; Roy H. Baskin, Waco; Nathan Cedars, Stephenville; Guy T. Denton, Jr., Dallas; P. Clift Price, Austin; Alice Smith, Dallas; Robert E. Stevens, San Antonio; Charles Max Cole, Dallas, President (ex officio); and Mr. C. Lincoln Williston, Austin, Executive Secretary (ex officio). Mrs. Dale Willimack, Austin, serves as Coordinator of Annual Session.

The Committee on General Arrangements for the 1970 annual session, all members of the Dallas County Medical Society, includes Dr. Oscar M. Marchman, Jr., general chairman, and the following subcommittee chairmen:

Dr. Chester E. Cook (alumni and fraternity functions)
Dr. Wayne H. Gossard (entertainment)
Dr. Howard C. Coggeshall and Dr. G. Cooley Nabors (art exhibition)
Dr. John H. Childers (scientific exhibits)
Dr. Joseph C. Ogle (technical exhibits)
Dr. George Taylor James (first aid)
Dr. Jack T. Chisolm (information)
Dr. John T. Binion (memorial service)
Dr. Walter H. Patton (public lectures)
Dr. Robert K. Portman (publicity)
Dr. George Truett James (sports)

Mr. Millard J. Heath is Executive Officer of the Dallas County Medical Society.

Texas Medical Association staff members assisting with phases of the annual session include: Mr. Donald M. Anderson, Assistant Executive Secretary, hotels and delegates; Mrs. Marilyn Baker, special articles in TEXAS MEDICINE; Mr. John T. Boyd, printing; Miss Pauline Duffield, memorial service and film program; Mrs. Jan Cayce, housing and committees; Mr. Jon R. Hornaday, publicity and public relations; Mr. E. Maxwell Jones, registration; and Mr. Dale R. Werner, exhibits and equipment.

Mrs. H. C. Henderson, Jr., Dallas, is convention chairman for the Woman's Auxiliary. Mrs. William David Barnett, Dallas, is convention cochairman. Mrs. Martha James, Austin, is Auxiliary staff secretary.

ALSO WATCH FOR —

TMA BULLETIN to be distributed at the session.

Memorial Service Program, with names of those paid tribute, to be distributed at the service.

Handbook for Delegates, containing agenda of House of Delegates, annual reports of committees, and officer and committee lists, available for distribution at registration.

Woman's Auxiliary Program, containing convention details, to be distributed at Auxiliary registration at Sheraton-Dallas and Fairmont Hotels.

SPEAKERS

GUEST SPEAKERS

John Adriani, M.D.

Director, Department of Anesthesia, Charity Hospital of Louisiana, New Orleans.

The Pulmonary Cripple as a Surgical Risk, Texas Chapter, American College of Chest Physicians, Thursday, 4:25-4:50 p.m.
Legal Implications of the Package Insert, General Meeting, Friday, 10-10:25 a.m.
Differences and Similarities Between Epidural and Subarachnoid Block, Texas Society of Anesthesiologists, Saturday, 4-5 p.m.
Metabolic Fate of Anesthetic Drugs and the Importance of Such Knowledge, Texas Society of Anesthesiologists, Sunday, 11 a.m.-12 Noon.
Host: Harold Boehning, Dallas.
Cohost: Oliver F. Bush, Dallas.
Guest of Texas Society of Anesthesiologists and Texas Medical Association.

Fred L. Allman, Jr., M.D.

Sports Medicine Clinic; Immediate Past President, American College of Sports Medicine, Atlanta, Ga.

Pre-Season Conditioning of the Athlete and Rehabilitation of the Injured Athlete, Texas Society of Athletic Team Physicians, Friday, 9-9:30 a.m.
Host: George W. Sibley, Dallas.
Cohost: Ronald F. Garvey, Dallas.
Guest of Texas Society of Athletic Team Physicians and Texas Medical Association.

Stephen M. Ayres, M.D.

Director, Cardiopulmonary Laboratory, St. Vincent's Hospital, New York.

Treatment and Evaluation of Shock, Continental Breakfast Round Table Presentation, Friday, 8:15-10 a.m.
Hypoxemia and Hyperventilation as Causes of Cardiac Arrhythmias, Section on Internal Medicine, Friday, 2:30-3 p.m.
Respiratory Management of the General Medical and Surgical Patient, Section on Internal Medicine, Saturday, 9-9:30 a.m.
Host:
Cohost:
Guest of Section on Internal Medicine, Texas Medical Association.

Merrill A. Bender, M.D.

Professor and Director of Nuclear Medicine, State University of New York, Buffalo.

Topic pending, Texas Association of Physicians in Nuclear Medicine, Saturday, 12 Noon.
Host: Frederick J. Bonte, Dallas.
Cohost: John A. Burdine, Houston.
Guest of Texas Association of Physicians in Nuclear Medicine, and Texas Medical Association.

Kurt Benirschke, M.D.

Professor and Chairman, Department of Pathology, Dartmouth Medical School, Hanover, N. H.

Recent Developments in Cytogenetics, Section on Pathology, Friday, 2:30-3:10 p.m.
Pathology of the Placenta, Section on Pathology, Saturday, 9-9:40 a.m.
Fetal Placental Problems, Section on Obstetrics and Gynecology, Saturday, 10:50-11:20 a.m.
Host: Anthony N. D'Agostino, Dallas.
Cohosts: Edwin H. Eigenbrodt, Dallas; Frank Vellios, Dallas.
Guest of Section on Pathology, Texas Medical Association.

William J. Brown, M.D.

Chief, Venereal Disease Branch, Department of Health, Education and Welfare, National Communicable Disease Center, Atlanta, Ga.

Can Brown's Law Be Repealed? Texas Association of Public Health Physicians Dinner Meeting, Thursday, 6:30 p.m.
The Effective Practice of Syphilis Case Management, Section on Public Health, Friday, 2:30-3 p.m.
New Directions in VD Control, Conference of City and County Health Officers, Saturday, 9-9:30 a.m.
Host: Hal J. Dewlett, Dallas.
Cohost: J. E. Peavy, Austin.
Guest of Conference of City and County Health Officers and Texas Medical Association.

William D. Davis, Jr., M.D.

Head, Department of Internal Medicine, Ochsner Clinic, New Orleans.

The Problem of Chronic Heoatitis, Section on Digestive Diseases, Friday, 3:10-3:40 p.m.
Therapy of Peptic Ulcer Disease, Curbstone Consultations Program, Friday, 5-6:30 p.m.
Pathophysiology and Management of Por al Hypertension, Section on Digestive Diseases, Saturday, 9:40-10:10 a.m.
Specter of Hepatitis in a General Hosoital and the Community, General Meeting, Saturday, 2-2:25 p.m.

Host: John S. Fordtran, Dallas.

Cohost: F. Scott O'Neill, Houston.

Guest of Section on Digestive Diseases, Texas Medical Association.

Philip P. Ellis, M.D.

Professor and Head, Division of Ophthalmology, University of Colorado Medical Center, Denver.

Ocular Complications of Systemic Medications, Continental Breakfast Round Table Presentation, Friday, 8:15-10 a.m.
Recent Developments in Ocular Therapeutics, Section on Ophthalmology, Friday, 4-4:50 p.m.
Anti-Inflammatory Therapy in Ophthalmology, Section on Ophthalmology, Saturday, 11:15 a.m.-12:05 p.m.
Subconjunctival Medications, Texas Ophthalmological Association, Saturday, 3-3:50 p.m.

Host: John R. Lynn, Dallas.

Cohost: Jerald Feldman, Dallas.

Guest of Texas Ophthalmological Association and Texas Medical Association.

James L. Dennis, M.D.

Vice President and Dean, The University of Oklahoma Medical Center, Oklahoma City.

Pediatrics—Education, Training, and Practice in a Changing Society, Section on Pediatrics, Friday, 3:30-4:30 p.m.
Evaluation of Growth and Development in the Office, Section on Pediatrics, Saturday, 9-10 a.m.

Host: Doris J. D. Adam, Dallas.

Cohost: Samuel Hunt, Dallas.

Guest of Section on Pediatrics, Texas Medical Association.

Donnell D. Etzwiler, M.D.

Project Director, Diabetes Detection and Education Center; Pediatrician, Department of Pediatrics, St. Louis Park Medical Center, Minneapolis.

Two papers, Texas Diabetes Association, Sunday.

Host:

Cohost:

Guest of Texas Diabetes Association and Texas Medical Association.

Gerald D. Dorman, M.D.

President, American Medical Association, New York.

Address, General Meeting Luncheon, Saturday, 12 Noon.

Host: Milford O. Rouse, Dallas.

Cohost: Harvey Renger, Hallettsville.

Guest of American Medical Association.

Robert J. Freeark, M.D.

Director, Cook County Hospital, Chicago.

Pitfalls in the Diagnosis of Acute Surgical Abdomen, Continental Breakfast Round Table Presentation, Friday, 8:15-10 a.m.
Controversial Aspects of Abdominal Trauma, Section on Surgery, Friday, 3-3:30 p.m.
Postoperative Complications, Curbstone Consultations Program, Friday, 5-6:30 p.m.
Surgical Management of Pancreatitis, Section on Surgery, Saturday, 10-10:30 a.m.
The Indications for Arteriography, Curbstone Consultations Program, Saturday, 4-5:30 p.m.

Host: Ronald F. Garvey, Dallas.

Cohost: Wishard S. Lorimer, Jr., Fort Worth.

Guest of Section on Surgery, Texas Medical Association.

Stanley E. Gitlow, M.D.

Associate Clinical Professor of Medicine, Mount Sinai School of Medicine, New York.

Sedativism, Symposium on Alcoholism, Thursday, 8 p.m.
Treatment of the Alcoholic in Private Practice, General Meeting, Friday, 11-11:25 a.m.

Host: Robert L. Stubblefield, Dallas.

Cohost: McIver Furman, Corpus Christi.

Guest of Texas Commission on Alcoholism, The University of Texas Division of Extension, and Texas Medical Association.

Carl V. Granger, M.D.

Professor and Chairman, Department of Physical and Rehabilitation Medicine, Tufts University School of Medicine, Boston.

Prognostic Consideration in Bell's Palsy, Joint Session, Section on Physical Medicine and Rehabilitation, Texas Industrial Medical Association, Texas Physical Medicine and Rehabilitation Society, and Texas Traumatic Surgical Society, Thursday, 10:25-11:10 a.m.
The Face as a Mirror of Disease—A Slide Presentation, Joint Session, Section on Physical Medicine and Rehabilitation, Texas Industrial Medical Association, Texas Physical Medicine and Rehabilitation Society, and Texas Traumatic Surgical Society, Thursday, 11:10 a.m.-12:10 p.m.
Industrial Rehabilitation and Surgical Aspects of the Face (Panel), Joint Session, Section on Physical Medicine and Rehabilitation, Texas Industrial Medical Association, Texas Physical Medicine and Rehabilitation Society, and Texas Traumatic Surgical Society, Thursday, 2:45-3:45 p.m.
Electrodiagnostic Studies in Bell's Palsy, Section on General Practice, Friday, 4:30-5 p.m.

Host: John R. Shull, Dallas.

Cohost: Lewis A. Leavitt, Houston.

Guest of Section on Physical Medicine and Rehabilitation, Texas Medical Association.

Alan F. Guttmacher, M.D.

President, Planned Parenthood World Population, New York.

Medical, Surgical, and Gynecological Complications of Pregnancy, Section on Obstetrics and Gynecology, Friday, 2:30-3 p.m.
How Extensively Should Abortion Laws Be Revised? Section on Obstetrics and Gynecology, Saturday, 9-9:30 a.m.
Population Problem—Medicine's Responsibility, General Meeting, Saturday, 3:30-3:55 p.m.

Host: Dudley V. Powell, Dallas.

Cohost: Joanna Perlmutter, Dallas.

Guest of Section on Obstetrics and Gynecology, Texas Medical Association.

Jack H. Hall, M.D.

Director of Medical Education, Methodist Hospital Graduate Medical Center, Indianapolis.

Health Hazard Appraisals, Symposium on Cardiovascular Diseases, Thursday, 10:45-11:30 a.m.

Host:

Cohost:

Guest of Texas Heart Association and Committee on Cardiovascular Diseases, Texas Medical Association.

J. William Hillman, M.D.*

Professor of Orthopaedic Surgery, Vanderbilt University School of Medicine, Nashville.

Trends in Cerebral Palsy Treatment, General Meeting, Saturday, 3-3:25 p.m.

Host: Edward M. Krusen, Dallas.

Cohost: Kenneth R. Duff, Houston.

Guest of United Cerebral Palsy Association of Texas, Inc.

Colin B. Holman, M.D.

Consultant in Diagnostic Roentgenology, Mayo Clinic, Rochester, Minn.

Virus and Paracystic Diseases of Neuroradiologic Interest, Section on Radiology, Friday, 2:50-3:20 p.m.
A Pragmatic Approach to the Pituitary Fossa, Section on Radiology, Saturday, 9-9:30 a.m.

Host: George E. Plum, Dallas.

Cohost: Jerome H. Arndt, Dallas.

Guest of Section on Radiology, Texas Medical Association.

Jack Chandler Hughston, M.D.

Chairman, Committee on Sports Medicine of the American Academy of Orthopaedic Surgeons; Staff, St. Francis Hospital, Columbus, Ga.

Sports Medicine—Orthopaedic Oriented, Continental Breakast Round Table Presentation, Friday, 8:15-10 a.m.
"Field" Diagnosis of Knee Injuries, Section on General Practice, Saturday, 9-9:30 a.m.
Posterior Cruciate Ligament, Texas Orthopaedic Association, Saturday, 11:30 a.m.-12 Noon.
The Pathology and Treatment of the Extensor Mechanism of the Knee, Texas Orthopaedic Association, Saturday, 2:55-3:25 p.m.

Host: John B. Gunn, Dallas.

Cohost: Robert A. Murray, Temple.

Guest of Texas Orthopaedic Association and Texas Medical Association.

---

*At press deadline, word was received that Dr. Hillman had died.

Barrett Kennedy, M.D.

Clinical Profesor of Dermatology, Louisiana State University Medical School, New Orleans.

The Management of Anogenital Pruritus, Texas Proctologic Society, Thursday, 12:30-1 p.m.
The Differential Diagnosis and Management of the Common Wart, General Meeting, Saturday, 2:30-2:55 p.m.
Cutaneous Diseases Caused by Atypical Mycobacteria and Their Treatment, Texas Dermatological Society, Saturday, 9-9:45 a.m.

Host: David R. Weakley, Dallas.

Cohost: John L. Kestel, Jr., Dallas.

Guest of Texas Dermatological Society and Texas Medical Association.

Thomas J. Kirby, M.D.

Section of Ophthalmology, Mayo Clinic, Rochester, Minn.

Uveitis: Diagnosis and Treatment, Texas Ophthalmological Association, Friday, 10:45-11:35 a.m.
Uveitis: Management of Complications, Section on Ophthalmology, Friday, 3-3:50 p.m.
Skin Diseases Affecting the Eye, Section on Ophthalmology, Saturday, 9:30-10:20 a.m.
Ocular Neurosis, Fatigue, or Narcolepsy? Texas Ophthalmological Association, Saturday, 2-2:50 p.m.

Host: Thomas M. McCrory, Dallas.

Cohost: M. R. Harrington, Dallas.

Guest of Texas Ophthalmological Association and Texas Medical Association.

Blaine E. McLaughlin, M.D.

Professor and Chairman, Department of Psychiatry, University of North Dakota School of Medicine, Grand Forks, N.D.

The Adolescent and Drug Abuse, Continental Breakfast Round Table Presentation, Friday, 8:15-10 a.m.
The Acting-Out Child, Texas Chapter, American Academy of Pediatrics, Friday, 12 Noon.
The Interdisciplinary Approach to Working with Children, Section on Pediatrics, Saturday, 11-11:30 a.m.

Host:

Cohost:

Guest of Texas Chapter, American Academy of Pediatrics, and Texas Medical Association.

Ross L. McLean, M.D.

Deputy Coordinator, Regional Medical Program of Texas, Austin; Formerly, Associate Professor of Medicine, Clinical Assistant Professor of Preventive Medicine and Community Health, Emory University School of Medicine, Atlanta, Ga.

Factors Limiting Exercise Performance in Chronic Obstructive Pulmonary Disease, Texas Chapter, American College of Chest Physicians, Thursday, 3:35-4 p.m.
Pulmonary Gas Exchange in Diffuse Bilateral Pneumonic Tuberculosis (Charles M. Hendricks Memorial Lecture), Texas Chapter, American College of Chest Physicians, Thursday, 6:30 p.m.

Host: Fred F. Johnston, Dallas.

Guest of Texas Chapter, American College of Chest Physicians.

Major General J. Bruce Medaris, USA (Ret.)

Former Commanding General, U.S. Army Ordnance Missile Command, Winter Park, Fla.

From Here to Infinity, General Meeting Luncheon, Friday, 12:30 p.m.

Host: J. R. Maxfield, Dallas.

Cohost: Charles A. Berry, Dickinson.

Guest of Texas Medical Association.

John L. Lewis, M.D.

Chief, Gynecology Service, Memorial Hospital for Cancer and Allied Diseases, New York.

Undiagnosed Gynecologic Cancer Masquerading as a Benign Condition, General Meeting, Friday, 11:30-11:55 a.m.

Host: William P. Devereux, Dallas.

Cohost: Creighton L. Edwards, Dallas; George J. Race, Dallas.

Guest of Texas Division, American Cancer Society.

John A. Mohr, M.D.

Veterans Administration Hospital, Oklahoma City.

Recovery of a Virus-Like Particle from Human Alveolar Cell Carcinoma, Texas Chapter, American College of Chest Physicians, Thursday, 4-4:25 p.m.

Host: Cone Johnson, Dallas.

Guest of Texas Chapter, American College of Chest Physicians, and Texas Medical Association.

Delbert Oberteuffer, Ph.D.

Editor, The Journal of School Health, The Ohio State University, Columbus, Ohio.

An Optimum School Health Program, Conference on School Health, Thursday, 9-9:45 a.m.

Host: Hal J. Dewlett, Dallas.

Cohost: Austin E. Hill, Houston.

Guest of Committee on School Health, Texas Medical Association.

George P. Rosemond, M.D.

Professor and Chairman, Department and Division of Surgery, Temple University, Philadelphia.

Thyroid Nodule, Continental Breakfast Round Table Presentation, Friday, 8:15-10 a.m.

Peptic Ulcer—When Is It Surgical—Choice of Operation, Section on Surgery, Saturday, 11-11:30 a.m.

Host: Billie L. Aronoff, Dallas.

Cohost: Jesse E. Thompson, Dallas.

Guest of Texas Division, American Cancer Society.

Francis X. Paletta, M.D.

Professor of Clinical Surgery, St. Louis University School of Medicine, St. Louis.

Management of Facial Injuries, Joint Session, Section on Physical Medicine and Rehabilitation, Texas Industrial Medical Association, Texas Physical Medicine and Rehabilitation Society, and Texas Traumatic Surgical Society, Thursday, 9:10-9:40 a.m.

The Face as a Mirror of Disease—A Slide Presentation, Joint Session, Section on Physical Medicine and Rehabilitation, Texas Industrial Medical Association, Texas Physical Medicine and Rehabilitation Society, and Texas Traumatic Surgical Society, Thursday, 11:10 a.m.-12:10 p.m.

Surgical Care of Soft Tissue Problems in Farm and Ranch Injuries, Joint Session, Section on Physical Medicine and Rehabilitation, Texas Industrial Medical Association, Texas Physical Medicine and Rehabilitation Society, and Texas Traumatic Surgical Society, Thursday, 1:30-2:15 p.m.

Industrial Rehabilitation and Surgical Aspects of the Face (Panel), Joint Session, Section on Physical Medicine and Rehabilitation, Texas Industrial Medical Association, Texas Physical Medicine and Rehabilitation Society, and Texas Traumatic Surgical Society, Thursday, 2:45-3:45 p.m.

Acute Injuries of the Hand, Continental Breakfast Round Table Presentation, Friday, 8:15-10 a.m.

Host: Mark L. Lemmon, Dallas.

Cohost: Sanford Glanz, Corpus Christi.

Guest of Texas Industrial Medical Association, Texas Physical Medicine and Rehabilitation Society, Texas Traumatic Surgical Society, and Texas Medical Association.

Anthony Ruppersberg, Jr., M.D.

Associate Professor in Obstetrics and Gynecology, Ohio State University College of Medicine, Columbus, Ohio.

Obstetric Hemorrhage, Frequency, Etiology, and Prevention of Deaths, Symposium on Maternal Deaths in Texas, Friday, 10 a.m.-12 Noon.

Guiding Principles for Obstetric Care, Section on Obstetrics and Gynecology, Friday, 4-4:30 p.m.

Case Reporting and Data Analysis by State Maternal Health Committees, Committee on Maternal Health, Saturday, 8:30 a.m.-12 Noon.

Host: Harwin B. Jamison, Dallas.

Cohost: C. E. Gibbs, San Antonio.

Guest of Committee on Maternal Health, Texas Medical Association.

William G. Reese, M.D.

Chairman, Department of Psychiatry, University of Arkansas School of Medicine, Little Rock.

Psychiatric Aspects of the Leading Causes of Death, General Meeting, Friday, 10:30-10:55 a.m.

The Social Role Blues, Section on Nervous and Mental Diseases, Friday, 4-4:30 p.m.

Host: James K. Peden, Dallas.

Cohost: Belvin A. Simmons, Dallas.

Guest of Section on Nervous and Mental Diseases, Texas Medical Association.

Maynard I. Shapiro, M.D.

Immediate Past President, American Academy of General Practice, Chicago.

The Board of Family Practice, Section on General Practice, Friday, 2:30-3 p.m.

The Future of Family Practice, Section on General Practice, Friday, 4-4:30 p.m.

Host: Warren A. Shoecraft, Dallas.

Cohost: John C. Hundley, Fort Stockton.

Guest of Section on General Practice, Texas Medical Association.

James L. Sheehy, M.D.

Otologic Medical Group, Los Angeles.

Management of Aural Cholesteatoma, Texas Otolaryngological Association, Friday, 9:45-10:30 a.m.
Inner Ear Problems—Medical Aspects, Section on Otolaryngology, Friday, 4-5 p.m.
Problems in Stapes Surgery, Section on Otolaryngology, Saturday, 9-10 a.m.
Ossicular Problems in Tympanoplasty, Texas Otolaryngological Association, Saturday, 3:30-4:30 p.m.

Host: James L. Baldwin, Dallas.

Cohost: Marvin C. Culbertson, Dallas.

Guest of Texas Otolaryngological Association and Texas Medical Association.

Peter V. Siegel, M.D.

Federal Air Surgeon, AM-1, Department of Transportation, Federal Aviation Administration, Washington, D.C.

Fatal Flight Accidents Experienced by Texas-Based Pilots in 1968, Joint Session, Texas Air-Medics Association, and Texas Chapter, Flying Physicians Association, Saturday, 11-11:30 a.m.
Anatomy of Rule Making, Joint Session, Texas Air-Medics Association, and Texas Chapter, Flying Physicians Association, Saturday, 2:30-3 p.m.

Host: John S. Minnett, Dallas.

Cohost: James Y. Bradfield, Dallas.

Guest of Texas Air-Medics Association; Texas Chapter, Flying Physicians Association; and Texas Medical Association.

Marvin Stein, M.D.

Professor and Chairman, Department of Psychiatry, State University of New York Downstate Medical Center College of Medicine, Brooklyn.

Some Considerations of the Lethality of Suicide Attempts, Section on Nervous and Mental Diseases, Saturday, 10-10:45 a.m.

Host: Jerry M. Lewis, Dallas.

Cohost: James J. Ferrero, Austin.

Guest of Texas Department of Mental Health and Mental Retardation.

Gabriel F. Tucker, Jr., M.D.

Department of Laryngology and Broncho-Esophagology, Temple University Hospital, Health Sciences Center, Philadelphia.

Fatalities from Foreign Bodies (Refresher Course), Texas Otolaryngological Association, Friday, 9-9:45 a.m.
Laryngeal Carcinoma—Current Concepts in Evaluation and Management, Section on Otolaryngology, Friday, 3-4 p.m.
Present Day Treatment of Esophageal Stenosis, Section on Otolaryngology, Saturday, 10-11 a.m.
Newer Aspects in Management of Foreign Bodies, Texas Otolaryngological Association, Saturday, 2:30-3:30 p.m.

Host: Donald A. Corgill, Dallas.

Cohost: Edward A. Newell, Dallas.

Guest of Texas Otolaryngological Association and Texas Medical Association.

Frank L. Weakley, M.D.

Cleveland Clinic, Cleveland.

The "No-Touch" Method of Resection for Cancer of the Colon, Texas Proctologic Society, Thursday, 10:30-11 a.m.
The Choice of Operations for Cancer of the Colon, Texas Proctologic Society, Thursday, 11:30 a.m.-12 Noon.

Host: Malcolm McNatt, Dallas.

Cohost: William David Barnett, Dallas.

Guest of Texas Proctologic Society and Texas Medical Association.

SPECIAL SPEAKERS

Russell Adams, Ph.D., Assistant Professor, Department of Psychiatry, The University of Texas Medical School at San Antonio.
Suicidal Behavior Among Mexican-Americans—A Comparative Study, Section on Nervous and Mental Diseases, Saturday, 9:30 a.m.

Lynn C. Barnes, Regional Flight Surgeon, Federal Aviation Administration, Fort Worth.
Background Study of Several Interesting Airplane Accidents, Texas Air-Medics Association and Texas Chapter, Flying Physicians Association, Joint Session, Saturday, 10 a.m.

Mr. Don R. Barnett, Department of Human Genetics, The University of Texas Medical Branch, Galveston.
Biochemical Studies of the β Chain of Human Haptoglobin, Forum of Original Research, Friday.

Mr. Ed Beasley, Student, Southern Methodist University, Dallas.
Curbstone Consultations: Student Unrest, Friday, 5 p.m.

Bernard Becker, Department of Ophthalmology, Washington University School of Medicine, St. Louis.
Effects of Exercise on Aqueous Dynamics, Forum of Original Research, Friday.

H. Whitney Boggs, Jr., Member, Texas Proctologic Society, Fellow, American Proctologic Society, Shreveport, La.
Pseudocondylomata of the Perianal Area Heralding the Onset of Granulomatous Disease of the Bowel, Texas Proctologic Society, Thursday, 11 a.m.

Mr. Onan Bomar, Welch Fellow, Chemistry Department, Prairie View Agricultural and Mechanical College, Prairie View.
Anticoagulant Action of Glucuronolactone in Rat, Forum of Original Research, Friday.

Carlos A. Bonilla, Ph.D., Molecular Biology Section, Department of Biology, Midwestern University, Wichita Falls.
Comparative Biochemistry and Pharmacology of Basic Protein Neurotoxins from North American Rattlesnake Venoms, Forum of Original Research, Friday.

Barbara H. Bowman, Ph.D., I. H. Kempner Professor of Human Genetics, Department of Human Genetics, The University of Texas Medical Branch, Galveston.
Detection of the Cystic Fibrosis Gene by Oyster Cilia Inhibition; The Inhibitor to Ciliary Activity in Cystic Fibrosis Serum; Biochemical Studies of the β Chain of Human Haptoglobin, Forum of Original Research, Friday.

Mr. J. T. Brennan, Department of Radiology, University of Pennsylvania, Philadelphia.
The Response of Normal Intestine to Neutron Irradiation, Forum of Original Research, Friday.

Ruth Cady, Ph.D., Past President, Texas Association for Health, Physical Education and Recreation, Sam Houston State University, Huntsville.
Panel, Conference on School Health, Thursday, 12:30 p.m.

Curtis W. Caine, President, Flying Physicians, Inc., Jackson, Miss.
Activities of the Flying Physicians Association at the National Level, Texas Air-Medics Association and Texas Chapter, Flying Physicians Association, Joint Session, Saturday, 3:30 p.m.

Bill S. Caldwell, Ph.D., Child Development Clinic, Department of Pediatrics, The University of Texas Medical Branch, Galveston.
Curbstone Consultations: Learning Problems in Children, Saturday, 4 p.m.

Mr. J. E. Carnes, Baylor University College of Dentistry, Dallas.
The Snyder Test as an Index of Intracellular Polysaccharide-Storing Bacteria, Forum of Original Research, Friday.

Mr. Frank Chappell, Director of Media Relations, American Medical Association, Chicago.
Physicians' Public Pronouncements and the Press: Do We Need New Ground Rules? Seminar on Medical Writing, Sunday, 10:20 a.m.

Miss Charlotte Clarke, ASCW, Associate Project Director, Social Work, Child Development Unit, Department of Pediatrics, The University of Texas Medical Branch, Galveston.
Securing and Using Social Information in Pediatric Practice, Section on Pediatrics, Friday, 3 p.m.
Curbstone Consultations: Learning Problems in Children, Saturday, 4 p.m.

Dennis Cokkinos, Cardiology Section, St. Luke's Episcopal Hospital and Texas Heart Institute, Houston.
Relation of Anatomic Abnormality of Mitral Annulus to Functional Mitral Insufficiency in Late Systole, Forum of Original Research, Friday.

Major Kenneth Cooper, USAF MC, Cardiology Research Unit, Wilford Hall Hospital, Lackland Air Force Base.
Jogging for Health, Symposium on Cardiovascular Diseases, Thursday, 9:30 a.m.

Harold B. Crasilneck, Ph.D., Psychologist, Dallas.
Curbstone Consultations: How to Handle the Smoking Problem, Saturday, 4 p.m.

Lois DeBakey, Ph.D., Professor of Scientific Communications, Baylor College of Medicine, Houston.
The Language of Medical Science, Seminar on Medical Writing, Sunday, 9:40 a.m.

Miss Selma DeBakey, Editorial Consultant, Cardiovascular Research and Training Center, Baylor College of Medicine, Houston.
Ethics in Medical Writing, Seminar on Medical Writing, Sunday, 10 a.m.

J. Robert Dille, Chief, Civil Aeromedical Institute, Oklahoma City.
Current Research at Civil Aeromedical Institute, Texas Air-Medics Association and Texas Chapter, Flying Physicians Association, Joint Session, Saturday, 3 p.m.

V. M. Doctor, Ph.D., Professor, Chemistry Department, Prairie View Agricultural and Mechanical College, Prairie View.
Anticoagulant Action of Glucuronolactone in Rat, Forum of Original Research, Friday.

Mr. M. M. Elkind, Biology Division, Brookhaven National Laboratory, Upton, Long Island, New York.
The Response of Normal Intestine to Neutron Irradiation, Forum of Original Research, Friday.

Nolan Estes, Ph.D., Superintendent, Dallas Independent School District, Dallas.
Welcome, Conference on School Health, Thursday, 8:45 a.m.

Katie Fiero, Undergraduate Research Trainee, Molecular Biology Section, Department of Biology, Midwestern University, Wichita Falls.
Comparative Biochemistry and Pharmacology of Basic Protein Neurotoxins from North American Rattlesnake Venoms, Forum of Original Research, Friday.

Mr. Bill Fox, Professor, Southern Methodist University, Dallas.
Curbstone Consultations: Student Unrest, Friday, 5 p.m.

Miss Lucille P. Frank, Molecular Biology Section, Department of Biology, Midwestern University, Wichita Falls.
Comparative Biochemistry and Pharmacology of Basic Protein Neurotoxins from North American Rattlesnake Venoms, Forum of Original Research, Friday.

Mr. Larry Gardner, Physical Therapist; Trainer, Dallas Cowboys Professional Football Team, Dallas.
Protection of the Injured Player for Competition in Football, Texas Society of Athletic Team Physicians, Friday, 10:30 a.m.

Frances B. Garfield, Ph.D., Instructor, Department of Psychiatry, The University of Texas Medical School at San Antonio.
Suicidal Behavior Among Mexican-Americans—A Comparative Study, Section on Nervous and Mental Diseases, Saturday, 9:30 a.m.

Robert B. Gillett, Resident in Ophthalmology, Hermann Hospital, Houston.
Metastatic Carcinoma of the Choroid, Forum of Original Research, Friday.

Mr. Elwyn Gooding, Engineer, Department of Surgery, University of Michigan Medical School, Ann Arbor, Mich.
Head and Neck Injuries in Football, Texas Society of Athletic Team Physicians, Friday, 11 a.m.

Hank H. Gosch, Resident in Neurological Surgery, University of Michigan Medical School, Ann Arbor, Mich.
Head and Neck Injuries in Football, Texas Society of Athletic Team Physicians, Friday, 11 a.m.

Clay A. Henry, D.D.S., Ph.D., Assistant Professor of Microbiology and Biochemistry, Baylor University College of Dentistry, Dallas.
The Snyder Test as an Index of Intracellular Polysaccharide-Storing Bacteria, Forum of Original Research, Friday.

Miss Victoria Herzberg, Department of Human Genetics, The University of Texas Medical Branch, Galveston.
The Inhibitor to Ciliary Activity in Cystic Fibrosis Serum, Forum of Original Research, Friday.

Mr. Hays V. Hettinger, Legal Department, Federal Aviation Administration, Houston.
Legal Problems for FAA Medical Examiners, Texas Air-Medics Association and Texas Chapter, Flying Physicians Association, Joint Session, Saturday, 9:30 a.m.

D. A. B. Hopkin, FFARCS, Anaesthetics, Charing Cross Hospital, London.
Topic pending, Texas Society of Anesthesiologists, Sunday, 10:30 a.m.

Milan Kalus, Assistant Professor of Pathology, Baylor College of Medicine, Houston.
In vitro Neointima Formation in Vascular Prostheses Lined by Velour, Forum of Original Research, Friday.

William E. Kantz, D.D.S., Post Doctoral Trainee, Baylor University College of Dentistry, Dallas.
The Snyder Test as an Index of Intracellular Polysaccharide-Storing Bacteria, Forum of Original Research, Friday.

James A. Kieke, Research Technician, Department of Preventive Medicine and Community Health, The University of Texas Medical Branch, Galveston.
Epidemiology of Accidental and Self-Induced Poisoning in Galveston County, Forum of Original Research, Friday.

Kenneth C. Lafleur, Resident in Ophthalmology, The University of Texas M. D. Anderson Hospital and Tumor Institute and Hermann Hospital, Houston.
Squamous Cell Carcinoma of the Bulbar Conjunctiva, Forum of Original Research, Friday.

Mr. C. H. Lagow, The University of Texas at Austin.
Dry Electrocardiograph Electrodes, Forum of Original Research, Friday.

Raymond LeBlanc, Department of Ophthalmology, Washington University School of Medicine, St. Louis.
Effects of Exercise on Aqueous Dynamics, Forum of Original Research, Friday.

Mr. Tong-Ho Lee, Department of Human Genetics, The University of Texas Medical Branch, Galveston.
Biochemical Studies of the β Chain of Human Haptoglobin, Forum of Original Research, Friday.

Miss Lillian H. Lockhart, Department of Human Genetics and Pediatrics, The University of Texas Medical Branch, Galveston.
Detection of the Cystic Fibrosis Gene by Oyster Cilia Inhibition; The Inhibitor to Ciliary Activity in Cystic Fibrosis Serum, Forum of Original Research, Friday.

Harry W. Martin, Ph.D., The University of Texas Medical School at San Antonio.
Suicidal Behavior Among Mexican-Americans—A Comparative Study, Section on Nervous and Mental Diseases, Saturday, 9:30 a.m.

Donald J. Merki, Ph.D., Professor of Health, College of Health, Physical Education and Recreation, Woman's University, Denton.
The Educator and Effective School Health Programs, Conference on School Health, Thursday, 10:15 a.m.

Don W. Micks, Professor and Chairman, Department of Preventive Medicine and Community Health, The University of Texas Medical Branch, Galveston.
Epidemiology of Accidental and Self-Induced Poisoning in Galveston County, Forum of Original Research, Friday.

Mr. Mike L. McCombs, Graduate Student, Department of Human Genetics, The University of Texas Medical Branch, Galveston.
The Inhibitor to Ciliary Activity in Cystic Fibrosis Serum, Forum of Original Research, Friday.

Mr. Willie Don McCullough, Welch Fellow, Chemistry Department, Prairie View Agricultural and Mechanical College, Prairie View.
Anticoagulant Action of Glucuronolactone in Rat, Forum of Original Research, Friday.

Major Joseph J. McNamara, MC, Trauma Study Section, U.S. Army Medical Research Team, WRAIR, 24th Evacuation Hospital, APO, San Francisco.
Traumatic Injury to the Popliteal Artery, Section on Surgery, Saturday, 10:30 a.m.

Mr. A. L. O'Donnell, Employers Mutual Liability Insurance Company, Dallas.
Curbstone Consultations: How to Collect Workmen's Compensation Bills, Friday, 5 p.m.

Mr. Smith Pettigrew, Texas Employers Insurance Association, Dallas.
Curbstone Consultations: How to Collect Workmen's Compensation Bills, Friday, 5 p.m.

Mr. Benny G. Raimer, Department of Human Genetics, The University of Texas Medical Branch, Galveston.
Biochemical Studies of the β Chain of Human Haptoglobin, Forum of Original Research, Friday.

E. A. Ripperger, Ph.D., Professor of Engineering Mechanics, College of Engineering, The University of Texas at Austin.
A Totally Implantable Cardiac Replacement Device, Forum of Original Research, Friday.

Charles G. Roland, Chairman, Department of the Medical Library and of Publications, Mayo Clinic, Rochester, Minn.
Editor Versus Author, Seminar on Medical Writing, Sunday, 10:40 a.m.

William H. Sanders, LL.B., Blackwell, Sanders, Matheny, Weary, and Lombardi, Kansas City, Mo.
Address, Texas Ophthalmological Association, Friday, 12:15 p.m.

Mr. Harry Schneider, Trainer, YMCA, Houston.
Curbstone Consultations: Jogging—What Should Patients Be Told? Friday, 5 p.m.

Arnold Schwartz, Ph.D., Baylor College of Medicine, Houston.
Do Drugs Help Prevent Cardiovascular Disease? Symposium on Cardiovascular Diseases, Thursday, 3:50 p.m.

Mrs. W. H. Sears, Health Chairman, Texas State Parents-Teachers Association, Lake Jackson.
Panel, Conference on School Health, Thursday, 12:30 p.m.

Miss Brenda Shepherd, Welch Fellow, Chemistry Department, Prairie View Agricultural and Mechanical College, Prairie View.
Anticoagulant Action of Glucuronolactone in Rat, Forum of Original Research, Friday.

Mr. K. J. Sladek, The University of Texas at Austin.
Dry Electrocardiograph Electrodes, Forum of Original Research, Friday.

Mr. Lewis Spears, Program Director, Health and Physical Education, Texas Education Agency, Austin.
Presentation of Guidelines for Optimum School Health Program, Thursday, 2 p.m.

Mrs. Clydia Steenson, Director of School Nurses, Dallas Independent School District, Dallas.
Panel, Conference on School Health, Thursday 12:30 p.m.

Mr. J. C. Streett, Chairman, Science Division, Texas Wesleyan College, Fort Worth.
Regenerative Interaction Between the Bile Duct and Intestine: The Search for a Technique, Forum of Original Research, Friday.

Mr. Reed M. Stringham, Jr., Molecular Biology Section, Department of Biology, Midwestern University, Wichita Falls.
Comparative Biochemistry and Pharmacology of Basic Protein Neurotoxins from North American Rattlesnake Venoms, Forum of Original Research, Friday.

Van W. Teeters, Resident in Ophthalmology, Hermann Hospital, Houston.
Vitreous Wick Syndrome, Forum of Original Research, Friday.

Mr. Kirk Wiggins, The University of Texas at Austin.
A Totally Implantable Cardiac Replacement Device, Forum of Original Research, Friday.

Mr. Thomas E. Winford, Assistant Professor of Microbiology, Baylor University College of Dentistry, Dallas.
The Snyder Test as an Index of Intracellular Polysaccharide-Storing Bacteria, Forum of Original Research, Friday.

H. R. Withers, Ph.D., Associate Radiotherapist, Section of Experimental Radiotherapy, The University of Texas M. D. Anderson Hospital and Tumor Institute, Houston.
The Response of Normal Intestine to Neutron Irradiation, Forum of Original Research, Friday.

Oscar Zamalloa, Cardiology Section, St. Luke's Episcopal Hospital and Texas Heart Institute, Houston.
Relation of Anatomic Abnormality of Mitral Annulus to Functional Mitral Insufficiency in Late Systole, Forum of Original Research, Friday.

GENERAL MEETINGS

FRIDAY, MAY 1, 10 A.M.-12 Noon

Regency Ballroom, Fairmont Hotel

Charles Max Cole, Dallas, President, Presiding

1. (10:00) Legal Implications of the Package Insert
John Adriani, New Orleans

2. (10:30) Psychiatric Aspects of the Leading Causes of Death
William G. Reese, Little Rock

In the United States the leading causes of death during the third decade of life are: accidents, malignancies, heart disease, homicide and suicide. We shall explore some common psychiatric features of these killers as related to prevention and treatment by the physician who does not specialize in psychiatry.

3. (11:00) Treatment of the Alcoholic in Private Practice
Stanley E. Gitlow, New York

4. (11:30) Undiagnosed Gynecologic Cancer Masquerading as a Benign Condition
John L. Lewis, New York

SATURDAY, MAY 2, 2-4 P.M.

Regency Ballroom, Fairmont Hotel

George V. Pazdral, Somerville, Vice President, Presiding

1. (2:00) Specter of Hepatitis in a General Hospital and the Community
William D. Davis, Jr., New Orleans

2. (2:30) The Differential Diagnosis and Management of the Common Wart

Barrett Kennedy, New Orleans

This presentation will discuss etiology, modes of transmission, and some facts on immunity and incidence. A classification according to location will be given and, more importantly, a review of old, still valuable methods of therapy, along with some of the newer ways to manage this often difficult problem will be given.

3. (3:00) Trends in Cerebral Palsy Treatment

J. William Hillman, Nashville

4. (3:30) Population Problem—Medicine's Responsibility

Alan F. Guttmacher, New York

The unprecedented rapid rate of growth of the world's population is in considerable measure the responsibility of medicine and public health. Together with modern technology and agriculture they have introduced the control of death to the peoples of the world without simultaneously introducing the control of birth. The age-old checks on population growth which operated with significant success for two million years, pestilence, famine, and war, have suddenly ceased to exist. Malaria, smallpox, and other endemic killers have been largely eliminated. Today few, if any, persons starve to death. And in terms of today's global numbers, brush wars remove proportionately very few people. Thus, with more than 950 of every 1,000 liveborn infants achieving reproductive maturity and with life expectancy reaching the biblical three score years and ten, the world is rapidly becoming a hugely overcrowded planet and the end of population growth is not in sight. The real issue is whether man will control his fertility through his own volition or whether control must be coerced.

GENERAL MEETING LUNCHEONS

FRIDAY, MAY 1, 12:30 P.M.

Embassy Garden, Statler Hilton Hotel

Walter Walthall, San Antonio, President-Elect, Presiding

Maj. Gen. J. Bruce Medaris, USA (Ret)
Guest Speaker

Former Commanding General
U. S. Army Ordnance Missile Command
Winter Park, Fla.

1. (12:30) Invocation

Charles A. Berry, Dickinson

Luncheon

Recognition:

Fifty Year Club

Council on Annual Session

Chairman, Committee on General Arrangements

2. (1:15) Announcements of Scientific Exhibits Awards and Recognition of Authors of Exhibits

Phillip W. Voltz, Jr., San Antonio

3. (1:25) Announcement of Winners of Annual Art Exhibition

G. Cooley Nabors, Dallas

4. (1:35) Introduction of Speaker

J. R. Maxfield, Jr., Dallas

5. (1:40) From Here to Infinity

Maj. Gen. J. Bruce Medaris, Winter Park, Fla.

(2:00) Adjournment

(The General Meeting Luncheon Program is jointly sponsored by Texas Society of Internal Medicine, Inc., and Texas Medical Association.)

SATURDAY, MAY 2, 12 Noon

Embassy Garden, Statler Hilton Hotel

Charles Max Cole, Dallas, President, Presiding

Gerald D. Dorman, M.D.
Guest Speaker

President,
American Medical Association

1. (12:00) Invocation

Milford O. Rouse, Dallas

Luncheon

Recognition:

1969-1970 Officers

Past Presidents Association

Presidents of Allied Health Professions

Presidents of Paramedical Groups

2. (12:45) Presentation of Anson Jones Awards

Charles Max Cole, Dallas

3. (1:00) Installation of Dr. Walter Walthall as President of the Texas Medical Association for 1970-1971

4. (1:20) Introduction of Speaker

Harvey Renger, Hallettsville

5. (1:25) Address

Gerald D. Dorman, New York

(1:45) Adjournment

MEMORIAL SERVICE

SUNDAY, MAY 3, 9-9:30 A.M.

Embassy Garden, Statler Hilton Hotel

John T. Binion, M. D., Dallas, Chairman

Mrs. Joe W. King, Houston, Cochairman

Mrs. Oscar M. Marchman, Jr., Auxiliary Local Arrangements Chairman

Prelude: Our Father in Heaven Who Art When in the Hour of Deepest Need— Johann Sebastian Bach
Mrs. Martha Binion, Dallas

Invocation
Harold M. Mims, M.D., Dallas

Memorial Address For Deceased Wives of Physicians
Mrs. Joe W. King, Houston

Solo: Like As a Father—John Prindle Scott
Mrs. Carolyn Gagas, Dallas

Memorial Address For Deceased Physicians
Floyd A. Norman, M.D., Dallas

Solo: But the Lord is Mindful—Mendelssohn
Mrs. Carolyn Gagas, Dallas

Benediction
Dan R. Sutherland, M.D., Dallas

Postlude: Fugue in E Flat—Johann Sebastian Bach
Mrs. Martha Binion, Dallas

FORUM OF ORIGINAL RESEARCH

Coordinator—Thomas M. Runge, Austin

FRIDAY, MAY 1, 9:30 A.M.-4:30 P.M. and

SATURDAY, MAY 2, 10-11:50 A.M.

Century Room, Fairmont Hotel

(The Forum of Original Research provides an opportunity for short presentation and discussion of original work in basic medical sciences and clinical medicine by members and guests of the Texas Medical Association. Presentations of ten minutes will be given. Brief discussion periods, led by moderators, will follow each paper. The following papers have been accepted for presentation. A moderator for each specialty and a specific time for each presentation will be designated and will appear in the final program of the Annual Session.)

RADIOTHERAPY AND/OR ONCOLOGY

1. Hyperbaric Oxygen as an Adjunct to Radiation Therapy

Robert Lindberg, Houston

In the early 1920's, radiobiological experiments showed that the effects of radiations were related to the amount of oxygen present at the time of irradiation. Patients breathing oxygen at three atmospheres of pressure have a significant increase in blood oxygen content. The first clinical trial of high pressure oxygen as an adjunct to radiation therapy was begun in 1954. The first year's experience with the combined treatment modality at M. D. Anderson Hospital will be presented.

2. The Technique of P32 Testing with Analysis of 140 Cases of Suspected Melanoma of the Eye

Frank O. McGehee, Herbert C. Allen, Jr., Richard S. Ruiz, Houston

One hundred-forty cases of P32 eye betagrams have been analyzed with emphasis placed on both technical and pathological causes for false positives and false negatives. Reference is made in regard to improvement of both surgical and instrument technique.

The paper demonstrates practical application on how the P32 test should be performed.

3. Immunology of Malignant Lymphoma in Man: Cell-Mediated Immunity to Neoplastic Cells

C. C. Shullenberger, Joseph G. Sinkovics, Houston

A patient with lymphocytic lymphoma exhibited circulating lymphocytes which were cytotoxic in vitro to autologous neoplastic cells. Two patients with reticulum cell sarcoma mobilized histiocytes against an allogenic tumor cell line cultured from another patient with reticulum cell sarcoma. Control leukocytes from normal persons also exhibited in vitro activity against tumor cells. The possibility is considered that lymph node tissue from a patient with Hodgkin's disease yielded a lymphoid cell clone in culture which is specifically committed to lymphoma tumor-antigens.

4. Treatment of Soft Tissue Sarcomas of the Extremities

Herman D. Suit, Robert D. Lindberg, Houston

Twenty-seven patients with sarcoma of the soft tissues of the extremities have been treated by a technique which featured irradiation administered under conditions of local tissue hypoxia: application of a tourniquet above the treatment field for each of 14 sessions (1,000 rads/session) over a total time of 43 days: 1,400 rads tumor dose/43 days). Results of these treatments will be reviewed. No local recurrences have been observed; observation periods were 1-5 years.

5. The Response of Normal Intestine to Neutron Irradiation

H. R. Withers, Ph.D., Houston; J. T. Brennan, Philadelphia; M. M. Elkind, Long Island

Some animal tumors are resistant to cure by x-ray therapy because they contain anoxic, but viable, cells that are about three times as radioresistant as are well-oxygenated cells. If cells are exposed to neutrons instead of x-rays they are less protected by anoxia. Therefore, there is a good reason for using neutrons in the treatment of tumors containing anoxic cells. There is some evidence to suggest that a proportion of human tumors may also contain anoxic cells and that, therefore, neutrons would be useful in clinical radiotherapy. However, another, but unrelated, phenomenon in the interaction of neutrons with tissue must be considered: an increased radiosensitivity of the cells, especially to multiple small doses. It was predicted that intestinal mucosa might suffer disproportionately from this increased radiosensitivity because they are resistant to small doses of x-rays. Our ex-

periments using an in vivo system for assaying quantitatively the radiosensitivity of intestinal mucosal cells indicates that neutrons of the energy required for radiotherapy increase the radiosensitivity of intestinal mucosal cells, but that this increase is less than predicted and probably proportionate to the increase to be expected in the cells of other tissues.

CARDIOLOGY

6. *In vitro* Neointima Formation in Velour Lined Vascular Prostheses

Milan Kalus, Houston

One of the practical applications of tissue cultures might be their use for development of neointima in cardiovascular prostheses prior to surgery. Such a neointima, grown in tissue culture from the patient's connective tissue obtained by biopsy several weeks before the planned operation, could prevent thromboembolic complications which are the main problem in the prolonged use of cardiovascular grafts.

This technique for neointima formation in tissue culture on impermeable, velour lined vascular prostheses is based on implantation of dense suspension of tissue fragments on velour. The technique is simple and inexpensive, avoiding complicated manipulation in tissue culture.

The complete neointima of 6 cm long vascular prostheses and 3 by 3 cm flat velour sheets has been formed in two to three weeks in tissue culture. It consists of a multilayered cellular membrane supported by a network of spindle cells spread between the velour threads. The morphology of the cells shows features of normal endothelial cells, myointimal cells and fibroblasts.

7. Effects of Exercise on Aqueous Dynamics

Robert H. Stewart, Houston;
Bernard Becker,
Raymond LeBlanc, St. Louis

This study investigated the effects of physical exercise on intraocular pressure. Tonography, as well as measurements of episcleral venous pressure and serum osmolarity, were carried out in an attempt to learn more about the mechanism of the decrease in intraocular pressure subsequent to exercise.

8. A Totally Implantable Cardiac Replacement Device

Mr. Kirk Wiggins, E. A. Ripperger, Ph.D.,
Thomas M. Runge, Austin

A cardiac replacement device has been constructed and installed in a mock circulation. It consists of four chambers and is roughly triangular in shape. It measures 14 cm by 12 cm by 7 cm. Pumping motion is derived from oscillating vanes which are actuated by an eccentric cam. Power is supplied by a DC motor mounted underneath the device. Control of output is achieved by variable compliance outflow tracts; speed is constant at 60 strokes/min.

9. Relation of Anatomic Abnormality of Mitral Annulus to Functional Mitral Insufficiency in Late Systole

Robert D. Leachman, Dennis Cokkinos,
Oscar Zamalloa, Houston

The late systolic murmur accompanied by a mid-systolic, non-ejection click is being recognized as a distinct entity. An anatomical characteristic is a dilated mitral annulus. The diameter of the mitral valve ring is significantly enlarged in comparison to the length of the value leaflets. Angiocardiographically, the diameter of the mitral valve is larger than the maximal left ventricular basal diameter during both systole and diastole, in the absence of ventricular dilatation. Also, the mitral valve/aortic valve diameter ratio in the A-P view is approximately 2/1, while it is not larger than 1.5/1 in most other patients examined.

The mitral valve is a sleeve-like structure. Dilatation of the annulus hampers approximation of the leaflets, creating mitral regurgitation. It also imposes an abnormal strain upon the chordae tendineae, which elongate and may eventually rupture. In our experience, this syndrome is the single most common etiology of "idiopathic" chordal rupture in later life. The anterior chordae are less affected because: (a) the anterior leaflet is longer than the posterior, and (b) it is better anchored by the fibrous trigones and because of its approximation to the left coronary and posterior aortic cusps.

The etiology of this syndrome appears multiple. Most commonly it is idiopathic, has a familial character and is accompanied by myxomatous degeneration and basophilic staining of the valvular tissue. Coronary and rheumatic heart disease have been shown to produce a similar picture.

Apart from eventual rupture, arrhythmias, chest pain, and abnormal electrocardiographic responses to exercise constitute aspects of this interesting entity.

10. Dry Electrocardiograph Electrodes

Mr. C. H. Lagow, Philip C. Richardson,
Mr. K. J. Sladek, Austin

OPHTHALMOLOGY

11. Metastatic Carcinoma of the Choroid

Robert B. Gillett, Houston

Lengthening survival times and more comprehensive care of patients with carcinomatosis increase the likelihood of the ophthalmologist becoming involved in the diagnosis and treatment of metastatic ocular disease. This paper reviews briefly the problem of metastatic tumors of the choroid by discussing the incidence of these tumors, primary tumor sites, route and distribution of metastases, and clinic appearance of the metastases, and clinic appearance of the metastatic lesions. The discussion is illustrated by a survey of patients seen at the M. D. Anderson Hospital and Tumor Institute.

12. Squamous Cell Carcinoma of the Bulbar Conjunctiva

Kenneth C. Lafleur, Ralph G.
Berkeley, Richard S. Ruiz, Houston

Twenty-nine cases of squamous cell carcinoma are reviewed. Prominent clinical features are the fleshy hue of the carcinoma, the presence of enlarged blood vessels in the area, and location at the limbus near the palpebral fissure. The disorder is a disease predominately of elderly males and is probably related to outdoor exposure. Early treatment consisting of surgical excision, diathermy, and irradiation is advised.

13. Transantral Orbital Decompression

Robert B. Wilkins, Houston

Thyroid exoohthalmos, when untreated, can result in severe orbital congestion with compromised ocular circulation and bizarre visual field changes thought to be secondary to optic nerve stretching. In addition to these vision-threatening conditions, painful exposure keratitis with secondary superficial infection and decreased vision can certainly be a major complication. The bulging eyes also create a severe cosmetic defect, sometimes resulting in serious depressions and reclusive attitudes.

The best functionally and cosmetically acceptable method of decompression was originally described by Ogura and Walsh of St. Louis. Our presentation describes further studies on the technical approach to the surgery as well as the pre- and postoperative ocular and extraocular muscle changes.

14. Vitreous Wick Syndrome

Van W. Teeters, Richard S. Ruiz, Houston

Eleven cases of surgically uncomplicated cataract extractions have developed prolapse of vitreous through a microscopic wound dehiscence two weeks or more after surgery. Severe intraocular inflammation developed in more than one-half the patients, which resembled bacterial enophthalmitis in two patients. This late wound breakdown is believed due to the manner sutures are tied and to the use of fornix-based conjunctival flaps at surgery.

SURGERY

15. Studies in Reconstruction and Transplantation of the Cervical Trachea

Byron J. Bailey, Jerome Kosoy, Galveston

During the past four years studies have been conducted in the area of reconstruction of the cervical trachea in dogs utilizing a variety of staged prostheses and tracheal transplantation.

In the area of tracheal prostheses, a number of different combinations of autogenous tissue (rib, fat, and fibrocollagenous tissue) combined with supporting materials (stainless steel mesh, Silastic, and Teflon) have been investigated. The results in this group have been interesting and there have been occasional successes, but the long-term results have been unsatisfactory because of problems with tracheal stenosis and excessive tissue reaction to this foreign material. A concise review will be presented.

Tracheal transplantation has provided more promising results and is the area under most intensive investigation currently. The series includes several dogs who have survived more than one year. The basic technique employed consists of removing a segment of 10-to-12 tracheal rings and transferring the segments from one animal to another. Details of technique and management will be presented.

The paper is illustrated with color slides and tables.

16. Regenerative Interaction Between the Bile Duct and Intestine: The Search for a Technique

Mr. J. Clark Streett, Fort Worth

Studies on bile duct regeneration in frogs reveal that the hepatic end of the severed duct can tunnel a new and functional passage through the wall of the intestine to its lumen. Thus an adult organ has its structure locally altered in the presence of regenerating tissue. A method is sought for achieving this effect in a sufficiently high percentage of experiments to make further studies more efficient.

PHARMACOLOGY AND/OR CHEMISTRY

17. Comparative Biochemistry and Pharmacology of Basic Protein Neurotoxins From North American Rattlesnake Venoms

Carlos A. Bonilla, Ph.D., D. Clifford Burross, Miss Katie Fiero, Miss Lucille P. Frank, Reed M. Stringham, Jr., Wichita Falls

The nerve growth factor (NGF) a protein endowed with growth promoting activity on specific nerve cell types has been isolated from mouse sarcoma 180, the submandibular gland of male Swiss albino mice, mouse saliva, and the venoms from various species of the three families of poisonous snakes (Elapidae, Viperidae and Crotalidae). We have studied the relationship between the salivary gland, human saliva, and mineral metabolism and recently a polypeptide with powerful hypocalcemic activity was isolated from whole and submandibular human saliva. In an attempt to find a more plentiful source for the hypocalcemic peptide we have begun a detailed investigation of the comparative biochemistry of the basic proteins in salivary secretions. Having developed a method for the electrophoretic detection of small molecular weight basic polypeptides (down to 1,500) from salivary secretions, a comparative study was instituted in which the protein composition of human parotid fluid could be determined in relation to that of several reptilian venoms.

18. Anticoagulant Action of Glucuronolactone in Rat

Miss Brenda Shepherd, Mr. Onan Bomar, V. M. Doctor, Ph.D., Mr. Willie Don McCullough, Prairie View

The oral administration of a single dose of 1.5 g./kg. of glucuronolactone to rats causes a prolongation of clotting time for a period of one week. During the initial phase (15 minutes, ½ hour, 1 hour) the whole blood obtained from glucuronolactone treated animals took twice as long to clot as compared with control animals. The clotting time of whole blood taken daily was significantly prolonged in the treated animals for seven days. Preliminary observations on the site of action of glucuronolactone on the clotting mechanism indicate that the contact activated system (intrinsic) may be altered significantly by this compound.

19. Epidemiology of Accidental and Self-Induced Poisoning in Galveston County

Don W. Micks, Mr. James A. Kieke, Galveston

The problem of poisoning in the population of Galveston County from 1958 to 1970 has been investigated retrospectively (1958-1967) and prospectively (1968-present) to determine trends, magnitude, and patterns of poisoning due to medicinal agents and other chemicals.

The findings indicate that the poisoning rate has been increasing and that the four leading categories of poisons are medicinal agents, cleaning and polishing agents, pesticides, and gases and vapors. Medicinal agents alone accounted for 55 percent of the total cases, tranquilizers being the most frequent cause of poisoning.

20. Clinical Significance of Serum Copper

Carl F. Tessmer, Houston

Studies of serum copper have begun to clarify the potential value of this trace element in clinical management of disease. Already established as a key factor in Wilson's disease, including diagnosis, and extensively evaluated from a physiologic standpoint, serum has been examined for a lesser known characteristic, its relationship to neoplasia of the reticuloendothelial system. Report of a pilot study (*Cancer*, April 1968) indicated a significant relationship between serum copper and the clinical status particularly of Hodgkin's disease. In untreated or relapsed cases the serum copper was above normal, while in cases responding satisfactorily to treatment, or in remission, serum copper was at normal levels. Certain interfering factors were recognized, as steroids, but of greatest significance was what appeared to be a predictive role, the serum copper changes preceding by a significant period the changes seen clinically.

21. Detection of the Cystic Fibrosis Gene by Oyster Cilia Inhibition

Miss Lillian H. Lockhart, Barbara H. Bowman, Ph.D., Galveston

Ciliary inhibition in oyster gills serves as an assay in identifying a serum factor in cystic fibrosis patients and heterozygotes. Serums from 61 of 62 cystic fibrosis patients and all 26 of their parents tested caused ciliary cessation within 35 minutes whereas serums from only 2 of 74 normal individuals inhibited ciliary activity within this time.

22. The Inhibitor to Ciliary Activity in Cystic Fibrosis Serum

Mr. Mike L. McCombs, Barbara H. Bowman, PhD., Miss Victoria Herzberg, Miss Lillian H. Lockhart, Galveston

The inhibitor to oyster ciliary activity was isolated from serum of cystic fibrosis patients and heterozygotes. The protein fraction demonstrating inhibition was electrophoretically a cation, had molecular weight of approximately 125,000 to 200,000 and was eluted on DEAE chromatography with the immunoglobulin G fraction. The analogous fraction in unaffected individuals did not inhibit oyster ciliary activity.

23. Biochemical Studies of the β Chain of Human Haptoglobin

Mr. Don R. Barnett, Mr. Tong-Ho Lee, Mr. Benny G. Raimer, Barbara H. Bowman, Ph.D., Galveston

Human haptoglobin (Hp) is a genetically determined serum protein which normally binds free hemoglobin. The β chain is

important in hemoglobin binding. This study has characterized the structure of the β chain and has revealed striking homologies to the immunoglobulin and serine proteases.

INTERNAL MEDICINE

24. North American Blastomycosis of a Nasal Sinus
Alvis E. Greer, Houston

The patient was a well developed 36-year-old woman who was admitted to the clinic June 19, 1955, complaining of severe, dull pain over the left maxillary antrum and left orbit, protrusion of the left eye, dual vision, and a sensation as though the eye were being pushed upward and outward.

The left antrum was opened and a thick granulomatous mass was completely filling it.

Diagnosis was blastomycosis dermatitidis. The left antrum was thoroughly cleansed. It was found that she had depressed breath sounds, associated with crepitant rales in the left basal area.

Residual recognizable fungi were found in the left antrum. She was hospitalized in Houston and was given 2-hydroxystilbamidine intravenously for 26 days. The treatment was repeated six weeks after the first course and her improvement was remarkable and eventually complete.

25. The Snyder Test as an Index of Intracellular Polysaccharide-Storing Bacteria
Clay A. Henry, D.D.S., Ph.D.,
Mr. J. E. Carnes, Mr. Thomas E. Winford,
William E. Kantz, D.D.S., Dallas.

Saliva samples were obtained from dental students and used for bacterial analysis and for the Snyder Test, which has been advocated for estimating caries susceptibility.

The *Streptococcus salivarius* population contributed significantly to the salivary flora capable of storing intracellular polysaccharides. A positive correlation was found between the Snyder Test results and the numbers of these streptococci.

26. Total Parathyroidectomy in Azotemic Renal Osteodystrophy
Jack W. Moncrief, Austin

CONTINENTAL BREAKFAST ROUND TABLE PRESENTATIONS

Six Continental Breakfast Round Table Presentations will be held Friday, 8:15 to 10 a.m., in the Fairmont Hotel. The round table presentations are informal programs given primarily for those in general practice. They feature 30 minutes of informal discussion and refreshments, approximately 25 minutes of lecture by the guest speaker, and 50 minutes of open forum. Tickets (at no charge) are required for admittance and may be obtained at the registration desks.

Coffee, rolls, and juice will be available to those attending through the courtesy of Geigy Pharmaceuticals.

Following is a list of round table topics, discussion leaders, and meeting rooms in the Fairmont Hotel:

FRIDAY, MAY 1, 8:15-10 A.M.

1. **Treatment and Evaluation of Shock**
(Continental Room) Stephen M. Ayres, New York

2. **Ocular Complications of Systemic Medications**
(Pavilion Room) Philip P. Ellis, Denver

3. **Pitfalls in the Diagnosis of the Acute Surgical Abdomen**
(Executive Room) Robert J. Freeark, Chicago

4. **Sports Medicine—Orthopaedic Oriented**
(Florentine Room) Jack Chandler Hughston, Columbus, Ga.

5. **The Adolescent and Drug Abuse**
(Oak Room) Blaine E. McLaughlin, Grand Forks, N. D.

6. **Acute Injuries of the Hand**
(French Room) Francis X. Paletta, St. Louis

Systematic evaluation to determine the extent of the injuries of the hand require that a tabulation of injuries to the nerve, tendons, and bone be made to every component part of the hand. It is preferable if these injuries can be repaired within the first two hours to minimize infection and convert the wound to a surgically clean wound, where definitive reconstructive procedures can be done. Most injuries of the hand if seen early should result in a closed wound, using skin grafts whenever possible and skin flaps whenever indicated. One should constantly keep in mind that while splinting of the injured part is most important, prolonged immobilization of the finger and hand can be most destructive from the resulting stiffening.

7. **Thyroid Nodule**
(State Room) George P. Rosemond, Philadelphia

The management of the patient with a thyroid nodule usually, but not always, includes surgical removal to exclude the possibility of thyroid cancer. Certain groups are more likely to have a malignant nodule while others are most unlikely to be so afflicted. Various diagnostic tests are available adjuncts in making the decision as to when and if an operation should be performed. The importance of meticulous, careful operative technique cannot be minimized.

CURBSTONE CONSULTATIONS

Twenty informal, unrehearsed round table discussions, sponsored by the Texas Medical Association, will be held Friday, 5 to 6:30 p.m., and Saturday, 4 to 5:30 p.m., in the Regency Ballroom of the Fairmont Hotel. All registrants are invited to attend. Tickets (at no charge) are required for admittance. There is a limited number of tickets available, and they may be requested in advance, and will be available at the registration desks.

Physicians may move from one table to another, if and when they wish, and are encouraged to ask questions and to comment on the various aspects of each subject under discussion. Physicians are encouraged to bring case histories and to obtain the opinions of the discussion leaders.

Beer, coffee, and soft drinks will be provided, courtesy of Landry Pharmaceuticals, Inc., Houston, and Medical Advisors, Southwestern Bell Telephone Company.

Topics, moderators, and discussion leaders are as follows:

FRIDAY, MAY 1, 5 to 6:30 P.M.

Table 1. Therapy of Peptic Ulcer Disease
Kermit B. Knudsen, Temple, Moderator
E. Stanley Crawford, Houston
William D. Davis, New Orleans
John M. Eiband, Houston

Table 2. Management of Cardiorespiratory Arrest
Thomas K. Burnap, Dallas, Moderator
Robert F. Anderson, Austin
Maurice E. Herring, Dallas
George S. Schools, Dallas
Oscar B. Williams, Jr., Dallas

Table 3. Office Psychiatry, Including Psychotherapy, Drug Therapy
James K. Peden, Dallas, Moderator
Bruce H. Beard, Dallas
Larry E. Tripp, Dallas

Table 4. Management of Neck Pain
G. Truett James, Dallas, Moderator
Edward M. Krusen, Dallas
Dan R. Sutherland, Dallas
Charles M. Wilson, Dallas

Table 5. How to Collect Workmen's Compensation Bills
Edward F. Thomas, Amarillo, Moderator
George V. Launey, Dallas
Ralph Liles, Houston
Mr. A. L. O'Donnell, Dallas
Mr. Smith Pettigrew, Dallas

Table 6. You and the Law

Table 7. Jogging—What Should Patients Be Told?
Robert D. Sine, Houston, Moderator
Richard H. Eppright, Houston
Herbert L. Fred, Houston
Cone Johnson, Dallas
William F. Ossenfort, Jr., Houston
Mr. Harry Schneider, Houston

Table 8. Evaluation of Joint Pain
Louis H. Paradies, Dallas, Moderator
Jerald L. Blum, Dallas
James P. (Pat) Evans, Dallas
Albert O. Loiselle, Dallas
J. Donald Smiley, Dallas

Table 9. Postoperative Complications
Charles R. Baxter, Dallas, Moderator
Charles L. Austin, Jr., Dallas
Peter C. Canizaro, Dallas
Robert J. Freeark, Chicago
Alan K. Pierce, Dallas

Table 10. Student Unrest
Donald H. McDonald, Abilene, Moderator
Mr. J. Edward Beasley, Jr., Dallas
Mr. Bill Fox, Dallas
John E. Meeks, Dallas
Floyd A. Norman, Dallas

SATURDAY, MAY 2, 4 to 5:30 p.m.

Table 11. Newer Laboratory Aids to Diagnosis
Gerald Noteboom, Dallas, Moderator
Ronald E. Buchanan, Dallas
A. Ben C. Dowdey, Dallas
Norman G. P. Helgeson, Dallas
Robert R. Rember, Dallas

Table 12. Pain Relief
Joe A. Walker, Galveston, Moderator
William S. Derrick, Houston
Milam E. Leavens, Houston
Robert B. White, Galveston

Table 13. Learning Problems in Children
ArrNell Boelsche, Galveston, Moderator
Bill S. Caldwell, Ph.D., Galveston
Miss Charlotte Clarke, Galveston
William S. Conkling, Navasota
Charles B. Lambeth, Odessa

Table 14. The Indications for Arteriography
John R. Derrick, Galveston, Moderator
William S. Fields, Houston
Robert J. Freeark, Chicago
George C. Morris, Jr., Houston
Jesse E. Thompson, Dallas
Fred J. Wolma, Jr., Galveston

Table 15. The Place of Cervical Biopsy Today
John W. Boldt, San Antonio, Moderator
Merle W. Delmer, San Antonio
Charles E. Gibbs, San Antonio
Harwin B. Jamison, Dallas
Bruce W. Meek, Dallas

Table 16. Diagnostic Approach and Management of Edema
Albert D. Roberts, Jr., Dallas, Moderator
Robert B. Allison, Dallas
George B. Carman, Dallas
Maurice E. Herring, Dallas
Alan R. Hull, Dallas
N. Kermit Olson, Fort Worth

Table 17. How to Handle the Smoking Problem
William F. Miller, Dallas, Moderator
Milton V. Davis, Dallas
Harold Crasilneck, Ph.D., Dallas

Table 18. Therapeutic Use of Oxygen
David P. Nicholson, Dallas, Moderator
Thomas K. Burnap, Dallas
Roger R. Ecker, Dallas
Jacob L. Kay, Dallas

Table 19. Pharmacological Treatment of Acute Psychiatric Emergencies

James Claghorn, Houston, Moderator
K. D. Charalampous, Dallas
Edwin E. Johnstone, Houston
Joseph C. Schoolar, Houston

Table 20. Prevention of Prematurity

Peter Weston, San Antonio, Moderator

SECTION MEETINGS

SECTION ON DIGESTIVE DISEASES

Chairman—Henry Laurens, Temple

Secretary—John M. Eiband, Houston

FRIDAY, MAY 1, 2:30-5 P.M.

Executive Room, Fairmont Hotel

1. (2:30) The Liver and Bile Salt Metabolism

F. Scott O'Neil, Houston

Many disease states affect the bile secretory apparatus of the liver and thereby disturb the intermediary metabolism of bile salts. The immediate effect is to elevate the bile salts circulating in the blood and to limit the delivery of bile salts into the biliary tree and the small intestine. This, in turn, leads to pruritus, to the precipitation of cholesterol crystals, and to steatorrhea.

(2:45) Discussion

Kermit B. Knudsen, Temple

2. (2:50) The Australia Antigen and Viral Hepatitis

Theodore Hersh, Houston

The Australia antigen was first detected in the serum of an Australian aborigine by its reaction in immunodiffusion tests with sera of multiple transfused hemophiliacs. Electron microscopic studies characterize it as a virus-like particle. The Australia antigen has been shown by immunologic techniques to be present in the sera of patients with acute viral hepatitis. It appears early in the incubation period of the illness and disappears during clinical recovery. A greater percentage of patients with the clinical diagnosis of serum hepatitis, rather than with infectious hepatitis, have the Australia antigen. A quarter of patients with diagnosis of chronic active hepatitis also have Australia antigen in their sera. Evidence that Australia antigen may be the agent of serum hepatitis is provided by studies showing that recipients of donors' blood having Australia antigen develop acute viral hepatitis.

(3:05) Discussion

Stuart Riggs, Houston

3. (3:10) The Problem of Chronic Hepatitis

William D. Davis, Jr., New Orleans

(3:40) Intermission

4. (3:50) Primary Hepatomas, A Twenty Year Review

Edward E. Louis,
Marcel Patterson, Galveston

There was a twofold increase in the number of hepatomas from the 1950's to 1960's. The average age of patients was 63. A 30% erroneous diagnosis (such as liver abscess, obstructive cholelithiasis, intestinal obstruction) was not corrected until operation or autopsy. Fifty percent had alkaline phosphatase-bilirubin dissociation. Chemotherapy was not attempted. There was one resection with a known six-year survival.

(4:05) Discussion

E. Stanley Crawford, Houston

5. (4:10) Gallstones—Pathogenesis and Diagnosis

Daniel E. Polter, Dallas

The pathogenesis of gallstone formation involves multiple factors which are poorly understood. Definite changes in hepatic and gallbladder bile have been demonstrated in lithogenic bile. Gallstones can be regularly induced in laboratory animals by dietary manipulation or by feeding abnormal bile salts. Some pitfalls in the diagnosis of gallstones are reviewed along with newer diagnostic techniques.

(4:25) General Discussion

SATURDAY, MAY 2, 9-11:30 A.M.

Executive Room, Fairmont Hotel

6. (9:00) The Choice of an Esophageal Substitute

Edward A. Hanna, Houston

Among the many methods designed to replace the esophagus, the visceral substitutes, stomach, small and large intestines, have proved most satisfactory. A 25-year investigation was conducted to determine the performance and the long-term results of the visceral substitutes. The findings indicate that each substitute has certain advantages and is best suited for specific conditions. This study establishes a basis for the choice of a visceral substitute for the esophagus.

(9:15) Discussion

Harold C. Urschel, Jr., Dallas

7. (9:20) Gastric Ulcer in the Teenager

Stuart A. Mason, Fort Worth

Six cases of gastric ulcer in teenagers were diagnosed out of more than 200,000 admissions to a west Texas hospital in the last ten years. Five of the cases were in males and one in a female: All were Caucasians; their ages varied from 15 to 19 years. Symptoms and physical findings were similar to those found in adults. One case was associated with hematemesis and melena. One case of active gastric ulcer, associated with active duodenal ulcer, was found in an 11 year old white male, who developed syncope, followed by melena. All cases responded well to conservative medical management. Because of the rarity of the condition, the symptoms are apt to be ascribed to dietary indiscretion, emotional tension, or "indigestion." A high index of suspicion, and a carefully performed gastrointestinal series, are essential to making the diagnosis. (Talk to be illustrated with slides.)

(9:35) Discussion

Laurance N. Nickey, El Paso

8. (9:40) Pathophysiology and Management of Portal Hypertension

William D. Davis, Jr., New Orleans

(10:10) Intermission

9. (10:20) Newer Concepts in the Medical Management of Peptic Ulcer Disease

John S. Fordtran, Dallas

Medical treatment of peptic ulcer includes the use of diet, antacids, and anticholinergic drugs. The rationale for the use of each of these methods of treatment will be discussed,

especially with regard to whether or not they decrease gastric acidity, hasten ulcer healing or prevent ulcer recurrence.

(10:35) General Discussion

10. (10:40) Mesenteric Vascular Disease
Michael A. LeVine, Houston

In the past decade, a clearer definition of the clinical presentation of mesenteric vascular disease has emerged. Several acute and chronic visceral ischemic syndromes will be defined. Primary emphasis will be given at acute mesenteric thrombosis and embolism, chronic intestinal ischemia, segmental infarction of the colon, and bowel infarction without demonstrable vessel occlusion.

(10:55) Discussion
James W. McBee, Houston

SECTION ON GENERAL PRACTICE

Chairman—Franklin L. Crawford, Cedar Hill

Secretary—J. T. Lamar McNew, Bryan

FRIDAY, MAY 1, 2:30-5 P.M.

Parisian Room, Fairmont Hotel

1. (2:30) The Board of Family Practice
Maynard I. Shapiro, Chicago

2. (3:00) The Aging Face Renewed
E. Frank Dunton, Dallas

In our society, which increasingly emphasizes youth, the problem of premature aging has become one of economics as well as emotions. Loss of elasticity of skin and herniation of fat causes the eyes to show aging first. This is followed by sagging of facial skin and wrinkling of the neck which further adds to the appearance of excessive years. Removal of this excess skin and reconstructing all sagging fatty tissue renews the "aging face."

3. (3:30) Salvage of Brains and Legs With Reconstructive Vascular Surgery
Grady L. Hallman, Houston

The areas most commonly affected by occlusive disease of the major peripheral arteries are the lower extremities and the brain. All patients with transient ischemic cerebral symptoms should have arteriograms to identify those with stenosing plaques in the carotid and vertebral arteries, since removal of these obstructions produces dramatic relief of symptoms and prevents stroke. Intermittent claudication is the earliest symptom of ischemia of the legs, and gangrene is the end stage. Bypass grafts to the femoral or popliteal arteries can restore circulation and result in maximum salvage of tissue.

4. (4:00) The Future of Family Practice
Maynard I. Shapiro, Chicago

5. (4:30) Electrodiagnostic Studies in Bell's Palsy
Carl V. Granger, Boston

There are three possibilities for treatment in Bell's palsy—curative, palliative or protective and restorative. Electrodiagnostic techniques aid in assessment of the neurophysiologic state of nerve and muscle. These are more important for prognosis than for diagnosis in cases of Bell's palsy. The relative merits of strength—duration testing, nerve conduction latency measurements, nerve threshold excitability testing, electrogustometry and electromyography are discussed. Electromyography directly reflects the functional continuity of the nerve and provides information at the onset of paralysis as well as during the course of recovery. Such information has direct implications for so-called curative treatment at the onset as well as for restorative treatment during convalescence.

SATURDAY, MAY 2, 9-11:30 A.M.

Parisian Room, Fairmont Hotel

6. (9:00) The "Field" Diagnosis of Knee Injuries
Jack Chandler Hughston, Columbus, Ga.

7. (9:30) Immediate Revascularization of the Heart
Maurice Adam, Dallas

8. (10:00) Gerifacts on Rehabilitation in the Aging
Allen M. Fain, Duncanville

The generalized observations of a Dallas-based geriatric clinic group will be presented in brief summaries as they relate to problem areas of the aging. Specific references will include prevention and treatment of decubiti, care of the hemiplegic, the use of drugs in the aged, an outline of necessary orders for the long-term-care patient, and physical medicine and rehabilitation.

9. (10:30) A Pilot Program in Family Practice
Seth B. Cowan, Garland

A ten-week program was developed to test the usefulness of an experience based learning situation for junior students at Southwestern Medical School. Involved in developing this program were the participating students, Southwestern Medical School representatives, area family physicians, and an industrial psychologist.

Two students and five physicians were models. Results are reported in terms of attitudes, behavioral change, and the program's effect on future planning.

10. (11:00) Treatment of the Injured Nose
Melvin Spira, Houston

The presentation covers the management of all types of injuries to both the bony, cartilaginous and soft tissue portions of the external nose and nasal air passageways. While the treatment of the more simple injuries such as bleeding, lacerations, avulsions and nasal fractures is stressed, the management of more complex trauma, including septal and reconstructive nasal surgery is also mentioned. Common errors committed during repair are cited and ways to avoid them are discussed.

SECTION ON INTERNAL MEDICINE

Chairman—Homer R. Goehrs, Austin

Secretary—Maurice E. Herring, Dallas

FRIDAY, MAY 1, 2:30-5 P.M.

Continental Room, Fairmont Hotel

1. (2:30) Hypoxemia and Hyperventilation as Causes of Cardiac Arrhythmias
Stephen M. Ayres, New York

Table 19. Pharmacological Treatment of Acute Psychiatric Emergencies

James Claghorn, Houston, Moderator
K. D. Charalampous, Dallas
Edwin E. Johnstone, Houston
Joseph C. Schoolar, Houston

Table 20. Prevention of Prematurity

Peter Weston, San Antonio, Moderator

SECTION MEETINGS

SECTION ON DIGESTIVE DISEASES

Chairman—Henry Laurens, Temple

Secretary—John M. Eiband, Houston

FRIDAY, MAY 1, 2:30-5 P.M.

Executive Room, Fairmont Hotel

1. (2:30) The Liver and Bile Salt Metabolism

F. Scott O'Neil, Houston

Many disease states affect the bile secretory apparatus of the liver and thereby disturb the intermediary metabolism of bile salts. The immediate effect is to elevate the bile salts circulating in the blood and to limit the delivery of bile salts into the biliary tree and the small intestine. This, in turn, leads to pruritus, to the precipitation of cholesterol crystals, and to steatorrhea.

(2:45) Discussion

Kermit B. Knudsen, Temple

2. (2:50) The Australia Antigen and Viral Hepatitis

Theodore Hersh, Houston

The Australia antigen was first detected in the serum of an Australian aborigine by its reaction in immunodiffusion tests with sera of multiple transfused hemophiliacs. Electron microscopic studies characterize it as a virus-like particle. The Australia antigen has been shown by immunologic techniques to be present in the sera of patients with acute viral hepatitis. It appears early in the incubation period of the illness and disappears during clinical recovery. A greater percentage of patients with the clinical diagnosis of serum hepatitis, rather than with infectious hepatitis, have the Australia antigen. A quarter of patients with diagnosis of chronic active hepatitis also have Australia antigen in their sera. Evidence that Australia antigen may be the agent of serum hepatitis is provided by studies showing that recipients of donors' blood having Australia antigen develop acute viral hepatitis.

(3:05) Discussion

Stuart Riggs, Houston

3. (3:10) The Problem of Chronic Hepatitis

William D. Davis, Jr., New Orleans

(3:40) Intermission

4. (3:50) Primary Hepatomas, A Twenty Year Review

Edward E. Louis,
Marcel Patterson, Galveston

There was a twofold increase in the number of hepatomas from the 1950's to 1960's. The average age of patients was 63. A 30% erroneous diagnosis (such as liver abscess, obstructive cholelithiasis, intestinal obstruction) was not corrected until operation or autopsy. Fifty percent had alkaline phosphatase-bilirubin dissociation. Chemotherapy was not attempted. There was one resection with a known six-year survival.

(4:05) Discussion

E. Stanley Crawford, Houston

5. (4:10) Gallstones—Pathogenesis and Diagnosis

Daniel E. Polter, Dallas

The pathogenesis of gallstone formation involves multiple factors which are poorly understood. Definite changes in hepatic and gallbladder bile have been demonstrated in lithogenic bile. Gallstones can be regularly induced in laboratory animals by dietary manipulation or by feeding abnormal bile salts. Some pitfalls in the diagnosis of gallstones are reviewed along with newer diagnostic techniques.

(4:25) General Discussion

SATURDAY, MAY 2, 9-11:30 A.M.

Executive Room, Fairmont Hotel

6. (9:00) The Choice of an Esophageal Substitute

Edward A. Hanna, Houston

Among the many methods designed to replace the esophagus, the visceral substitutes, stomach, small and large intestines, have proved most satisfactory. A 25-year investigation was conducted to determine the performance and the long-term results of the visceral substitutes. The findings indicate that each substitute has certain advantages and is best suited for specific conditions. This study establishes a basis for the choice of a visceral substitute for the esophagus.

(9:15) Discussion

Harold C. Urschel, Jr., Dallas

7. (9:20) Gastric Ulcer in the Teenager

Stuart A. Mason, Fort Worth

Six cases of gastric ulcer in teenagers were diagnosed out of more than 200,000 admissions to a west Texas hospital in the last ten years. Five of the cases were in males and one in a female: All were Caucasians; their ages varied from 15 to 19 years. Symptoms and physical findings were similar to those found in adults. One case was associated with hematemesis and melena. One case of active gastric ulcer, associated with active duodenal ulcer, was found in an 11 year old white male, who developed syncope, followed by melena. All cases responded well to conservative medical management. Because of the rarity of the condition, the symptoms are apt to be ascribed to dietary indiscretion, emotional tension, or "indigestion." A high index of suspicion, and a carefully performed gastrointestinal series, are essential to making the diagnosis. (Talk to be illustrated with slides.)

(9:35) Discussion

Laurance N. Nickey, El Paso

8. (9:40) Pathophysiology and Management of Portal Hypertension

William D. Davis, Jr., New Orleans

(10:10) Intermission

9. (10:20) Newer Concepts in the Medical Management of Peptic Ulcer Disease

John S. Fordtran, Dallas

Medical treatment of peptic ulcer includes the use of diet, antacids, and anticholinergic drugs. The rationale for the use of each of these methods of treatment will be discussed,

especially with regard to whether or not they decrease gastric acidity, hasten ulcer healing or prevent ulcer recurrence.

(10:35) General Discussion

10. (10:40) Mesenteric Vascular Disease
Michael A. LeVine, Houston

In the past decade, a clearer definition of the clinical presentation of mesenteric vascular disease has emerged. Several acute and chronic visceral ischemic syndromes will be defined. Primary emphasis will be given at acute mesenteric thrombosis and embolism, chronic intestinal ischemia, segmental infarction of the colon, and bowel infarction without demonstrable vessel occlusion.

(10:55) Discussion
James W. McBee, Houston

SECTION ON GENERAL PRACTICE

Chairman—Franklin L. Crawford, Cedar Hill

Secretary—J. T. Lamar McNew, Bryan

FRIDAY, MAY 1, 2:30-5 P.M.

Parisian Room, Fairmont Hotel

1. (2:30) The Board of Family Practice
Maynard I. Shapiro, Chicago

2. (3:00) The Aging Face Renewed
E. Frank Dunton, Dallas

In our society, which increasingly emphasizes youth, the problem of premature aging has become one of economics as well as emotions. Loss of elasticity of skin and herniation of fat causes the eyes to show aging first. This is followed by sagging of facial skin and wrinkling of the neck which further adds to the appearance of excessive years. Removal of this excess skin and reconstructing all sagging fatty tissue renews the "aging face."

3. (3:30) Salvage of Brains and Legs With Reconstructive Vascular Surgery
Grady L. Hallman, Houston

The areas most commonly affected by occlusive disease of the major peripheral arteries are the lower extremities and the brain. All patients with transient ischemic cerebral symptoms should have arteriograms to identify those with stenosing plaques in the carotid and vertebral arteries, since removal of these obstructions produces dramatic relief of symptoms and prevents stroke. Intermittent claudication is the earliest symptom of ischemia of the legs, and gangrene is the end stage. Bypass grafts to the femoral or popliteal arteries can restore circulation and result in maximum salvage of tissue.

4. (4:00) The Future of Family Practice
Maynard I. Shapiro, Chicago

5. (4:30) Electrodiagnostic Studies in Bell's Palsy
Carl V. Granger, Boston

There are three possibilities for treatment in Bell's palsy—curative, palliative or protective and restorative. Electrodiagnostic techniques aid in assessment of the neurophysiologic state of nerve and muscle. These are more important for prognosis than for diagnosis in cases of Bell's palsy. The relative merits of strength—duration testing, nerve conduction latency measurements, nerve threshold excitability testing, electrogustometry and electromyography are discussed. Electromyography directly reflects the functional continuity of the nerve and provides information at the onset of paralysis as well as during the course of recovery. Such information has direct implications for so-called curative treatment at the onset as well as for restorative treatment during convalescence.

SATURDAY, MAY 2, 9-11:30 A.M.

Parisian Room, Fairmont Hotel

6. (9:00) The "Field" Diagnosis of Knee Injuries
Jack Chandler Hughston, Columbus, Ga.

7. (9:30) Immediate Revascularization of the Heart
Maurice Adam, Dallas

8. (10:00) Gerifacts on Rehabilitation in the Aging
Allen M. Fain, Duncanville

The generalized observations of a Dallas-based geriatric clinic group will be presented in brief summaries as they relate to problem areas of the aging. Specific references will include prevention and treatment of decubiti, care of the hemiplegic, the use of drugs in the aged, an outline of necessary orders for the long-term-care patient, and physical medicine and rehabilitation.

9. (10:30) A Pilot Program in Family Practice
Seth B. Cowan, Garland

A ten-week program was developed to test the usefulness of an experience based learning situation for junior students at Southwestern Medical School. Involved in developing this program were the participating students, Southwestern Medical School representatives, area family physicians, and an industrial psychologist.

Two students and five physicians were models. Results are reported in terms of attitudes, behavioral change, and the program's effect on future planning.

10. (11:00) Treatment of the Injured Nose
Melvin Spira, Houston

The presentation covers the management of all types of injuries to both the bony, cartilaginous and soft tissue portions of the external nose and nasal air passageways. While the treatment of the more simple injuries such as bleeding, lacerations, avulsions and nasal fractures is stressed, the management of more complex trauma, including septal and reconstructive nasal surgery is also mentioned. Common errors committed during repair are cited and ways to avoid them are discussed.

SECTION ON INTERNAL MEDICINE

Chairman—Homer R. Goehrs, Austin

Secretary—Maurice E. Herring, Dallas

FRIDAY, MAY 1, 2:30-5 P.M.

Continental Room, Fairmont Hotel

1. (2:30) Hypoxemia and Hyperventilation as Causes of Cardiac Arrhythmias
Stephen M. Ayres, New York

The AMBAR® SCRAPBOOK of

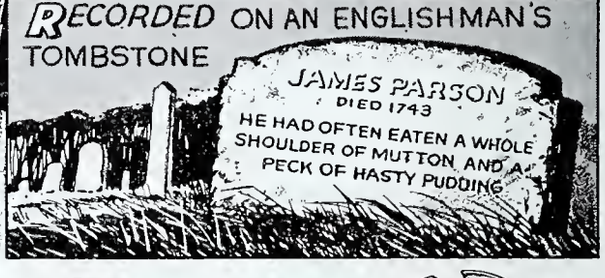
Obesity Oddities

FACT & LEGEND

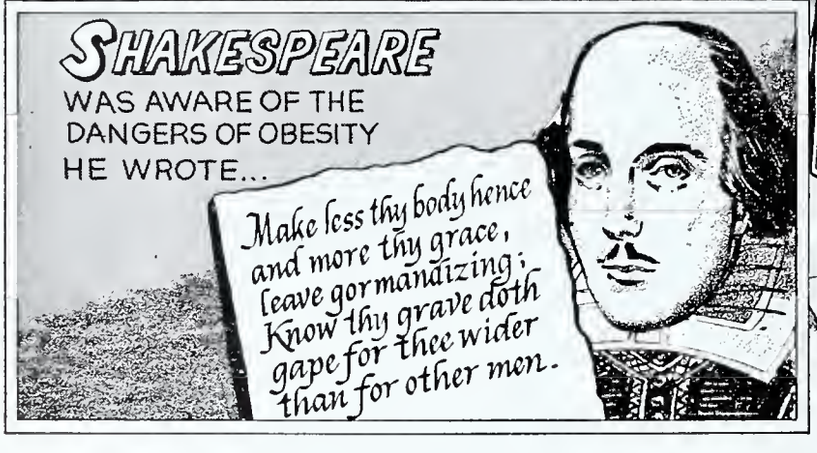
OBESITY WAS A MILITARY OFFENSE!

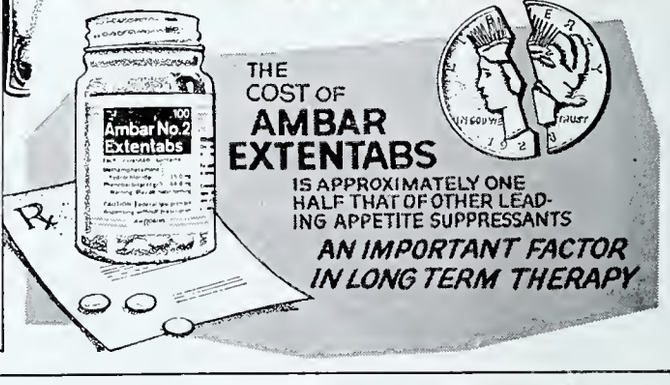
OVERWEIGHT ROMAN HORSEMEN WERE MADE TO FORFEIT THEIR MOUNTS AND BECOME FOOT SOLDIERS!

RECORDED ON AN ENGLISHMAN'S TOMBSTONE



SHAKESPEARE WAS AWARE OF THE DANGERS OF OBESITY HE WROTE...





THE COST OF **AMBAR EXTENTABS** IS APPROXIMATELY ONE HALF THAT OF OTHER LEADING APPETITE SUPPRESSANTS

AN IMPORTANT FACTOR IN LONG TERM THERAPY

CONTROL FOOD AND MOOD ALL DAY LONG WITH A SINGLE MORNING DOSE

AMBAR #2 EXTENTABS®

methamphetamine HCl 15 mg., phenobarbital 64.8 mg. (1 gr.) (Warning: may be habit forming).

One Ambar Extentab before breakfast can help control most patients' appetite for up to 12 hours. Methamphetamine, the appetite suppressant, gently elevates mood and helps overcome dieting frustrations. Phenobarbital, the sedative in Ambar, controls irritability and anxiety...helps maintain a state of mental calm and equanimity. Both work together to ease the tensions that erode the willpower during periods of dieting.

Also available: Ambar #1 Extentabs®—methamphetamine hydrochloride 10 mg., phenobarbital 64.8 mg. (1 gr.) (Warning: may be habit forming).

BRIEF SUMMARY/**Indications:** Ambar suppresses appetite and helps offset emotional reactions to dieting. **Contraindications:** Hypersensitivity to barbiturates or sympathomimetics; patients with advanced renal or hepatic disease. **Precautions:** Administer with caution in the presence of cardiovascular disease or hypertension. **Side Effects:** Nervousness or excitement occasionally noted, but usually infrequent at recommended dosages. Slight drowsiness has been reported rarely. See package insert for further details.

A. H. ROBINS COMPANY, RICHMOND, VA. 23220 A·H·ROBINS

2. (3:00) Dynamic Auto-Fluoroscopic Pulmonary Vascular Examination in Thromboembolism

Herbert C. Allen, Jr., Houston

3. (3:30) Surgery for Impending Myocardial Infarction

Ben F. Mitchel, Dallas

4. (4:00) Arterial Aging as Seen by the Electric Plethysmograph

Richard J. Puls, Dallas

5. (4:30) North American Blastomycosis

Alvis E. Greer, Houston

SATURDAY, MAY 2, 9-11:30 A.M.

Continental Room, Fairmont Hotel

6. (9:00) Respiratory Management of the General Medical and Surgical Patient

Stephen M. Ayres, New York

7. (9:30) Hepatic Arterial Infusions

Charles M. McBride, Houston

8. (10:00) Intra-Articular Salicylates

John D. Gleckler, Denison

9. (10:30) Percutaneous Needle Biopsy of the Lung

C. Roger Youmans, Jr., Galveston

10. (11:00) Reconstructive Surgery Versus Transplantation for Acquired Heart Disease

Grady L. Hallman, Jr., Houston

SECTION ON NERVOUS AND MENTAL DISEASES

(With Texas District Branch, American Psychiatric Association)

Chairman—Robert L. Leon, San Antonio

Secretary—Jerry M. Lewis, Dallas

(Members of the Texas District Branch, American Psychiatric Association will have a cocktail party, dance, and buffet breakfast Thursday, 8 p.m., Regency Ballroom, Fairmont Hotel. Texas District Branch, APA, will meet for a business session Saturday, 11:20 a.m., Oak Room, Fairmont Hotel. See Specialty Programs section for additional details.)

FRIDAY, MAY 1, 2:30-5 P.M.

Oak Room, Fairmont Hotel

1. (2:30) Establishing the Therapeutic Alliance With the Adolescent

John E. Meeks, Dallas

Adolescence as both an emotional and cognitive developmental phase presents some specific technical difficulties in the establishment of a therapeutic working relationship. Some of the most important issues are (1) the adolescent's attitude toward dependency, (2) the adolescent's fear of regression and his anxiety about the future, both of which tend to make him fearful of exploring his past, (3) the adolescent's anxiety regarding his controls, which makes it difficult for him to allow himself to be aware of his true feelings, and (4) the recent development of the capacity for formal operational thought which tends to lead the adolescent to believe in the omnipotence of thought.

The paper will deal with some of the specific resistances to the psychotherapeutic process which these factors produce in the adolescent. Some techniques for dealing with these special problems, as well as a discussion of the nature of the therapeutic alliance with the adolescent, will be considered.

2. (3:00) Countertransference Problems

Robert T. Long, Dallas

Countertransference, as those feelings and sometime actions which are aroused in the therapist by his patients during the course of psychotherapy, is considered as a normally occurring phenomenon. The questions are how to recognize it, and how to handle it therapeutically. In this paper countertransference is considered in two parts: (1) Emotional reactions aroused by the patient as a whole, e.g., counter feelings aroused by enormous rage, despair, and helplessness, and (2) Specific emotional reactions to discrete conflicts of the patient where the therapist reacts to an unconscious partial identification of his own which he unknowingly projects onto his patient. Both of these countertransference aspects are discussed within a developmental framework from the adolescent phase, through the latency and oedipal periods to the more regressed pregenital periods of the obsessional neuroses, and psychotic regressions.

3. (3:30) The Day Hospital

Stanley L. Seaton, Dallas

4. (4:00) The Social Role Blues

William G. Reese, Little Rock, Ark.

Human suffering manifests as pain, anxiety, depression, or their equivalents. Depression as affect, symptom, syndrome or disease is protean, ubiquitous, and complex. Customarily, psychiatrists analyze depression from intrapsychic or neuroendocrine perspectives. This presentation will focus instead on relevant social factors.

SATURDAY, MAY 2, 9-11:15 A.M.

Oak Room, Fairmont Hotel

5. (9:00) Lithium Therapy in Psychiatry

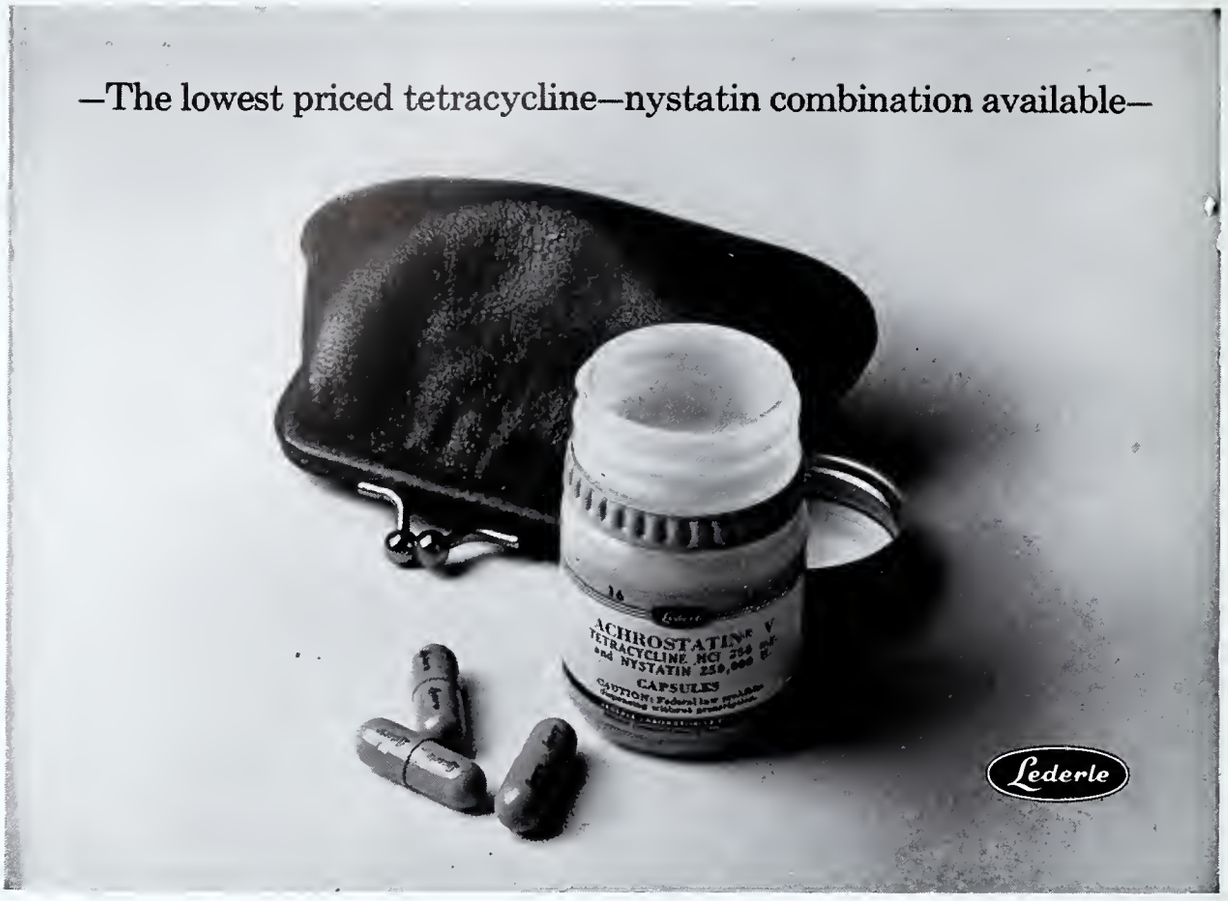
Irvin M. Cohen, Houston

Extensive clinical trial has now demonstrated that lithium carbonate can terminate the manic phase of the manic-depressive psychosis and may exert a prophylactic effect. It is of no value in the treatment of the depressive phase once established but may modify or prevent future episodes. Principles of administration, including dosage and laboratory control, side effects and toxic manifestations and their management are discussed. Current status of lithium therapy in other disorders is also discussed.

6. (9:30) Suicidal Behavior Among Mexican-Americans—A Comparative Study

Harry W. Martin, Ph. D.,
Russell Adams, Francis B. Garfield,
Martin B. Griffin, San Antonio

The paper reports suicide and attempted suicide rates in San Antonio for 1959-61 and 1967-68. Rates were calculated with data derived from police records for these two periods. Sex-ethnic comparisons are made among the three population groups residing in the city, i.e., Mexican-Americans, Anglos, and non-whites. Anglos had higher suicide and attempt rates; however, rates among Mexican-Americans were considerably



Serving Texas Physicians for Over Forty Years

Precision-engineered, functionally-built equipment

SMR keeps you and your patients' comfort and satisfaction in mind . . . a room that reflects professional good taste.

SMR has manufactured medical and Dental equipment for over forty years on a direct to user basis.

STAINLESS STEEL POLISH

SMR Stainless Steel Polish cleans, and preserves with superior results —ends fingerprints, watermarks and surface stains. **22 oz. economy** $2.75 F.O.B. Plant

NEW CATALOG NOW AVAILABLE

SMR

SURGICAL MECHANICAL RESEARCH, INC.

Post Office Box 1185 • (714) 646-4405

960 W. 16th St., Newport Beach, Calif. 92663

Established Over 40 Years

Factory Direct Sales

See us at Booth No. 100 TMA April 30-May 3, 1970

higher than would have been anticipated from the meager information found in the literature.

7. (10:00) Some Considerations of the Lethality of Suicide Attempts

Marvin Stein, Brooklyn, N. Y.

8. (10:45) Some Observations in Early Development

David A. Freedman, Houston

Longitudinal observation of children suffering from congenital or perinatal sensory deprivations has proved to be a useful approach to the study of early development. The relevance for the infant of various modes of sensory input appears to change with time. Data will be presented to indicate the importance of age-appropriate inputs for normal development.

(11:15) Recess

11:20 A.M.

Oak Room, Fairmont Hotel

9. (11:20) Business Session, Texas District Branch, American Psychiatric Association

(12:00) Adjournment

SECTION ON OBSTETRICS AND GYNECOLOGY

Chairman—Benson L. Martin, Jr., Kingsville

Secretary—Daniel A. Chester, McAllen

FRIDAY, MAY 1, 2:30-4:45 P.M.

Royal Room, Fairmont Hotel

1. (2:30) Medical, Surgical, and Gynecological Complications of Pregnancy

Alan F. Guttmacher, New York

One of the most challenging aspects of the specialty of obstetrics and gynecology is its involvement with other fields of medicine. It requires widely based diagnostic acumen and therapeutic knowledge. An understanding of how some non-obstetric complications affect pregnancy and how pregnancy affects medical and surgical ailments is of vital importance. The proper handling of the pregnant cardiac or diabetic requires the cooperative and dual supervision of internist and obstetrician. Occasionally differential diagnosis presents a fascinating puzzle, as for example between placental abruption and a ruptured spleen. Then, too, today's gynecologist must be an expert in endocrinology.

(3:00) Discussion

2. (3:15) Halothane Anesthesia and Hepatitis

E. B. Mendel, Dallas

Twenty-three patients developing postoperative hepatitis following surgery are presented. In all these cases halothane anesthesia was administered on one or more occasions. The possibility that these cases of hepatitis might be iatrogenic in nature is suggested.

(3:45) Intermission

3. (4:00) Guiding Principles for Obstetric Care

Anthony Ruppersberg, Jr., Columbus, Ohio

It is essential that every group studying maternal mortality and morbidity establish a set of principles delineating at least a minimum level of obstetric care. Recognized as "Ideal Care," these principles are used constantly by the committee in evaluating features and facts in each maternal death. They also form a sound baseline for education in obstetric management. Their use in actual case study will be demonstrated. Within the Franklin County (Ohio) Maternal Mortality Study during 21 years, 71.4% of the maternal deaths were voted preventable.

(4:30) Discussion

SATURDAY, MAY 2, 9 A.M.-12 NOON

Royal Room, Fairmont Hotel

4. (9:00) How Extensively Should Abortion Laws Be Revised

Alan F. Guttmacher, New York

Few physicians are satisfied with the restrictive abortion statutes which are still operative in 40 states. The main cause for dissatisfaction is vagueness of the phrase "to preserve the life of the mother," leading to one practice in Hospital A and another in Hospital B. Then, too, the fact that probably one million illegal abortions (more than 75% by physicians) are performed annually in the United States gives grounds for protest. Also both legal and illegal abortions are highly discriminatory, influence in the former and affluence in the latter, giving private patients more available and safer abortions than those who are medically indigent. The question is whether moderate liberalization of abortion laws or their removal from the criminal code, placing abortion in the same patient-doctor relationship as other surgical procedures, is the wiser solution.

(9:30) Discussion

5. (9:40) Ultrastructure of Ovarian Tumors

Daniel K. Roberts, Galveston

The acquisition of baseline morphologic data at the subcellular level on all ovarian neoplasms is essential before a comparative analysis will give diagnostic ability in this area. An ultrastructural study of more than 100 ovarian specimens has been accomplished. Examples of these tumors utilizing this method of study in determining diagnosis and histogenesis will be presented. Future potential as to etiology and best modes of therapy for individual tumors will be discussed.

(10:00) Discussion

(10:10) Intermission

6. (10:20) Cervical Conization, Frozen Section Diagnosis—A Review of 210 Cases

Byron B. Holt, Houston

Because of the treacherous and often unpredictable nature of cervical cancer the diagnosis must be accurate and the treatment swift. A review of 210 cervical cone, frozen section diagnoses reveals an interesting correlation of age, socioeconomic status, and degrees of cervical pathology. The accuracy of the cone, frozen section diagnosis as a diagnostic tool in the treatment of cervical carcinoma is evaluated. The errors in diagnosis, alterations in treatment, and ultimate consequences are reviewed.

(10:40) Discussion

7. (10:50) Fetal Placental Problems

Kurt Benirschke, Hanover, N. H.

(11:20) Discussion

8. (11:30) Posterior Sacculation of the Uterus—Two Case Reports

David M. Buring,
James H. Goodson,
Ronal B. Mason, Dallas

Posterior sacculation of the uterus is a rare obstetrical complication with fewer than 30 cases having been reported. The authors present two case reports, both patients having been delivered within a two-week period. An accompanying review of the literature suggests congenital etiology. One case strongly supports this theory.

(11:50) Discussion

SECTION ON OPHTHALMOLOGY AND TEXAS OPHTHALMOLOGICAL ASSOCIATION

Chairman, Section on Ophthalmology, and President, Texas Ophthalmological Association — John C. Koch, Lufkin

Secretary, Section on Ophthalmology, and President-Elect and Program Chairman—Edwin G. Grafton, Dallas

Secretary, Texas Ophthalmological Association—John C. Kuppinger, Harlingen

Treasurer, Texas Ophthalmological Association—Joe L. Bussey, Fort Worth

(The Executive Council, Texas Ophthalmological Association, will meet Thursday, April 30, 2 to 5 p.m., Green Room, Fairmont Hotel.)

(Members of Texas Ophthalmological Association will have a refreshment reception Thursday, April 30, 6 to 8 p.m., Oak Room, Fairmont Hotel.)

(Medical Advisory Committee Chairmen, Texas Society for the Prevention of Blindness, will have a breakfast session Saturday, May 2, 7:30 a.m., Century Room, Fairmont Hotel.)

FRIDAY, MAY 1, 8:15 A.M.-5 P.M.

Pavilion Room, Fairmont Hotel

John C. Koch, Lufkin, Presiding

1. (8:15) Continental Breakfast Round Table Presentation: Ocular Complications of Systemic Medication

Philip P. Ellis, Denver

Serious ocular complications may follow systemic medication. Corneal deposits occur with chloroquine and chlorpromazine therapy. Cataracts can be induced by corticosteroids and chlorpromazine. Retinal pigmentary degenerative changes have been observed after phenothiazine and chloroquine treatment. Digitalis produces visual disturbances. Optic neuritis has occurred with many antibiotics and chemotherapeutic drugs. In most instances the complications are time and dosage related. Some of the ocular changes are permanent while others are reversible. Methods for early detection of ocular complications are stressed.

(10:00) Intermission

2. (10:15) Irregularities and Protrusions on the Surface of the Retina

Louis Daily, Jr., Houston

Pathological irregularities and protrusions of the retinal surface visible only biomicroscopically are described and illustrated with colored photographs of optical sections of the posterior vitreous and retina.

3. (10:45) Uveitis: Diagnosis and Treatment

Thomas J. Kirby, Rochester

Uveitis is a serious disease, often resulting in loss of vision. Advances in determining etiology have been modest. Until new knowledge provides the physician with better tools, our approach must be practical and at times empirical. A uveitis survey is indicated for most patients. Specific treatment for the cause is seldom available; a flexible but organized program of nonspecific therapy continues to offer the best chance of preserving vision.

(12:00) Recess

12:15 P.M.

Fountain Room, Fairmont Hotel

4. (12:15) Luncheon, Texas Ophthalmological Association

The Pending Lawsuit Against Optometry Where Medical Association Has Asked Court to Limit Optometry

William H. Sanders, LL.B.,
Kansas City, Mo.

1:45 P.M.

Pavilion Room, Fairmont Hotel

5. (1:45) Business Meeting of the Texas Ophthalmological Association

President's Address

John C. Koch, Lufkin

3 P.M.

Pavilion Room, Fairmont Hotel

James L. Mims, Jr., San Antonio, Presiding

6. (3:00) Uveitis: Management of Complications

Thomas J. Kirby, Rochester

Uveitis can be a self-limiting disease; the prevention of complications can mean the difference between a residual of useful vision and a residual of qualified or indefinite potential vision.

Posterior synechiae, complicated cataract, and secondary glaucoma are frequent complications of uveitis. Definitive treatment of these and other complications can help to preserve vision. Extensive vitreous degeneration and phthisis bulbi are usually beyond the help of definitive treatment.

7. (4:00) Recent Developments in Ocular Therapeutics

Philip P. Ellis, Denver

Many recently developed antibiotics are valuable for therapy of bacterial ocular infections. Gentamicin is effective against a wide range of organisms including Pseudomonas; the drug

is beneficial as a subconjunctival and topical agent. Systemic ampicillin and cephaloridine penetrate the eye in good therapeutic concentrations.

Among other recently developed ocular therapeutic agents are topical guanethidine for lid retraction of Grave's disease; thiotepa to retard recurrence of pterygium; pimaricin and thiabendazole as topical antifungal agents; interferon for herpes simplex keratitis; collagenase inhibitors for alkali burns of cornea; and cyanoacrylate adhesives for corneal perforations.

(5:00) Adjournment

Visit Exhibits

SATURDAY, MAY 2, 9 A.M.-5 P.M.

Pavilion Room, Fairmont Hotel

John C. Kuppinger, Harlingen, Presiding

8. (9:00) The Cause and Management of Vitreous Hemorrhage

Richard S. Ruiz, Houston

This paper makes a plea for the adequate evaluation and management of the patient with vitreous hemorrhage. The ophthalmologist is called upon to assume responsibility. All causes for vitreous hemorrhage are broken down into two categories: those which are amenable to local therapy and those which are not. The remainder of the paper discusses the causes for vitreous hemorrhage which are amenable to local therapy by photocoagulation, diathermy, or cryopexy. These treatable causes are completely discussed and profusely illustrated with Kodachrome slides. The proper steps in management of a patient with vitreous hemorrhage are enumerated and amplified. Various techniques which aid in proper evaluation and management are emphasized and recommended.

9. (9:30) Skin Diseases Affecting the Eye

Thomas J. Kirby, Rochester

The skin and several structures of the eye are derived from surface ectoderm. Diseases affecting one often affect the other. Hereditary, congenital, infectious, allergic, and collagen diseases are among the common conditions affecting both organs. Some are of academic and diagnostic interest, others offer opportunity for practical and effective treatment.

(10:30) Intermission

10. (10:45) Intraocular Carbachol in Cataract Surgery

C. Harold Beasley, Fort Worth

Prompt miosis of the pupil after extraction of the cataractous lens and in other anterior segment surgery is often desirable. Pilocarpine and acetylcholine are the usual parasympathomimetic drugs used for this purpose. Carbachol in a weak dilution (0.01%) is effective and relatively nonirritating as a miotic, when used intraocularly. In animals, carbachol (0.01%) exhibited miotic activity that was more intense and of longer duration than 2% pilocarpine and 1% acetylcholine. A comparison of acetylcholine 1% and carbachol 0.01% for miosis in cataract surgery suggests that the carbachol is probably better than acetylcholine and it is more stable and should be less expensive.

11. (11:15) Anti-Inflammatory Therapy in Ophthalmology

Philip P. Ellis, Denver

Corticosteroids are the mainstay of ophthalmic anti-inflammatory therapy. For external disorders, steroid preparations should be individualized. High doses may be required for certain disorders. Alternate-day administration reduces some of the side effects. It is advisable when long-term systemic therapy is necessary. Non-corticosteroid anti-inflammatory agents are useful in selected cases. Anti-metabolites may suppress inflammation when steroids fail, but many complications accompany their use.

(12:15) Recess

1:30 P.M.

Pavilion Room, Fairmont Hotel

Edwin G. Grafton, Dallas, Presiding

12. (1:30) Repair of the Lower Lid by the Mustardé Technique

Ralph G. Berkeley, Houston

A method of total removal of the lid with plastic repair according to the technic originally described by John Mustardé of Scotland is discussed. Three cases, in which 75 to 100 percent of the lid was removed, are presented. This procedure has been successful in rebuilding the lower lid without causing surgical scars of the upper lid with consequent discomfort abrasion and ulceration of the cornea.

13. (2:00) Ocular Neurosis, Fatigue or Narcolepsy?

Thomas J. Kirby, Rochester

Ocular symptoms are experienced by patients with normal eyes. Some are features of true neurosis. Others are mild transitory symptoms of temporary emotional stress. Some ocular symptoms reflect chronic ocular and physical fatigue. Sleepy people, or narcoleptics, may present ocular symptoms that are difficult to distinguish from those of neurosis. Alertness by ophthalmologists to the diagnosis of narcolepsy and proper treatment can help a struggling unhappy patient.

14. (3:00) Subconjunctival Medications

Philip P. Ellis, Denver

Subconjunctival injection of aqueous solutions of antibiotics is a useful adjunct in the treatment of severe bacterial endophthalmitis. It may be employed for prophylaxis in intraocular surgery. High intraocular antibiotic levels are achieved; therapeutic levels remain only for a few hours. Subconjunctival injection of repository corticosteroids produce therapeutic drug levels which may persist for weeks. Aqueous corticosteroids should not be used subconjunctivally in preference to topical therapy. Subconjunctival mydriatics sometimes are of value but may produce systemic side reactions.

(5:00) Adjournment

Mylanta®
24 million hours a day.

Through the day, every day,
ulcer patients take
one million doses of Mylanta
for relief of ulcer pain.

Mylanta®
LIQUID/TABLETS

aluminum and magnesium hydroxides plus simethicone

Good taste = patient acceptance
Relieves G.I. gas distress*
Non-constipating

*with the defoaming action of simethicone

Stuart PHARMACEUTICALS Pasadena, Calif. 91109
Division of Atlas Chemical Industries, Inc., Wilmington, Del. 19899

SECTION ON OTOLARYNGOLOGY AND TEXAS OTOLARYNGOLOGICAL ASSOCIATION

Chairman, Section on Otolaryngology; and Vice President and Program Chairman, Texas Otolaryngological Association—Jesse D. Gomillion, Midland

Secretary, Section on Otolaryngology—William L. Draper, Houston

President, Texas Otolaryngological Association—H. Edward Maddox, III, Houston

President-Elect, Texas Otolaryngological Association—Edward A. Newell, Dallas

Secretary, Texas Otolaryngological Association—James L. Baldwin, Dallas

Treasurer, Texas Otolaryngological Association—Ernest Nalle, Jr., Lubbock

FRIDAY, MAY 1, 9 A.M.-5 P.M.

Far East Room, Fairmont Hotel

Jesse D. Gomillion, Midland, Presiding

1. (9:00) Refresher Course: Fatalities From Foreign Bodies

Gabriel F. Tucker, Jr., Philadelphia

2. (9:45) Management of Aural Cholesteatoma

James L. Sheehy, Los Angeles

This presentation will be a summary of the conclusions drawn from ten years' experience with the intact canal wall technique of tympanoplasty with mastoidectomy. A movie will be shown demonstrating the anatomy and the problems involved with this technique.

3. (10:30) Reflux Laryngitis

Claude D. Winborn, Dallas

4. (11:00) Laryngeal Reconstruction with Adaptation for Swallowing and Voice Production

Masashi Kawasaki, Dallas

12 Noon

Florentine Room, Fairmont Hotel

5. (12:00) Luncheon

6. (1:00) Business Meeting of Texas Otolaryngological Association

2 P.M.

Far East Room, Fairmont Hotel

H. Edward Maddox, III, Houston, Presiding

7. (2:00) Diagnostic Problems with Vertigo and Deafness

H. Edward Maddox, III, Houston
Loyd Storrs, Lubbock
Jack L. Turner, Odessa

8. (3:00) Laryngeal Carcinoma—Current Concepts in Evaluation and Management

Gabriel F. Tucker, Jr., Philadelphia

9. (4:00) Inner Ear Problems—Medical Aspects

James L. Sheehy, Los Angeles

The otologist is seeing an ever-increasing number of patients whose chief problem centers on the inner ear: dizziness, tinnitus, and/or sensorineural hearing impairment. Case presentations will be used as a point of departure to discuss the diagnosis and treatment of some of these problems.

(5:00) Adjourn

6:30 P.M.

Fountain Room, Fairmont Hotel

10. (6:30) Social Hour — Texas Otolaryngological Association (Members, Wives, and Guests)

SATURDAY, MAY 2, 9 A.M.-4:30 P.M.

Far East Room, Fairmont Hotel

Jesse D. Gomillion, Midland, Presiding

11. (9:00) Problems in Stapes Surgery

James L. Sheehy, Los Angeles

There are a number of different techniques which may be used successfully in stapedectomy surgery. Failures continue to occur in a small percentage, however. This presentation will consider the causes of failure in stapes surgery and various approaches to their solution.

12. (10:00) Present Day Treatment of Esophageal Stenosis

Gabriel F. Tucker, Jr., Philadelphia

13. (11:00) The Tack Procedure for Meniere's Disease

Bert A. DeBord, Temple

14. (11:20) Benign Tumors of the External Auditory Canal

Jerome Kosoy, Galveston

15. (11:40) Nasal Vibrissae, Their Incidence and Function: An Original Study

Stanley P. Howard, Waco

(12:00) Recess

12:30 P.M.

Executive Room, Fairmont Hotel

16. (12:30) Luncheon

2:30 P.M.

Far East Room, Fairmont Hotel

H. Edward Maddox, III, Houston, Presiding

17. (2:30) Newer Aspects in Management of Foreign Bodies

Gabriel F. Tucker, Jr., Philadelphia

18. (3:30) Ossicular Problems in Tympanoplasty

James L. Sheehy, Los Angeles

Techniques of reconstruction of the ossicular chain in cases of chronic otitis media have stabilized, to a large extent, in the last five years. Minor changes in technique are periodically made, however, based on observations of failures.

This presentation will deal with the techniques currently used at the Otologic Medical Group. Particular attention will be paid to the causes of failure, the techniques which are no longer used, and the solutions to our present problems.

(4:30) Adjournment

SECTION ON PATHOLOGY

Chairman—Merle W. Delmer, San Antonio

Secretary—Rolland C. Reynolds, Dallas

FRIDAY, MAY 1, 2:30-5 P.M.

French Room, Fairmont Hotel

1. (2:30) Recent Developments in Cytogenetics

Kurt Benirschke, Hanover, N.H.

The assessment of the chromosome complement has now found a firm place in clinical medicine and the syndromes in which aberrations can be expected are reasonably well delineated. The most problematic areas are conditions in which chromosomal mosaicism is found, prenatal diagnosis, and the cytogenetics of abortion specimens. These will be highlighted and recent findings will be summarized.

2. (3:10) Endometrial Hyperplasia and Endometrial Carcinoma In Situ: A Review of Morphologic Changes Preceding Invasive Carcinoma of the Endometrium

Frank Vellios, Dallas

Endometrial carcinoma in situ is now a well recognized precursor of invasive carcinoma of the endometrium. Other endometrial changes which may be precursors of invasive carcinoma are usually designated hyperplasias. A review of their morphologic characteristics and a suggested significance of these lesions will be presented.

(3:40) Intermission

3. (3:50) Notes on Fat Embolism

Charles S. Petty, Dallas

Post-traumatic fat embolism has confused clinicians and pathologists alike. Most particularly the controversy concerning the existence of death due to pulmonary fat embolism without systemic spread of the lipid material has never truly been resolved.

Several observations concerning death due to pure pulmonary fat embolism, the opportunity for massive embolization in the absence of fractures, and the diagnosis of fat embolism from the gross examination of tissues are presented. Emphasis is made on pulmonary and systemic fat embolisms as a cause of delayed deaths in automobile crash victims.

4. (4:15) Panel: Education of Paramedical Laboratory Personnel

Moderator: Rolland C. Reynolds, Dallas

Panelists: John L. Goforth, Dallas
Elwood E. Baird, Galveston

SATURDAY, MAY 2, 9-11:30 A.M.

French Room, Fairmont Hotel

5. (9:00) Pathology of the Placenta

Kurt Benirschke, Hanover, N. H.

The author has repeatedly suggested that an examination of the placenta must be more widely practiced so that the reasons for poor fetal outcome will become better understood. In this presentation a few of the more important macroscopic lesions of the placenta will be illustrated, particularly those which bear a direct relationship to fetal development and neonatal care. In addition, a newly recognized microscopic entity, villitis, will receive emphasis.

6. (9:40) Ultrastructure of Pneumocystis Carinii

E. K. Ham, Houston
S. Donald Greenberg, Houston
Rolland C. Reynolds, Dallas
Don B. Singer, Houston

The ultrastructure of *pneumocystis carinii* was studied in human lungs with *Pneumocystis* pneumonia. Emphasis was directed toward determining the nature of the membranous complexes which appeared contiguous with the concave surface of the organism. An occasional *Pneumocystis* was found within the alveolar wall, indicating a more aggressive aspect of this disease.

(10:00) Intermission

7. (10:10) Paleopathology

George J. Race, Dallas

Human paleopathology is commonly understood to be the science of diseases of ancient man. Material presented will include the theoretical bases for its study. Interrelationships between anthropology and paleopathology will be considered. The discussion of methods of paleopathology includes macroscopic, microscopic, electron microscopic, radiographic, electron diffraction, paleoepidemiology, skeletal adaptations, serologic, paleoecologic, and biochemical methods as well as epigenetic traits.

8. (10:30) Plasma Lipid Profile Studies; Electrophoretic Patterns and Clinical Correlation

H. Reginald McDaniel, Dallas

An outline of the technique for accelerated cellulose acetate plate electrophoresis of plasma lipoprotein will be presented. A clinical-pathology correlation will be made with typical electrophoretic patterns. Case and family histories in arteriosclerotic patients will be discussed.

9. (11:00) Non-Neoplastic Lesions of Lymph Nodes To Be Differentiated from Lymphomas

James J. Butler, Houston

The differentiation of reactive processes from lymphomas in lymph nodes requires correct removal of a representative lymph node and its proper fixation, staining, and sectioning to provide technically ideal microscopic sections. The correct interpretation of these sections depends on an appreciation of the range of histologic changes that may be produced by reactive processes, definite criteria for the malignant lymphomatous diseases, and a systematic approach to the study of lymph nodes.

SECTION ON PEDIATRICS

Chairman—Arr Nell Boelsche, Galveston

Secretary—Charles B. Lambeth, Odessa

FRIDAY, MAY 1, 2:30-5 P.M.

Patio Room, Fairmont Hotel

New Trends in Pediatrics

1. (2:30) The Multiply Handicapped Child

Joan R. Hebeler, Galveston

The existence of a handicapped child creates a chronic stress situation. Common reactions evoked in families, children, and professionals include fear, denial, revulsion, grief, chronic anxiety, shame, overprotection, rejection, and anger. The relationship of four families to their handicapped children is presented to illustrate adjustment processes (spina bifida, trisomy 13-15, Down's syndrome).

The physician who anticipates, recognizes, and deals with the intense, often disguised, normal feelings will assist most families to work toward a satisfactory, helpful adjustment. As the handicapped child spends most of life with parents, in school, or at work, attention given to his "human environment" will ensure an effective medical program, and an optimal level of development.

2. (3:00) Securing and Using Social Information in Pediatric Practice

Miss Charlotte Clarke, Galveston

Pediatricians and social workers can share in their common endeavor of preventing health breakdown, promoting recovery, and sustaining health. The social workers' knowledge about individuals, groups, and communities and their skill in service, training, planning, and evaluation equip them for effective collaboration with the physician. This paper looks at the responsibilities, roles, and knowledge which these two helping professions can share.

3. (3:30) Pediatrics—Education, Training and Practice in a Changing Society

James Dennis, Oklahoma City

4. (4:30) Learning Disabilities in a Private Pediatric Practice

Charles B. Lambeth, Odessa

A learning disability is found in at least 10% of all children. This problem has significant impact on the whole child, as well as on the parents, school, and community.

The work-up outline includes (1) physical and neurological examination; (2) teacher conference; (3) parent conference (1 hour)-detailed history; (4) child testing (1 hour); (5) psychometric and language testing; (6) parent conference (1 hour)-results; (7) teacher conference; (8) tutor conference; (9) parent conference (1 hour)-home; and (10) follow-up conferences.

SATURDAY, MAY 2, 9-11:30 A.M.

Patio Room, Fairmont Hotel

5. (9:00) Evaluation of Growth and Development in the Office

James Dennis, Oklahoma City

6. (10:00) Splenectomy in Children

A. S. MacLellan, Dallas

A survey of patients who underwent splenectomy from 1952 to 1969 is analyzed according to age, underlying diseases including congenital hemolytic anemia, idiopathic thrombocytopenic purpura, acquired hemolytic anemia, Gaucher's disease, Niemann-Pick disease, and other miscellaneous conditions. The patients who had splenectomy with underlying diseases such as hypoplastic anemia are excluded from this study since their primary illness was a factor in susceptibility to infection. Survival time and frequency of infections in these children who were splenectomized at age range between 6 months to 14 years will be reported. The followup studies of these post-splenectomy patients will extend up to 13 years postoperatively.

7. (10:30) Differential Diagnosis of Hypoglycemia and Hypocalcemia in the Newborn

Jacob L. Kay, Dallas

The newly born infant is a complex interacting organism affected by many internal and external stresses. Depending upon the responsiveness of the central nervous system, these physiologic or abnormal stresses may produce a spectrum of neurologic signs.

Several metabolic derangements are capable of producing neurologic symptomatology in the newborn. The clinical signs produced by deficiencies of glucose and calcium are usually indistinguishable and the response of the neonate to the administration of glucose or calcium does not consistently correlate with changes observed in corresponding serum values. A relationship may exist between glucose and calcium metabolism in the neonate since simultaneous derangements of glucose and calcium sometimes occur in the same infant.

8. (11:00) The Interdisciplinary Approach to Working With Children

Blaine E. McLaughlin, Grand Forks, N. D.

JOINT SESSION—

SECTION ON PHYSICAL MEDICINE AND REHABILITATION, TEXAS INDUSTRIAL MEDICAL ASSOCIATION, TEXAS PHYSICAL MEDICINE AND REHABILITATION SOCIETY, AND TEXAS TRAUMATIC SURGICAL SOCIETY

Section on Physical Medicine and Rehabilitation

Chairman—John R. Shull, Dallas

Secretary—Robert M. Izard, Jr., Gonzales

Texas Industrial Medical Association

President—George E. McGlothlen, Bridge City

Texas Physical Medicine and Rehabilitation Society

President—John R. Shull, Dallas

Secretary—James W. Caldwell, Dallas

Texas Traumatic Surgical Society

President—Sanford Glanz, Corpus Christi

Secretary-Treasurer—C. Marshall Ashmore, Bellaire

THURSDAY, APRIL 30, 9 A.M.

Royal Room, Fairmont Hotel

Sanford Glanz, Corpus Christi, Program Coordinator

The Face

1. **(9:00) Welcome and Introductions**

2. **(9:10) Management of Facial Injuries**
Francis X. Paletta, St. Louis

Accurate inventory as to the true nature of specific injuries to the face is most important in outlining treatment. Attention should be directed to lacerations of the facial nerves, Stensen's duct, lacrimal duct, intrinsic injuries of the eye, and fractures of the facial bones. Since many of these injuries are caused by automobile accidents and frequently associated with body trauma, it is necessary that clearance be given in regard to head, chest, and abdominal injuries. Since the latter of the three areas, if not treated immediately, may result in death, they obviously take priority. Following clearance of these three specific regions, attention can then be directed to the immediate repair of soft tissue injuries. Those fractures of the face which can be taken care of under local anesthesia are treated at the same time as the soft tissue repair. Stabilization and fixation of other facial fractures which require general anesthesia are treated when the general condition of the patient permits the administration of an anesthetic agent.

3. **(9:40) Noise-Induced Hearing Loss—Criteria and Legislation**
Aram Glorig, Dallas

(10:10) Intermission

4. **(10:25) Prognostic Consideration in Bell's Palsy**
Carl V. Granger, Boston

Unilateral paralysis (complete or partial) of the muscles of facial expression is relatively abrupt in onset in Bell's palsy of the idiopathic type. Other common etiologies of facial palsy include direct or indirect trauma, bacterial or viral infection, brain stem hemorrhage or tumor in the posterior fossa. Occult causes must always be considered before diagnosing Bell's palsy.

Despite the fact that the disease most often is a benign condition, it is frightening to the patient. Recognition of the various factors affecting prognosis assists the physician in formulating a management plan and in reassuring the patient. Aside from correct diagnosis, other factors include location of the lesion along the nerve pathway, degree of lost function, sequent changes in the nerve, viability of facial muscles, tone in facial tissues, quality of recovery and implications of treatment whether intended to be curative, palliative, and protective or restorative.

5. **(11:10) The Face As a Mirror of Disease—A Slide Presentation**
Richard D. Burk, Dallas
Carl V. Granger, Boston
Francis X. Paletta, St. Louis

1:30 P.M.

Royal Room, Fairmont Hotel

6. **(1:30) Surgical Care of Soft Tissue Problems in Farm and Ranch Injuries**
Francis X. Paletta, St. Louis

Many of the injuries occurring on the farm and ranch occur in the hand or represent avulsive injuries of other portions of the body. Early measures to prevent infection or tetanus are immediately instituted by prophylactic and therapeutic administration of antibiotics, tetanus toxoid, and other measures if necessary. Early debridement of the traumatized tissue followed by definitive reconstructive measures will result in a better functioning hand. Resurfacing for avulsions in the form of skin grafts and skin flaps are used whenever necessary.

7. **(2:15) Plastic Surgery in the Texas Department of Corrections**
Melvin Spira, Houston

8. **(2:45) Panel: Industrial Rehabilitation and Surgical Aspects of the Face**

Moderators: Sanford Glanz, Corpus Christi
John R. Shull, Dallas

Panelists: Melvin Spira, Houston
Carl V. Granger, Boston
Francis X. Paletta, St. Louis

(3:45) Recess

9. **(4:00) Separate Annual Business Meetings**
Texas Industrial Medical Association—French Room, Fairmont Hotel
Texas Physical Medicine and Rehabilitation Society—Florentine Room, Fairmont Hotel
Texas Traumatic Surgical Society—Century Room, Fairmont Hotel

6:30 P.M.

Garden Room, Fairmont Hotel

10. **(6:30) Social Hour (Members, Wives, Guests)**

SECTION ON PUBLIC HEALTH

Chairman—Elizabeth Gentry, Austin

Secretary—Marjorie E. Sewell, Dallas

(The Texas Association of Public Health Physicians will have a dinner meeting Thursday, 6:30 p.m., Baker Hotel. The Conference of City and County Health Officers will be held on Saturday from 9 a.m. to 11:30 a.m., Panorama Room, Fairmont Hotel. See Specialty Programs section for details.)

FRIDAY, MAY 1, 2:30-5 P.M.

Panorama Room, Fairmont Hotel

1. **(2:30) The Effective Practice of Syphilis Case Management**
William J. Brown, Atlanta, Ga.

2. **(3:00) Diphtheria**
Louis Miller, Austin

3. **(3:30) Epidemiology of Typhus and Rocky Mountain Spotted Fever**
J. Justin Older, Austin

4. **(4:00) Pertussis**
Fred S. Brooksaler, Dallas

5. **(4:30) Immunizing Against Certain Communicable Diseases**
Percy E. Luecke, Jr., Dallas

SECTION ON RADIOLOGY

Chairman—Hugo F. Elmendorf, Jr., San Antonio

Secretary—George E. Plum, Dallas

FRIDAY, MAY 1, 2:30-5 P.M.

State Room, Fairmont Hotel

1. (2:30) The Radiographic Demonstration of Small Amounts of Peritoneal Fluid

Robert W. Perrin, Dallas

The supine abdominal radiograph may demonstrate intraperitoneal fluid in amounts smaller than can be determined by physical examination. The radiographic findings are reviewed. Clinical situations where such information may be helpful are discussed.

2. (2:50) Virus and Paracystic Diseases of Neuroradiologic Interest

Colin B. Holman, Rochester, Minn.

3. (3:20) Pulmonary Perfusion: Scanning and Arteriography

Robert W. McConnell, Dallas

Scintillation scanning of the lungs, using I-131 macro-aggregated albumin has become a useful tool in the diagnosis of pulmonary disease. A satisfactory display of pulmonary artery perfusion can be obtained, using this procedure. When compared with catheter techniques, scans show a similar distribution. Scanning can provide important information in acute and chronic pulmonary disease, as well as pulmonary embolism.

Scans are easier to perform and can be done at the bedside without moving the critically-ill patient, and are less hazardous from many other standpoints. Scan data are not difficult to interpret, within limitations, and follow-up studies are clinically feasible. Scans should be the initial procedure of choice when the adequacy of pulmonary perfusion is to be studied.

4. (3:40) Scintillation Survey in Bronchogenic Carcinoma

Robert B. Connor, Dallas

Presentation of 60 or more cases in which various scanning procedures were done, primarily involving the lung, liver, and brain. Data indicated positive correlation between perfusion defects in the lung fields and the presence of primary or metastatic neoplasm in the lung. Of the patients scanned, about 50% had metastatic disease. The program permits better evaluation of the patient for surgery or irradiation therapy.

5. (4:00) Correlation of Brain Scans and Contrast Studies in Brain Abscess

Charles W. Yates, Rosenberg

Correlation of brain scans with arteriography and pneumography in patients with surgically proven brain abscess seen at Baylor University Medical Center during the period 1965-1969.

6. (4:20) Diagnostic Radiology Panel

Moderator:	George E. Plum, Dallas
Panelists:	Jerome H. Arndt, Dallas
	Robert R. Burns, Dallas
	Joe Hawkins, Dallas
	James M. Syler, Jr., Dallas

SATURDAY, MAY 2, 9-11:30 A.M.

State Room, Fairmont Hotel

7. (9:00) A Pragmatic Approach to the Pituitary Fossa

Colin B. Holman, Rochester, Minn.

8. (9:30) Review of Cardiac Fluoroscopy With Examples of Common and Rare Lesions (Movie)

James R. Stewart, San Antonio

During a period of five years a collection of diseases involving the heart and adjacent structures was obtained by cine fluoroscopy. A variety of entities were selected from this collection and developed into a movie which serves to illustrate the usefulness and limitation of cardiac fluoroscopy. Examples include aneurysms, pericardial effusions, atrial myxomas and loose prosthetic valves.

9. (9:50) Cervical Carcinoma: Fractionated Radium Irradiation

G. Ray Ridings, Dallas

Fractionation of external beam irradiation is considered essential; to do less is not considered adequate radiotherapy. Fractionation of radium irradiation has almost uniformly been ignored or observed in only a fragmentary manner. Radiobiologically, fractionation of radium irradiation should be just as significant as that for the external beam. For this to be observed, however, a simple radium insertion technique is essential.

A system, in use eight years, for this fractionation in treatment of carcinoma of the cervix has been devised. Techniques and results will be reported.

10. (10:10) Knee Arthrography

David W. Burgan and Jack Reynolds, Dallas

Discussion on technique of arthrography, normal arthrographic anatomy, and pathology of the knee joint.

11. (10:30) Carcinoma of the Gallbladder

Lee F. Rogers, San Antonio

12. (10:50) Diagnostic Radiology Panel:

Moderator:	George E. Plum, Dallas
Panelists:	Jerome H. Arndt, Dallas
	Robert R. Burns, Dallas
	Joe Hawkins, Dallas
	Bassett B. Kilgore, Dallas

SECTION ON SURGERY

Chairman—William L. Sammis, San Antonio

Secretary—LeRoy J. Kleinsasser, Dallas

FRIDAY, MAY 1, 2:30-5 P.M.

Terrace Room, Fairmont Hotel

1. (2:30) Congenital Anomalies of the Gastrointestinal Tract

Kenneth R. T. Tyson, Galveston

In the past two years at The University of Texas at Galveston, 56 neonates have been operated upon for serious congenital anomalies of the gastrointestinal tract (excluding hypertrophic pyloric stenosis). Twenty-five percent were premature or had significant associated anomalies, or both. One baby died.

General and specific measures in perioperative care and methods of operative management for individual anomalies in this high-risk group of patients will be discussed.

Discussion

Dick G. Ellis, Fort Worth

2. (3:00) Controversial Aspects of Abdominal Trauma

Robert J. Freeark, Chicago

3. (3:30) The Management of Breast Cancer

J. Harold Cheek, Dallas

The treatment of breast cancer must be individualized. The management of each case is a team effort involving the surgeon, radiologist, pathologist and the chemotherapist, in many instances. Varied treatment methods have evolved, particularly in the last 30 years, and are compared. Experience with the management of 180 cases, though of no statistical value, is presented.

Discussion

Edgar C. White, Houston

4. (4:00) Coagulation Testing in the Surgical Patient

Norwood O. Hill, Dallas

The detection of a hemorrhagic defect prior to surgery is of great importance. A bleeding time, platelet count, Quick's prothrombin time, and partial thromboplastin time are recommended from the standpoint of simplicity, cost, and maximum information. A rational scheme for the interpretation of these and other tests as well as illustrative cases are presented.

Discussion

Harold M. Mims, Dallas

5. (4:30) Hyperosmolar Intravenous Alimentation

Walter J. Wyrick, Jr., Dallas

Hyperosmolar alimentation entirely by the intravenous route has resulted in positive nitrogen balance enabling many critical patients to survive illnesses and complications that previously would have been fatal. It has been used both pre- and postoperatively to supply the energy and substrate requirements for combating infection and healing tissues. The technique of this therapy along with some specific indications for its use, as well as possible complications and their management, is reviewed.

Discussion

Robert N. McClelland, Dallas

SATURDAY, MAY 2, 9-11:30 A.M.

Terrace Room, Fairmont Hotel

6. (9:00) Surgical Management of Non-Toxic Nodular Goiter

Edwin M. Sykes, Jr., San Antonio

Surgical indications are well defined for certain types of toxic goiter, for goiter with suggestive signs of cancer, and for large goiters producing pressure symptoms or cosmetic deformity. In the non-toxic nodular goiter, with no physical evidence of malignancy and with mild or no symptoms except for nodularity usually found on routine physical examination, indications for surgery remain controversial. A retrospective analysis of 98 consecutive cases from the San Antonio area which came to surgery are presented.

Discussion

William Klingensmith, Amarillo

7. (9:30) Radical Neck Dissection

Billie L. Aronoff, Dallas

An experience over 20 years with about 500 radical neck dissections is used to review, first of all, the indications for radical neck dissection with particular emphasis on the pitfalls in diagnosis of lumps in the neck. Secondly, it will be used to understand some of the techniques of examination that are contraindicated prior to the definitive procedure. Thirdly, end results will be carefully presented on this large group of cases which will be divided into cases that have had no previous therapy, those cases that have been failures in other forms of therapy, and those cases that are treated for palliation only. Last but not least, rehabilitation of the cancer patient with head and neck surgery will be presented.

Discussion

Richard H. Jesse, Houston

8. (10:00) Surgical Management of Pancreatitis

Robert J. Freeark, Chicago

9. (10:30) Traumatic Injury to the Popliteal Artery

Major Joseph McNamara, San Francisco

Forty-five cases of traumatic occlusion or disruption of the popliteal artery have been surgically repaired at the 24th Evacuation Hospital in Vietnam during the past 14 months. The majority of the injuries were due to fragment wounds. Associated venous injury occurred in 28 cases. Major soft tissue injury distal to the arterial injury was common and in 17 patients a tibial fracture was also present.

Twenty-four patients were repaired with a segment of autologous saphenous vein. Twenty-one had a debridement of the injury and primary end-to-end anastomosis. Whenever possible the venous injury was repaired either by direct suture or saphenous vein graft.

Twelve procedures failed (27% in that distal pulses were no longer palpable at the time of evacuation 10 to 14 days after repair. In six of these the leg remained viable and the other 6 required amputation for distal ischemia (13.3%). The factors most frequently associated with failure were massive distal soft tissue injury, tibial fracture, and irreparable venous damage. The presently reported improved salvage rate of limbs with popliteal artery injuries is attributed to careful attention to restoring venous return.

Discussion

Malcolm O. Perry, Dallas

10. (11:00) Peptic Ulcer—When Is It Surgical—Choice of Operation

George P. Rosemond, Philadelphia

The concept of tailoring the operation for each individual who must have surgery for peptic ulcer is important. In this manner various factors such as age, sex, weight, location of ulcer, associated medical problems, and other factors are considered in selection of the proper operation. Increased knowledge of physiology surrounding peptic ulceration, as well as the sequelae of the various operative procedures, has made this possible. The goals, low operative morbidity and mortality with long-term physiological function, are more nearly attained with this approach.

SPECIALTY PROGRAMS

AMERICAN CANCER SOCIETY, TEXAS DIVISION

(Related Organization)

President—George J. Race, Dallas

Executive Vice President—Mr. Curt W. Reimann, Austin

(The Texas Division, American Cancer Society, will sponsor Dr. John L. Lewis, Jr., New York, and Dr. George P. Rosemond, Philadelphia, as guest speakers on programs of the Texas Medical Association 1970 Annual Session. See Speakers section for appearances.)

AMERICAN HEART ASSOCIATION, TEXAS AFFILIATE, INC.

(Related Organization)

President—Hugh E. Wilson, III, Dallas

Executive Director—Mr. Dudley Hafner, Austin

Chairman, Medical and Scientific Committee—Sidney Schnur, Houston

Director of Medical Programming—Mr. Richard A. Ferguson, Austin

(The American Heart Association, Texas Affiliate, Inc., will cosponsor the Symposium on Cardiovascular Diseases with the Texas Medical Association Committee on Cardiovascular Diseases Thursday, 9 a.m. to 4:40 p.m., Oak Room, Fairmont Hotel. See Specialty Programs section for details. The American Heart Association, Texas Affiliate, Inc., will cosponsor Dr. Jack H. Hall as guest speaker. See Speakers section for appearances.)

AMERICAN PSYCHIATRIC ASSOCIATION, TEXAS DISTRICT BRANCH

(Related Organization)

President—Pete C. Palasota, Abilene

Secretary-Treasurer—Irvin M. Cohen, Houston

(The Texas District Branch, American Psychiatric Association, will cosponsor the Section on Nervous and Mental Diseases program Friday, 2:30 to 5 p.m., Oak Room, Fairmont Hotel, and Saturday, 9 to 11:15 a.m., Oak Room, Fairmont Hotel. See Section Meetings section for details. The Executive Council, Texas District Branch, APA, will meet for breakfast and a business section Friday, 8 a.m., Green Room, Fairmont Hotel.)

THURSDAY, APRIL 30, 8 P.M.

Regency Ballroom, Fairmont Hotel

1. (8:00) Cocktails, Dancing, Buffet Breakfast

FRIDAY, MAY 1, 6:30 P.M.

Timberlawn Psychiatric Hospital, 4600 Samuell Boulevard

(Buses will leave headquarters hotels at 6:15 and 6:30 p.m. for Timberlawn Psychiatric Hospital.)

2. (6:30) Cocktails
   Buffet

SATURDAY, MAY 2, 11:20 A.M.

Oak Room, Fairmont Hotel

3. (11:20) Business Session
   (12:00) Adjournment

CONFERENCE ON CITY AND COUNTY HEALTH OFFICERS

(Related Organization)

Chairman—J. E. Peavy, Austin

(The Texas Association of Public Health Physicians will have a dinner meeting Thursday, 6:30 p.m., Texas Room, Baker Hotel. The meeting of the Section on Public Health will be held Friday from 2:30 to 5 p.m., Panorama Room, Fairmont Hotel. See Section Meetings section and elsewhere in this Specialty Programs section for details.)

SATURDAY, MAY 2, 9 A.M.

Panorama Room, Fairmont Hotel

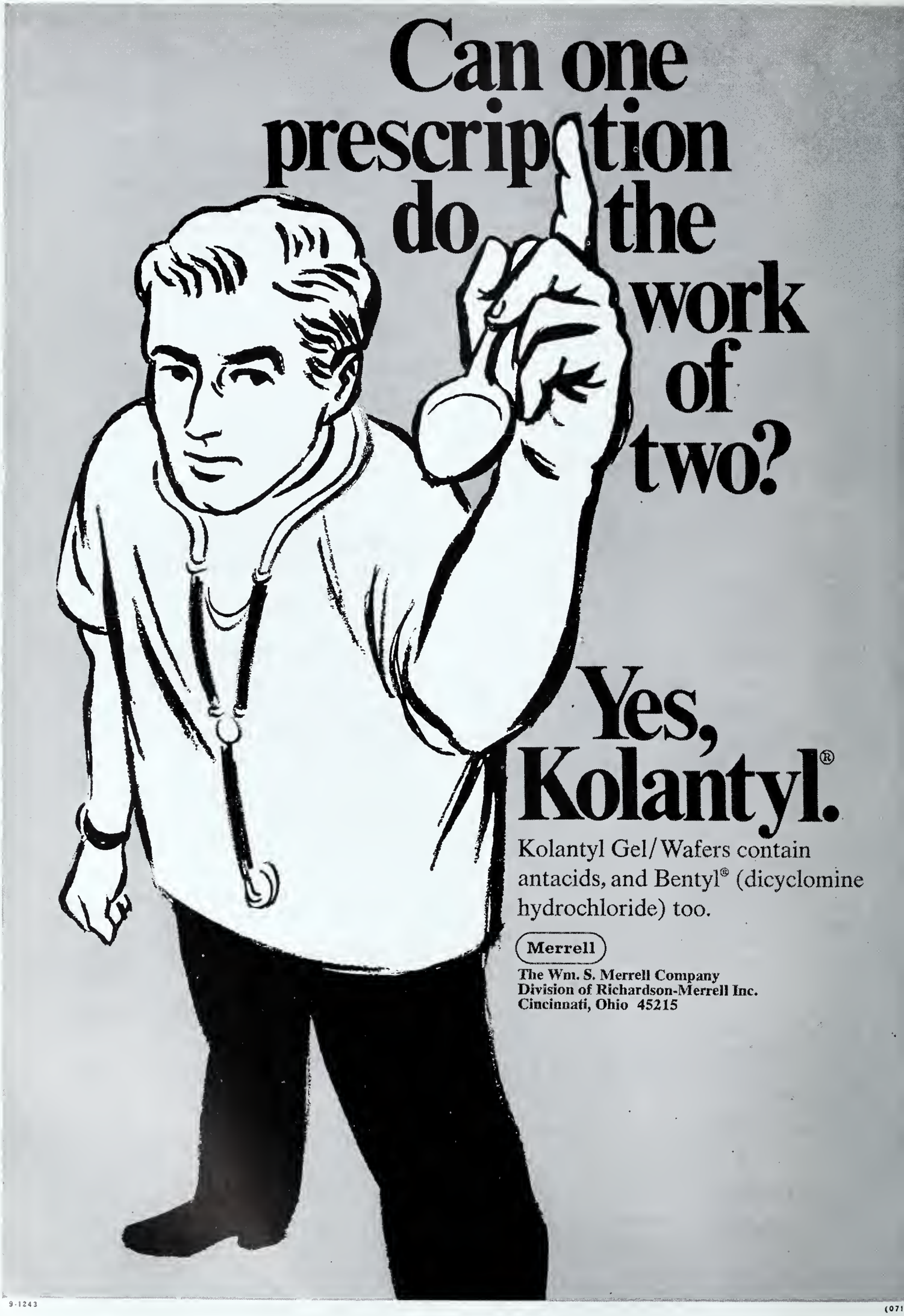
1. (9:00) New Directions in VD Control
   William J. Brown, Atlanta

2. (9:30) Texas Nutrition Survey
   William J. McGanity, Galveston

3. (10:00) Comprehensive Health Planning in Texas
   David Wade, Austin

4. (10:30) An Epidemiologic Overview of Meningococcal Meningitis Infections in Texas, 1964-1968
   Santino J. Lerro, Austin

5. (11:00) Family Planning
   Carl F. Moore, Jr., Austin


Can one prescription do the work of two?
Yes, Kolantyl®
Kolantyl Gel/Wafers contain antacids, and Bentyl® (dicyclomine hydrochloride) too.
Merrell
The Wm. S. Merrell Company
Division of Richardson-Merrell Inc.
Cincinnati, Ohio 45215

CONFERENCE ON SCHOOL HEALTH

(The Conference on School Health is sponsored by the Committee on School Health of the Texas Medical Association.)

Chairman, Committee on School Health, Texas Medical Association—Robert S. Ray, Seguin

THURSDAY, APRIL 30, 8 A.M.

Regency Ballroom II, Fairmont Hotel

An Optimum School Health Program

1. **(8:00) Registration**

2. **(8:45) Welcome**
Nolan Estes, Ph.D., Dallas

Opening Remarks
Robert S. Ray, Seguin

3. **(9:00) An Optimum School Health Program**
Delbert Oberteuffer, Ph. D., Columbus, Ohio

(9:45) Question and Answer Session

(10:00) Intermission

4. **(10:15) The Educator and Effective School Health Programs**
Donald J. Merki, Ph.D., Denton

(10:45) Question and Answer Session

5. **(11:00) The Physician and Effective School Health Programs**
Blanche O. Terrell, Fort Worth

(11:30) Question and Answer Session

12 Noon

Regency Ballroom 1, Fairmont Hotel

6. **(12:00) Luncheon**

(12:30) Panel Session

Moderator: Robert S. Ray, Seguin

Panelists:
Ruth Cady, Ph.D., Huntsville
Mrs. W. H. Sears, Lake Jackson
Mrs. Clydia Steenson, Dallas
Alexander W. Pierce, Wichita Falls

2 P.M.

Regency Ballroom, Fairmont Hotel

Action For Implementation

7. **(2:00) Presentation of Guidelines for Optimum School Health Program**
Mr. Lewis Spears, Austin

8. **(2:15) Round Table Group Discussions**

a. Medical Members of School Health Team

b. Educator Members of School Health Team

c. Nurse, Paramedical, and Lay Members of School Health Team

(3:30) Intermission

9. **(3:45) Reports of Round Table Group Discussions**

(4:30) Adjournment

INTERNATIONAL COLLEGE OF SURGEONS, TEXAS DIVISION

President—Heaton Smith, Victoria

Treasurer—Joe B. Stephens, Bangs

THURSDAY, APRIL 30, 7 P.M.

State Room, Fairmont Hotel

1. **(7:00) Cocktail Party and Dinner (Members, Wives, and Guests)**

MEDICAL HISTORY PRESENTATION

(The Medical History Presentation is sponsored by the Committee on Medical History of the Texas Medical Association.)

Chairman—Joe C. Rude, Austin

THURSDAY, APRIL 30, 6:30 P.M.

Far East Room, Fairmont Hotel

1. **(6:30) Dinner**

Texas History from an Anesthesiologist's Point of View
Robert B. Krause, San Antonio

The paper will present the history of Texas from an anesthesiologist's point of view with regard to the progress of anesthesia over the developmental years and how it paralleled the anesthesia development in the rest of the world during certain periods of time in Texas' history. A short biography of some of the early pioneers will be given and the needs and outlook for anesthesia in the future of Texas will be explained. Slides will be shown.

ORIENTATION PROGRAM OF TEXAS MEDICAL ASSOCIATION

FRIDAY, MAY 1, 8 A.M.

Parisian Room, Fairmont Hotel

1. (8:00) Registration

G. V. Brindley, Jr., Temple, Presiding

2. (9:00) Welcome
G. V. Brindley, Jr., Temple

3. (9:05) The 1970's; New Vistas and Challenges for Texas Medicine
Charles Max Cole, Dallas

4. (9:25) An Accounting of Stewardship; What Happens to Your Dues?
James A. Hallmark, Fort Worth

5. (9:45) Medical Ethics—Obligations of the Physician to His Colleagues and to the Medical Profession
S. Braswell Locker, Brownwood

6. (10:05) Serving the Doctors of Texas
Mr. Donald M. Anderson, Austin

(10:25) Intermission

Howard R. Dudgeon, Jr., Waco, Presiding

7. (10:40) The Role of Texas Medicine in Influencing Government Programs of Medical Service
Mr. C. Lincoln Williston, Austin

8. (11:10) Doctor Patient-Relations
Robert Mayo Tenery, Waxahachie

9. (11:30) Legal Aspects of Medical Practice; Malpractice—How to Avoid It
Philip R. Overton, LL.B., Austin

(12:15) Adjournment

12:30 P.M.
Embassy Garden, Statler Hilton Hotel

10. (12:30) General Meeting Luncheon
From Here to Infinity
Maj. Gen. J. Bruce Medaris, Winter Park, Fla.

SEMINAR ON ACUTE MEDICINE AND CARDIOPULMONARY RESUSCITATION

(A special advance Seminar on Acute Medicine and Cardiopulmonary Resuscitation will be sponsored by the Division of Postgraduate Education and the Department of Anesthesiology, University of Texas Southwestern Medical School at Dallas. Enrollment is restricted to 40 persons. Seminar tuition is $125. A box lunch will be served for $4. Checks should be sent to John S. Chapman, M.D., Division of Postgraduate Education, 5323 Harry Hines Boulevard, Dallas 75235. The seminar stresses the active participation of physicians in performing and practicing the clinical techniques. One faculty member for every three students will provide for direct tutorial experience. The course, offering lecture, clinical, and laboratory experience, seeks to qualify the physician as an instructor for further dissemination of techniques in his own community.)

THURSDAY, APRIL 30, 8 A.M.-5:30 P.M.

Room 301 and Laboratories, Basic Science Building, The University of Texas Southwestern Medical School

1. (8:00) Registration

2. (8:25) Introduction

3. (8:30) New Methods in Assessing and Treating Circulatory Dysfunction

4. (9:00) New Methods in Assessing and Treating Respiratory Dysfunction

5. (9:30) Clinical Practice in Measurements

(10:30) Intermission

6. (11:00) Principles of Cardiopulmonary Resuscitation

7. (11:45) Demonstration of Cardiopulmonary Resuscitation Team

8. (12:15) Box Lunch

Films:
Organization for Cardiac Arrest
Water Rescue
Prescription for Life

9. (1:30) Laboratory Exercises (All registrants will participate in four laboratory exercises.)

I. Mannequin Practice. The group will practice cardiopulmonary resuscitation on an automated mannequin, will learn proper techniques of performing CPR, teaching techniques, pitfalls, and hazards in teaching. Practice will include:
   A. Mouth to Mouth Breathing
   B. Use of "Ambu Bag"
   C. Use of "Elder Valve"
   D. Closed Chest Cardiac Compression
   E. Use of Mechanical Compressors
   F. Preparing Intravenous Infusion
   G. Choice and Use of Drugs
   H. Recognition of Cardiac Arrhyth-

mias
I. Defibrillation
J. Cardioversion

II. Physiology and Pharmacology of Canine Heart. A dog with a bilateral thoracotomy will be utilized to demonstrate the responses of the heart to various stresses and pharmacologic therapy including:
A. Hypoxia
B. Hypercarbia
C. Vagal Stimulation
D. Hyperkalemia
E. Digitalis
F. Propanolol
G. Internal Cardiac Compression
H. Defibrillation

Responses will be visualized on a projector physiograph—parameters to be monitored include Blood Pressure, EKG, Central Venous Pressure.

III. Cardiopulmonary Resuscitation Laboratory. A dog preparation which will demonstrate blood pressure, respiratory pressure, respiratory volume, and EKG will be utilized to practice cardiopulmonary resuscitation on a living model. Ventricular fibrillation will be induced electrically and similar steps as in "mannequin practice" will be practiced.

IV. Surgical Technique Laboratory. Practical experience in managing the dog as a teaching model will be gained. Experience will include:
A. Premedication
B. Handling the Unanesthetized Animal
C. Induction of Intravenous Anesthesia
D. Laryngoscopy
E. Endothracheal Intubation
F. Intravenous Infusion—Percutaneous; Cutdown
G. Arterial Puncture—Percutaneous; Cutdown
H. Measurement of Arterial and Venous Pressure
I. Fibrillation
J. Defibrillation
K. Cricothyrotomy

SEMINAR ON MEDICAL WRITING

(The Seminar on Medical Writing is sponsored by the Southwestern (Texas) Chapter of the American Medical Writers' Association. The $25 registration fee includes cocktails and luncheon. Details may be obtained by writing E. Clinton Texter, Jr., Scott and White Clinic, Temple, Texas 76501.)

Moderator—E. Clinton Texter, Jr., President, Southwestern (Texas) Chapter, American Medical Writers' Association, Temple

SUNDAY, MAY 3, 9:30 A.M.

Parisian Room, Fairmont Hotel

1. (9:30) Introductory Remarks
E. Clinton Texter, Jr., Temple

2. (9:40) The Language of Medical Science
Lois DeBakey, Ph.D., Houston

3. (10:00) Ethics in Medical Writing
Miss Selma DeBakey, Houston

4. (10:20) Physicians' Public Pronouncements and the Press: Do We Need New Ground Rules?
Mr. Frank Chappell, Chicago

5. (10:40) Editor Versus Author
Charles G. Roland, Rochester, Minn.

6. (11:00) Panel Discussion

(12:00) Recess for Luncheon

12:15 P.M.

Pavilion Room, Fairmont Hotel

7. (12:15) Cocktails

Luncheon

Business Meeting

SOCIETY OF LIFE INSURANCE MEDICAL DIRECTORS OF TEXAS

Corresponding Secretary—Miss Florence Ferguson, Dallas

FRIDAY, MAY 1, 12 NOON

Vista Room, Fairmont Hotel

1. (12:00) Luncheon Meeting

SYMPOSIUM ON ALCOHOLISM

(The Symposium on Alcoholism is sponsored by the Texas Commission on Alcoholism and The University of Texas Division of Extension.)

THURSDAY, APRIL 30, 8 P.M.

Parisian Room, Fairmont Hotel

1. (8:00) Sedativism
Stanley E. Gitlow, New York

SYMPOSIUM ON CARDIOVASCULAR DISEASES

(The Symposium on Cardiovascular Diseases is sponsored by the Committee on Cardiovascular Diseases of the Texas Medical Association in conjunction with the American Heart Association, Texas Affiliate, Inc.)

Chairman, Committee on Cardiovascular Diseases, Texas Medical Association—John R. Derrick, Galveston

Prophylaxis of Cardiovascular Disease

THURSDAY, APRIL 30, 9 A.M.

Oak Room, Fairmont Hotel

Cochairmen—Thomas W. Inmon, Temple; Grover L. Bynum, Jr., Austin

1. (9:00) Recognition of the Coronary-Prone Patient
John W. Hyland, Dallas

2. (9:30) Jogging for Health
Maj. Kenneth Cooper, Lackland Air Force Base

3. (10:00) Nutrition and Heart Disease
William J. Block, San Antonio

(10:30) Intermission

4. (10:45) Health Hazard Appraisals
Jack H. Hall, Indianapolis

(11:30) Question and Answer Forum

(12:00) Recess for Luncheon

1:30 P.M.

Oak Room, Fairmont Hotel

Cochairmen—J. Morris Horn, Dallas; Silas W. Grant, Hillsboro

5. (1:30) A Peek at The Pill by Cardiologists
Faber F. McMullen, Jr., Houston

6. (2:00) Preventive Breeding
James J. Nora, Houston

7. (2:30) Prophylaxis of Thromboembolism
Per H. Langsjoen, Temple

(3:00) Intermission

8. (3:30) Bad Bugs—New Drugs (Valvular Heart Disease)
Jay P. Sanford, Dallas

9. (3:50) Do Drugs Help Prevent Cardiovascular Disease?
Arnold Schwartz, Houston

(4:20) Question and Answer Forum

(4:40) Adjournment

SYMPOSIUM ON EMERGENCY ROOM CARE

(The Symposium on Emergency Room Care is sponsored by the Committee on Disaster Medical Care of the Texas Medical Association.)

Chairman, Committee on Disaster Medical Care, Texas Medical Association—Ben A. Merrick, Dallas

FRIDAY, MAY 1, 2-5 P.M.

Green Room, Fairmont Hotel

1. (2:00) Initial Management of Trauma to the Genitourinary Tract
Paul C. Peters, Dallas

2. (2:30) Current Status of Disaster Medical Planning in Texas
Charles R. Queen, Edinburg

(3:00) Intermission

3. (3:15) Initial Management of Blunt Trauma to the Abdomen
Robert N. McClelland, Dallas

4. (3:45) Emergency Room Care in the Small Community Hospital
Nathan Cedars, Stephenville

5. (4:15) Emergency Room Care in the Large Community General Hospital
Ronald C. Jones, Dallas

(4:45) Questions and Discussion

(5:00) Adjournment

SYMPOSIUM ON MATERNAL DEATHS IN TEXAS

(The Symposium on Maternal Deaths in Texas is sponsored by the Committee on Maternal Health of the Texas Medical Association.)

Chairman, Committee on Maternal Health—C. E. Gibbs, San Antonio

FRIDAY, MAY 1, 10 A.M.-12 Noon

Royal Room, Fairmont Hotel

Why Do Pregnant Women Die?

1. **(10:00) Introduction**
   C. E. Gibbs, San Antonio

2. **(10:10) Hemorrhage**
   Anthony Ruppersberg, Jr., Columbus, Ohio

In the Ohio Maternal Mortality Study, hemorrhage predominates as a direct cause of maternal deaths. From a survey covering 12 years, 1955 to 1966 (inclusive), the Committee on Maternal Health of OSMA noted 886 maternal deaths among the 2,652,120 live births reported by the Vital Statistics Division, Ohio Department of Health. Among the single contributing causes resulting in fatal hemorrhage, ruptured uterus leads. Screening the etiology of all categories in Ohio maternal deaths, it is evident that personnel factors exceed patient factors in prevention and avoidability.

3. **(10:30) Toxemia**
   Roy E. Moon, San Angelo

4. **(10:45) Infection**
   Morris E. Malakoff, Laredo

5. **(11:00) Abortion**
   William J. McGanity, Galveston

6. **(11:15) Anesthesia and Other Causes**
   James T. Downs, III, Dallas

(11:30) Question and Answer Session

(12:00) Adjournment

TEXAS ACADEMY OF GENERAL PRACTICE SEMINAR

(The program is acceptable for five hours of prescribed credit by the American Academy of General Practice. All American Medical Association members are invited to register. Registration fee is $10. Seminar speakers are faculty members of The University of Texas Southwestern Medical School at Dallas.)

President—John C. Hundley, Fort Stockton

Coordinator of Postgraduate Planning—L. W. Snider, Garrison

THURSDAY, APRIL 30, 12:30 P.M.

Parisian Room, Fairmont Hotel

1. **(12:30) Introductions**

2. **(1:00) Peripheral Vascular Disease in the Geriatric Age Group**
   R. Donald Patman, Dallas

3. **(2:00) Infections in the Elderly**
   Ralph R. Tompsett, Dallas

4. **(3:00) Urinary Obstruction and Its Management**
   Harry M. Spence, Dallas

5. **(4:00) Disorders of the Lower Bowel and Anus in the Elderly Patient**
   W. Malcolm McNatt, Dallas

6. **(5:00) The General Care of Geriatric Patients**
   Allen M. Fain, Dallas

(6:00) Adjournment

TEXAS AIR-MEDICS ASSOCIATION AND TEXAS CHAPTER, FLYING PHYSICIANS ASSOCIATION, JOINT SESSION

(Related Organizations)

Texas Air-Medics Association
President—Dudley P. Laugenour, Dallas

Vice President and President-Elect—William C. Nowlin, Littlefield

Secretary-Treasurer—C. F. Miller, Waco

Texas Chapter, Flying Physicians Association

President—William H. Kolter, Jr., Houston

Vice President—J. L. Wright, Jr., Big Lake

Secretary-Treasurer—James R. Old, Beaumont

(A social hour for members of Texas Air-Medics Association and Texas Chapter, Flying Physicians Association, and their wives will be held Friday, 5 p.m., in the suite of Dr. and Mrs. W. A. Ostendorf, Statler Hilton Hotel.)

SATURDAY, MAY 2, 9 A.M.

Ballroom Assembly, Statler Hilton Hotel

Dudley P. Laugenour, Dallas, and William H. Kolter, Jr., Houston, Presiding

1. **(9:00) Invocation**

   Welcoming Address

   Introduction of Guests
   P. W. Malone, Big Spring
   Dudley P. Laugenour, Dallas
   William H. Kolter, Jr., Houston

2. (9:30) Legal Problems for FAA Medical Examiners

Mr. Hays V. Hettinger, Houston

3. (10:00) Background Study of Several Interesting Airplane Accidents

Lynn C. Barnes, Fort Worth

(10:45) Intermission

4. (11:00) Fatal Flight Accidents Experienced by Texas-Based Pilots in 1968

Peter V. Siegel, Washington

A review of our general aviation fatal accident files for 1968 revealed 51 cases which were investigated. The average age of these pilots was 36, the youngest was 16 and the oldest 62. Approximately two-thirds of the pilots were in the 31 to 50 age bracket, and all were male. The average flying hours were 2,350 with the least amount being eight, and the most being 13,000. Flight plans had been filed in only eight cases (two instrument flight plans and six visual flight plans). Nine of these accidents occurred outside of Texas. Seven accidents occurred during aerial application work, of which two were considered to involve parathion toxicity. Comments concerning the role of the physician in assisting to diminish the number of general aviation accidents will be given.

5. (11:30) Pilots on the Check List—A Progress Report

William H. Kolter, Jr., Houston

(12:00) Recess for Lunch

1:30 P.M.

Ballroom Assembly, Statler Hilton Hotel

7. (1:30) Business Meeting, Texas Chapter, Flying Physicians Association

2 P.M.

Ballroom Assembly, Statler Hilton Hotel

8. (2:00) Current Trends in Airline Pilot Examinations

Paul M. Pratho, Fort Worth

9. (2:30) Anatomy of Rule Making

Peter V. Siegel, Washington

The ideal of regulatory medicine is to engender a system of policies and practices that effectively, efficiently accomplish the goals of preventive medicine. The limits fundamental to such a system are the tethers commonly known as Federal Regulations. In promulgating regulations concerning the mental and physical health of 600,000 active civil airmen, one is not seldomly confronted with the deficiencies of legal phraseology. Loopholes, changing definitions, vague references, omissions and even punctuation can inadvertently result in erosion of the soundest medical principles. Yet standards designed to allow less encumbered medical judgment can result in accusations of arbitrary decision making. While rules are not created by popular vote, their gestation and even their conception may largely be due to those who will be under the rule. Some concepts for tomorrow's rules further illustrate the dichotomies of rule-making.

10. (3:00) Current Research at Civil Aeromedical Institute

J. Robert Dille, Oklahoma City

11. (3:30) Activities of the Flying Physicians Association at the National Level

Curtis W. Caine, Jackson, Miss.

(4:00) Intermission

12. (4:15) Federal Aviation Administration Forum

Moderators: Dudley P. Laugenour, Dallas
William H. Kolter, Jr., Houston

(5:30) Adjournment

6:30 P.M.

Vista Room, Statler Hilton Hotel

13. (6:30) Refreshment Hour and Annual Banquet —Members, Wives, Guests—Texas Air-Medics Association and Texas Chapter, Flying Physicians Association

SUNDAY, MAY 3, 9 A.M.

Silver Room, Statler Hilton Hotel

14. (9:00) Texas Air-Medics Association Breakfast and Business Meeting

TEXAS ASSOCIATION OF PHYSICIANS IN NUCLEAR MEDICINE

Chairman—John A. Burdine, Houston

SATURDAY, MAY 2, 12 Noon

Florentine Room, Fairmont Hotel

1. (12:00) Organizational Luncheon

Address

Merrill A. Bender, Buffalo

TEXAS ASSOCIATION OF PUBLIC HEALTH PHYSICIANS

(Related Organization)

(The Section on Public Health will meet Friday from 2:30 to 5 p.m., Panorama Room, Fairmont Hotel. The Conference of City and County Health Officers is scheduled Saturday 9 a.m. to 11:30 a.m., Panorama Room, Fairmont Hotel. See Section Meetings section and elsewhere in this Specialty Programs section for details.)

President—Santino J. Lerro, Austin

Vice President—Reinhold E. Johnson, Midland

Secretary-Treasurer—Hardy D. Loe, Jr., Houston

THURSDAY, APRIL 30, 6:30 P.M.

Texas Room, Baker Hotel

1. (6:30) Cocktails

2. (7:30) Dinner
Can Brown's Law Be Repealed?
William J. Brown, Atlanta, Ga.

TEXAS CHAPTER, AMERICAN ACADEMY OF PEDIATRICS

(Related Organization)

Chairman—Clarence E. Gilmore, Paris

Secretary-Treasurer—William S. Conkling, Navasota

(The Section on Pediatrics will meet Friday from 2:30 to 5 p.m. in the Patio Room, Fairmont Hotel; and Saturday from 9 to 11:30 a.m., Patio Room, Fairmont Hotel. See Section Meetings for details.)

FRIDAY, MAY 1, 12 Noon

Garden Room, Fairmont Hotel

1. (12:00) Luncheon and Business Session

The Acting-Out Child
Blaine E. McLaughlin, Grand Forks, N. D.

TEXAS CHAPTER, AMERICAN COLLEGE OF CHEST PHYSICIANS

(Related Organization)

President—Paul L. Richburg, Dallas

Vice President—Daniel E. Jenkins, Houston

Secretary-Treasurer and Program Chairman—Cone Johnson, Dallas

THURSDAY, APRIL 30, 2 P.M.

Continental Room, Fairmont Hotel

Grady L. Hallman, Jr., Houston, Presiding

1. (2:00) Surgery for Coronary Artery Disease
Maurice Adam,
Carey J. Lambert,
Ben F. Mitchel, Dallas

2. (2:25) Diagnosis and Treatment of Accessory Diaphragm
Hugh E. Wilson, III, Dallas

3. (2:50) Adult Respiratory Distress Syndrome: Unilateral
Fred F. Johnston,
Cone Johnson,
William F. Miller, Dallas

(3:15) Intermission

William F. Miller, Dallas, Presiding

4. (3:35) Factors Limiting Exercise Performance in Chronic Obstructive Pulmonary Disease
Ross L. McLean, Austin

Physical working capacity in patients with obstructive pulmonary disease may be highly dependent upon the subject's motivation. In order to study exercise performance without the influence of motivation and with minimal effects from physical training, the workload approximating the onset of anaerobic metabolism was determined. This index is known as the Anaerobic Threshold (AT) and occurs at submaximal workloads which are both safe and readily tolerated by the patient.

Cardiac output at AT has not been found to be a limiting factor in either pulmonary emphysema or chronic bronchitis. Therefore, the principal factor limiting steady-state exercise performance appears to be insufficient effective pulmonary gas exchange surface in pulmonary emphysema and insufficient ventilation in chronic bronchitis, with both factors contributing in mixed cases. Knowledge of the ventilation relative to O_2 uptake at AT permits an assessment of the relative contribution of each factor in those patients able to tolerate steady-state treadmill exercise at 1.0 mph for 6-8 minutes.

5. (4:00) Recovery of a Virus-Like Particle from Human Alveolar Cell Carcinoma
John A. Mohr, Oklahoma City

We have observed nuclear and cytoplasmic particles within the neoplastic alveolar cell from patients with alveolar cell carcinoma. These particles have been cultured on HeLa and JAS-180 monolayer cell lines where they have been associated with cytopathic effects and ultrastructural transformation of the cell lines. Virus-like particles have been recovered and demonstrated in the cell-free filtrate of the infected monolayers. This cell-free filtrate when used as antigen appears specific for the detection of hypersensitivity in this disease.

angina can strike any time... any place

help protect your angina patients with ISORDIL® SUBLINGUAL (ISOSORBIDE DINITRATE)

Prescribe ISOROIL SUBLINGUAL (5-mg. tablets) for treatment of acute attacks or for prophylaxis when increased physical or emotional stress place an additional burden on your angina pectoris patients. ISOROIL SUBLINGUAL acts almost as fast as nitroglycerin, yet lasts hours longer. Reliable because it's stable.

ISORDIL® (isosorbide dinitrate) dilates coronary arteries and significantly reduces the number, duration and severity of angina attacks. Exercise tolerance is also increased in some patients.

Available in four additional dosage formulations to provide flexible management of your angina pectoris patients.

Prescribe ISORDIL® 10 mg. (scored, oral tablets) or ISORDIL® TEMBIOS® (40-mg. sustained action tablets) for basic prophylactic treatment of angina pectoris.

Prescribe ISOROIL® ORAL 5 mg. (scored, oral tablets) to facilitate small adjustments in dosage.

Prescribe ISORDIL® with PHENOBARBITAL when anxiety or emotional disturbances are important factors in the clinical picture. Each tablet contains 10 mg. isosorbide dinitrate and 15 mg. (¼ gr.) phenobarbital, U.S.P., *(Warning: Phenobarbital may be habit forming).*

INDICATIONS: *Sublingual*—for prevention and treatment of angina pectoris. *Oral*—for relief of angina pectoris (pain of coronary artery disease); the oral dosage forms are not intended to abort the acute anginal episode, but are widely regarded as useful in the prophylactic treatment of angina pectoris.

CONTRAINDICATION: Idiosyncrasy to this drug.

WARNING: Data supporting the use of nitrites during the early days of the acute phase of myocardial infarction (the period during which clinical and laboratory findings are unstable) are insufficient to establish safety.

PRECAUTIONS: Intraocular pressure is increased; therefore, caution is required in administering to patients with glaucoma. Tolerance to this drug and cross-tolerance to other nitrites and nitrates may occur. In patients with functional or organic gastrointestinal hypermotility or malabsorption syndrome, it is suggested that either the ISORDIL ORAL 5 mg. or ISORDIL 10 mg. oral tablet or ISORDIL SUBLINGUAL be the preferred therapy. The reason for this is that a few patients have reported passing partially dissolved ISORDIL TEMBIDS in their stools. This phenomenon is believed to be on the basis of physiologic variability and to reflect rapid gastrointestinal transit of the sustained action tablet. ***ISORDIL TEMBIDS should not be chewed.***

ADVERSE REACTIONS: Cutaneous vasodilation with flushing. Headache is common and may be severe and persistent. Transient episodes of dizziness and weakness as well as other signs of cerebral ischemia associated with postural hypotension may occasionally develop. This drug can act as a physiological antagonist to norepinephrine, acetylcholine, histamine, and many other agents. An occasional individual exhibits marked sensitivity to the hypotensive effects of nitrite, and severe responses (nausea, vomiting, weakness, restlessness, pallor, perspiration and collapse) can occur even with the usual therapeutic dose. Alcohol may enhance this effect. Drug rash and/or exfoliative dermatitis may occasionally occur.

Consult direction circular before prescribing.

May we send you reprints, detailed information and/or professional samples?

TEMBIDS®—Trademark for Sustained Action Tablets

IVES LABORATORIES INC.
685 Third Avenue, New York, N.Y. 10017

Ives®

6. (4:25) The Pulmonary Cripple as a Surgical Risk
John Adriani, New Orleans

6:30 P.M.

Fountain Room, Fairmont Hotel

7. (6:30) Cocktails and Dinner

The Charles M. Hendricks Memorial Lecture: Pulmonary Gas Exchange in Diffuse Bilateral Pneumonic Tuberculosis

Ross L. McLean, Austin

Pulmonary gas exchange in diffuse bilateral pneumonic tuberculosis is characterized by both overventilation relative to perfusion (increased dead-space ventilation) and underventilation relative to perfusion (increased venous admixture effect). The large unventilated shunt-like effect causes arterial hypoxemia which may be augmented in the most severe cases by decreased effective gas exchange surface.

Rapid changes in pulmonary gas exchange may occur during the initial six weeks of treatment. Both progressive necrosis and progressive resolution may occur simultaneously and both will contribute to improved arterial oxygenation by diminishing or eliminating venous admixture effect. A resolving process may be reflected by a decrease in respiratory dead space, improved arterial oxygenation and increased effective gas exchange surface. A lack of resolution and/or progressive caseous necrosis may be manifested by lack of change or increase in respiratory dead space and a decline in effective gas exchange surface. Mixed findings compatible with both resolution and progressive necrosis, e.g., decreased respiratory dead space (resolution) and decreased effective gas exchange surface (necrosis), occasionally occur. The ultimate impact of tuberculosis upon pulmonary gas exchange is determined by the balance achieved between the extent of caseous necrosis and the degree of resolution without necrosis.

The primary objective of treatment is to check bacillary growth as rapidly as possible with appropriate chemotherapy. The extent to which pulmonary gas exchange can be preserved and restored will depend upon the extent of irreversible tissue loss present at time of treatment, the rapidity with which progressive necrosis can be checked, and the swiftness of resolution of non-necrotic tubercles.

TEXAS DEPARTMENT OF MENTAL HEALTH AND MENTAL RETARDATION

Commissioner—John Kinross-Wright, Austin

(The Texas Department of Mental Health and Mental Retardation will sponsor Dr. Marvin Stein of Brooklyn as guest speaker on programs of the Texas Medical Association 1970 Annual Session. See Speakers section for appearances.)

TEXAS DERMATOLOGICAL SOCIETY

(Related Organization)

President—J. B. Richardson, Houston

President-Elect—Morris Polsky, Austin

Secretary-Treasurer—Coleman Jacobson, Dallas

Program Chairman—Stuart M. Brown, Dallas

SATURDAY, MAY 2, 9 A.M.

Vista Room, Statler Hilton Hotel

1. (9:00) Cutaneous Diseases Caused by Atypical Mycobacteria and Their Treatment
Barrett Kennedy, New Orleans

This is a short review of what is now known about this opportunist "nonpathogen" group of bacteria as related to their cultural characteristics, types of skin involvement, and methods of treatment. The use of B663, a Rimino phenazine derivative, its value in this condition, and the side effects that might be expected from its use will be discussed.

2. (9:45) Alternate Antibiotics in the Treatment of Syphilis
Joseph M. Glicksman, Corsicana

The chief subject of this article is alternate antibiotics currently used in the treatment of syphilis with special reference to cephaloridine which we have recently researched with excellent clinical results. The paper also briefly summarizes recent statistics concerning penicillin reactions and a summary of other alternate antibiotics which I use.

(10:05) Discussion

(10:15) Intermission

3. (10:30) What Makes Skin Dry?
James H. Herndon, Jr., Dallas

Dry skin may be due to an inherited disorder, to overzealous cleansing, or to chronic allergic skin diseases like atopic dermatitis or urticaria. The normal stratum corneum resists scaliness, cracking, and thickening as long as several structural features remain intact. These include (1) the membrane lipoproteins of the keratinized cell, (2) the alternating lipid and protein layers within it, and (3) a variety of small molecules that bind intracellular water.

(10:50) Discussion

4. (11:00) The Use of Ultraviolet Light With Topical Fluorouracil in the Treatment of Multiple Actinic Keratosis
John L. Kestel, Jr., Dallas

When treating multiple actinic keratosis with topical 5-fluorouracil, patients usually have a more intense reaction when they are exposed to sunlight. An attempt was made to take advantage of this fact and intentionally treat a series of patients with topical 5-fluorouracil after an erythema dose of ultraviolet light to one side of the face and not to the other. Patient acceptance seemed good. Some problems were encountered when the drug was used in this manner.

(11:20) Discussion

5. (11:30) Older Clinical Manifestations of Late Syphilis
Arthur G. Schoch, Dallas

Described briefly will be such items as the gait of the tabetic; the facial expression of the paretic; the facies of adolescent congenital syphilis; the Hutchinson triad; the pseudoparalysis of Parrot; syphilitic bursopathy of Verneuil; the saber shins as a lethal weapon; caries sicca; and, lastly, syphilitic ophthalmitis.

(12:00) Adjournment

in active stages of moderate to severe rheumatoid arthritis

What more can you

after you've tried

rheumatoid spondylitis, and osteoarthritis of the hip

do for these patients?

salicylates and rest

INDOCIN®

(INDOMETHACIN | MSD)

helps relieve pain, fever, swelling, and tenderness

Please see new prescribing information on following page.

REVISED PRESCRIBING INFORMATION

IMPORTANT NOTE: INDOCIN (Indomethacin, MSD) cannot be considered a simple analgesic and should not be used in conditions other than those recommended under Indications. The drug should not be prescribed for children because safe conditions for use have not been established.

General Adverse Effects: Because of the high potency of the drug and the variability of its potential to cause adverse reactions, the following are strongly recommended: 1) the lowest possible effective dose for the individual patient should be prescribed. Increased dosage tends to increase adverse effects, particularly in doses over 150-200 mg/day, without corresponding clinical benefits; and 2) careful instructions to, and observations of, the individual patients are essential to the prevention of serious and irreversible, including fatal, adverse reactions, especially in the aging patient.

Indications: Symptomatic relief of adult rheumatoid and degenerative joint disease unresponsive to adequate trial of salicylates and other measures of established value, such as appropriate rest. Has been found effective in active stages of: 1) moderate to severe rheumatoid arthritis including acute flares of chronic disease, 2) moderate to severe rheumatoid (ankylosing) spondylitis, and 3) moderate to severe degenerative joint disease of the hip (osteoarthritis of the hip). Has been found effective in relieving pain and reducing fever, swelling, and tenderness in acute gouty arthritis in selected patients. May enable reduction of steroid dosage in patients receiving steroids for the more severe forms of rheumatoid arthritis; in such instances the steroid dosage should be reduced slowly and the patients followed very closely for any possible adverse effects.

Contraindications: Children 14 years of age and under; pregnant women and nursing mothers; active gastrointestinal lesions or history of recurrent gastrointestinal lesions; allergy to aspirin and indomethacin.

Warnings: *Gastrointestinal Effects:* Because of the occurrence and, at times, severity of gastrointestinal reactions, be continuously alert for any sign or symptom signaling a possible gastrointestinal reaction. The risks of continuing therapy with INDOCIN in the face of such symptoms must be weighed against the possible benefits to the individual patient. Gastrointestinal effects may be reduced by giving the drug immediately after meals, with food, or with antacids. Use greater care in aging patients.
Ocular Effects: Corneal deposits and retinal disturbances, including those of the macula, have been observed in some patients on prolonged therapy. Discontinue therapy if such changes are observed. Ophthalmologic examination at periodic intervals is desirable in patients on prolonged therapy.
Central Nervous System Effects: INDOCIN (Indomethacin, MSD) may aggravate psychiatric disturbances, epilepsy, and parkinsonism, and should be used with considerable caution in patients with these conditions. If severe CNS reactions develop, discontinue the drug.

Precautions: Blurred vision may be a significant symptom that warrants a thorough ophthalmologic examination. Patients should be cautioned about engaging in activities requiring mental alertness and motor coordination, as driving a car. Headache which persists despite dosage reduction requires complete cessation of the drug. May mask the usual signs and symptoms of infection; therefore, the physician must be continually on the alert for this and should use the drug with extra care in the presence of existing controlled infection. After the acute phase of the disease is under control, an attempt to reduce the daily dose should be made repeatedly until the patient is off entirely.

Adverse Reactions: *Gastrointestinal Reactions:* Single or multiple ulcerations of the esophagus, stomach, duodenum, or small intestine, including perforation and hemorrhage, with fatalities in some instances; gastrointestinal bleeding without obvious ulcer formation; perforation of preexisting sigmoid lesions (diverticulum, carcinoma, etc.); rarely, increased abdominal pain in ulcerative colitis patients or development of ulcerative colitis and regional ileitis; gastritis, which may persist after the cessation of the drug; nausea, vomiting, anorexia, epigastric distress, abdominal pain, and diarrhea.
Eye Reactions: Corneal deposits and retinal disturbances, including those of the macula, have been observed on prolonged therapy; blurring of vision.
Hepatic Reactions: Rarely, toxic hepatitis and jaundice, including some fatal cases.
Hematologic Reactions: Aplastic anemia, hemolytic anemia, bone marrow depression, agranulocytosis, leukopenia, and thrombocytopenic purpura. Since some patients manifest anemia secondary to obvious or occult gastrointestinal bleeding, appropriate blood determinations are recommended.
Hypersensitivity Reactions: Acute respiratory distress, including dyspnea and asthma; angiitis; pruritus; urticaria; angioedema; skin rashes.
Ear Reactions: Hearing disturbances, deafness, tinnitus.
Central Nervous System Reactions: Psychotic episodes, depersonalization, depression, coma, convulsions, peripheral neuropathy, drowsiness, mental confusion, lightheadedness, dizziness, headache.
Cardiovascular-Renal Reactions: Edema, elevation of blood pressure, hematuria.
Dermatologic Reactions: Loss of hair, erythema nodosum.
Miscellaneous: Rarely, vaginal bleeding, hyperglycemia, glycosuria, ulcerative stomatitis, and epistaxis.

Supplied: Capsules containing 25 mg indomethacin each, in bottles of 100 and 1000; capsules containing 50 mg indomethacin each, in bottles of 100.

For more detailed information, consult your Merck Sharp & Dohme representative or see the package circular.

MSD **MERCK SHARP & DOHME** | **where today's theory is tomorrow's therapy**
Division of Merck & Co. Inc. West Point Pa 19486

JOINT SESSION—

TEXAS INDUSTRIAL MEDICAL ASSOCIATION, TEXAS PHYSICAL MEDICINE AND REHABILITATION SOCIETY, TEXAS TRAUMATIC SURGICAL SOCIETY, AND SECTION ON PHYSICAL MEDICINE AND REHABILITATION

Texas Industrial Medical Association

President—George E. McGlothlen, Bridge City

Texas Physical Medicine and Rehabilitation Society

President—John R. Shull, Dallas

Secretary—James W. Caldwell, Dallas

Texas Traumatic Surgical Society

President—Sanford Glanz, Corpus Christi

Secretary-Treasurer—C. Marshall Ashmore, Bellaire

Section on Physical Medicine and Rehabilitation

Chairman—John R. Shull, Dallas

Secretary—Robert M. Izard, Jr., Gonzales

THURSDAY, APRIL 30, 9 A.M.

Royal Room, Fairmont Hotel

Sanford Glanz, Corpus Christi, Program Coordinator

The Face

1. (9:00) Welcome and Introductions

2. (9:10) Management of Facial Injuries
Francis X. Paletta, St. Louis

Accurate inventory as to the true nature of specific injuries to the face is most important in outlining treatment. Attention should be directed to lacerations of the facial nerves, Stensen's duct, lacrimal duct, intrinsic injuries of the eye, and fractures of the facial bones. Since many of these injuries are caused by automobile accidents and frequently associated with body trauma, it is necessary that clearance be given in regard to head, chest, and abdominal injuries. Since the latter of the three areas, if not treated immediately, may result in death, they obviously take priority. Following clearance of these three specific regions, attention can then be directed to the immediate repair of soft tissue injuries. Fractures of the face that can be taken care of under local anesthesia are treated at the same time as the soft tissue repair. Stabilization and fixation of other facial fractures which require general anesthesia are treated when the general condition of the patient permits the administration of an anesthetic agent.

3. (9:40) Noise-Induced Hearing Loss—Criteria and Legislation
Aram Glorig, Dallas

(10:10) Intermission

4. (10:25) Prognostic Consideration in Bell's Palsy
Carl V. Granger, Boston

Unilateral paralysis (complete or partial) of the muscles of facial expression is relatively abrupt in onset of idiopathic Bell's palsy. Other common etiologies of facial palsy include direct or indirect trauma, bacterial or viral infection, brain stem hemorrhage or tumor in the posterior fossa. Occult causes must always be considered before diagnosing Bell's palsy.

Despite the fact that Bell's palsy most often is a benign condition, it is frightening to the patient. Recognition of the various factors affecting prognosis assists the physician in formulating a management plan and in reassuring the patient. Aside from correct diagnosis, other factors include location of the lesion along the nerve pathway, degree of lost function, sequent changes in the nerve, viability of facial muscles, tone in facial tissues, quality of recovery and implications of treatment whether intended to be curative, palliative and protective or restorative.

5. (11:10) The Face As a Mirror of Disease—A Slide Presentation
Richard D. Burk, Dallas
Carl V. Granger, Boston
Francis X. Paletta, St. Louis

1:30 P.M.

Royal Room, Fairmont Hotel

6. (1:30) Surgical Care of Soft Tissue Problems in Farm and Ranch Injuries
Francis X. Paletta, St. Louis

Many of the injuries occurring on the farm and ranch occur in the hand or represent avulsive injuries of other portions of the body. Early measures to prevent infection or tetanus are immediately instituted by prophylactic and therapeutic administration of antibiotics, tetanus toxoid, and other measures if necessary. Early debridement of the traumatized tissue followed by definitive reconstructive measures will result in a better functioning hand. Resurfacing for avulsions in the form of skin grafts and skin flaps are used whenever necessary.

7. (2:15) Plastic Surgery in the Texas Department of Corrections
Melvin Spira, Houston

8. (2:45) Panel: Industrial Rehabilitation and Surgical Aspects of the Face

Moderators: Sanford Glanz, Corpus Christi
John R. Shull, Dallas

Panelists: Melvin Spira, Houston
Carl V. Granger, Boston
Francis X. Paletta, St. Louis

(3:45) Recess

9. (4:00) Separate Annual Business Meetings

Texas Industrial Medical Association—French Room, Fairmont Hotel

Texas Physical Medicine and Rehabilitation Society—Florentine Room, Fairmont Hotel

Texas Traumatic Surgical Society—Century Room, Fairmont Hotel

6:30 P.M.

Garden Room, Fairmont Hotel

10. (6:30) Social Hour (Members, Wives, Guests)

TEXAS OPHTHALMOLOGICAL ASSOCIATION AND SECTION ON OPHTHALMOLOGY

President, Texas Ophthalmological Association, and Chairman, Section on Ophthalmology—John C. Koch, Lufkin

President-Elect and Program Chairman, Texas Ophthalmological Association, and Secretary, Section on Ophthalmology—Edwin G. Grafton, Dallas

Secretary, Texas Ophthalmological Association—John C. Kuppinger, Harlingen

Treasurer, Texas Ophthalmological Association—Joe L. Bussey, Fort Worth

(The Executive Council, Texas Ophthalmological Association, will meet Thursday, April 30, 2 to 5 p.m., Green Room, Fairmont Hotel.)

(Members of Texas Ophthalmological Association will have a refreshment reception Thursday, April 30, 6 to 8 p.m., Oak Room, Fairmont Hotel.)

(Medical Advisory Committee Chairmen, Texas Society for the Prevention of Blindness, will have a breakfast session Saturday, May 2, 7:30 a.m., Century Room, Fairmont Hotel.)

FRIDAY, MAY 1, 8:15 A.M.-5 P.M.

Pavilion Room, Fairmont Hotel

John C. Koch, Lufkin, Presiding

1. (8:15) Continental Breakfast Round Table Presentation: Ocular Complications of Systemic Medication
Philip P. Ellis, Denver

Serious ocular complications may follow systemic medication. Corneal deposits occur with chloroquine and chlorpromazine therapy. Cataracts can be induced by corticosteroids and chlorpromazine. Retinal pigmentary degenerative changes have been observed after phenothiazine and chloroquine treatment. Digitalis produces visual disturbances. Optic neuritis has occurred with many antibiotics and chemotherapeutic drugs. In most instances the complications are time and dosage related. Some of the ocular changes are permanent while others are reversible. Methods for early detection of ocular complications are stressed.

(10:00) Intermission

2. (10:15) Irregularities and Protrusions on the Surface of the Retina
Louis Daily, Jr., Houston

Pathological irregularities and protrusions of the retinal surface visible only biomicroscopically are described and illustrated with colored photographs of optical sections of the posterior vitreous and retina.

3. (10:45) Uveitis: Diagnosis and Treatment
Thomas J. Kirby, Rochester

Uveitis is a serious disease, often resulting in loss of vision. Advances in determining etiology have been modest. Until new knowledge provides the physician with better tools, our approach must be practical and at times empirical. A uveitis survey is indicated for most patients. Specific treatment for the cause is seldom available; a flexible but organized program of nonspecific therapy continues to offer the best chance of preserving vision.

(12:00) Recess

12:15 P.M.

Fountain Room, Fairmont Hotel

4. (12:15) Luncheon, Texas Ophthalmological Association

The Pending Lawsuit Against Optometry Where Medical Association Has Asked Court to Limit Optometry
William H. Sanders, L.L.B., Kansas City, Mo.

1:45 P.M.

Pavilion Room, Fairmont Hotel

5. (1:45) Business Meeting of the Texas Ophthalmological Association

President's Address
John C. Koch, Lufkin

3 P.M.

Pavilion Room, Fairmont Hotel

James L. Mims, Jr., San Antonio, Presiding

6. (3:00) Uveitis: Management of Complications
Thomas J. Kirby, Rochester

Uveitis can be a self-limiting disease; the prevention of complications can mean the difference between a residual of useful vision and a residual of qualified or indefinite potential vision.

Posterior synechiae, complicated cataract, and secondary glaucoma are frequent complications of uveitis. Definitive treatment of these and other complications can help to preserve vision. Extensive vitreous degeneration and phthisis bulbi are usually beyond the help of definitive treatment.

7. (4:00) Recent Developments in Ocular Therapeutics
Philip P. Ellis, Denver

Many recently developed antibiotics are valuable for therapy of bacterial ocular infections. Gentamicin is effective against a wide range of organisms including Pseudomonas; the drug is beneficial as a subconjunctival and topical agent. Systemic ampicillin and cephaloridine penetrate the eye in good therapeutic concentrations.

Among other recently developed ocular therapeutic agents are topical guanethidine for lid retraction of Grave's disease; thiotepa to retard recurrence of pterygium; pimaricin and thiabendazole as topical antifungal agents; interferon for herpes simplex keratitis; collagenase inhibitors for alkali burns of cornea; and cyanoacrylate adhesives for corneal perforations.

(5:00) Adjournment

Visit Exhibits

SATURDAY, MAY 2, 9 A.M.-5 P.M.

Pavilion Room, Fairmont Hotel

John C. Kuppinger, Harlingen, Presiding

8. (9:00) The Cause and Management of Vitreous Hemorrhage

Richard S. Ruiz, Houston

This paper makes a plea for the adequate evaluation and management of the patient with vitreous hemorrhage. The ophthalmologist is called upon to assume responsibility. All causes for vitreous hemorrhage are broken down into two categories: those which are amenable to local therapy and those which are not. The remainder of the paper discusses the causes for vitreous hemorrhage which are amenable to local therapy by photocoagulation, diathermy, or cryopexy. These treatable causes are completely discussed and profusely illustrated with Kodachrome slides. The proper steps in management of a patient with vitreous hemorrhage are enumerated and amplified. Various techniques which aid in proper evaluation and management are emphasized and recommended.

9. (9:30) Skin Diseases Affecting the Eye

Thomas J. Kirby, Rochester

The skin and several structures of the eye are derived from surface ectoderm. Diseases affecting one often affect the other. Hereditary, congenital, infectious, allergic, and collagen diseases are among the common conditions affecting both organs. Some are of academic and diagnostic interest, others offer opportunity for practical and effective treatment.

(10:30) Intermission

10. (10:45) Intraocular Carbachol in Cataract Surgery

C. Harold Beasley, Fort Worth

Prompt miosis of the pupil after extraction of the cataractous lens and in other anterior segment surgery is often desirable. Pilocarpine and acetylcholine are the usual parasympathomimetic drugs used for this purpose. Carbachol in a weak dilution (0.01%) is effective and relatively nonirritating as a miotic, when used intraocularly. In animals, carbachol (0.01%) exhibited miotic activity that was more intense and of longer duration than 2% pilocarpine and 1% acetylcholine. A comparison of acetylcholine 1% and carbachol 0.01% for miosis in cataract surgery suggests that the carbachol is probably better than acetylcholine and it is more stable and should be less expensive.

11. (11:15) Anti-Inflammatory Therapy in Ophthalmology

Philip P. Ellis, Denver

Corticosteroids are the mainstay of ophthalmic anti-inflammatory therapy. For external disorders, steroid preparations should be selected with weak intraocular penetration. Systemic steroid dosage should be individualized. High doses may be required for certain disorders. Alternate-day administration reduces some of the side effects. It is advisable when long-term systemic therapy is necessary. Non-corticosteroid anti-inflammatory agents are useful in selected cases. Anti-metabolites may suppress inflammation when steroids fail, but many complications accompany their use.

(12:15) Recess

1:30 P.M.

Pavilion Room, Fairmont Hotel

Edwin G. Grafton, Dallas, Presiding

12. (1:30) Repair of the Lower Lid by the Mustardé Technique

Ralph G. Berkeley, Houston

A method of total removal of the lid with plastic repair according to the technic originally described by John Mustardé of Scotland is discussed. Three cases, in which 75 to 100 percent of the lid was removed, are presented. This procedure has been successful in rebuilding the lower lid without causing surgical scars of the upper lid with consequent discomfort abrasion and ulceration of the cornea.

13. (2:00) Ocular Neurosis, Fatigue or Narcolepsy?

Thomas J. Kirby, Rochester

Ocular symptoms are experienced by patients with normal eyes. Some are features of true neurosis. Others are mild transitory symptoms of temporary emotional stress. Some ocular symptoms reflect chronic ocular and physical fatigue. Sleepy people, or narcoleptics, may present ocular symptoms that are difficult to distinguish from those of neurosis. Alertness by ophthalmologists to the diagnosis of narcolepsy and proper treatment can help a struggling unhappy patient.

14. (3:00) Subconjunctival Medications

Philip P. Ellis, Denver

Subconjunctival injection of aqueous solutions of antibiotics is a useful adjunct in the treatment of severe bacterial endophthalmitis. It may be employed for prophylaxis in intraocular surgery. High intraocular antibiotic levels are achieved; therapeutic levels remain only for a few hours. Subconjunctival injection of repository corticosteroids produce therapeutic drug levels which may persist for weeks. Aqueous corticosteroids should not be used subconjunctivally in preference to topical therapy. Subconjunctival mydriatics sometimes are of value but may produce systemic side reactions.

(5:00) Adjournment

TEXAS ORTHOPAEDIC ASSOCIATION

(Related Organization)

President—Joe W. King, Houston

Vice President—Cecil A. Robinson, Kermit

Secretary-Treasurer—L. Ray Lawson, Dallas

Program Chairman—L. Lee Lankford, Dallas

SATURDAY, MAY 2, 9 A.M.

Fountain Room, Fairmont Hotel

1. (9:00) Call to Order

Opening Remarks

Announcements

2. (9:10) Stress Fractures in Joggers

Charles E. Graham, Richardson

This is a study of six patients who have had stress fractures develop during the practice of jogging. Four patients showed evidence of stress fractures of the os calcis and two patients had fractures of the fibula. One case was reported in which the patient had stress fracture of the os calcis and then, approximately six months later, also developed a stress fracture of the fibula after continuing his jogging exercise.

(9:25) Discusser

Robert A. Murray, Temple

(9:30) Discussion from Floor

3. (9:35) Peripheral Nerve Surgery: Results Following Repair of the Radial Nerve

Claude Pollard, Jr., Austin

The paper briefly summarizes in a general way the material from World War II cases (about 1,700 operations) and the cases in private practice from 1946 to 1969 (about 150 cases) of major nerve laceration. There are about 170 radial nerve operations which will be reported and the results following neurorrhaphy and neurolysis will be reported. A motion picture showing the preoperative examination, the operative procedure, and the results will also be presented.

(9:50) Discusser

Col. George E. Omer, Fort Sam Houston

(9:55) Discussion from Floor

4. (10:00) Fibrous Dysplasia: Total Plating Femora

Louis W. Breck, El Paso

This is a case presentation of fibrous dysplasia in a young woman who has been treated over a 15-year period. Following repeated bilateral femoral fractures, bilateral Jewett plates and bilateral long femoral shaft plates were placed along the length of the femora. A follow-up of two years post surgery without subsequent fracture will be discussed.

(10:15) Discusser

Brandon Carrell, Dallas

(10:20) Discussion from Floor

(10:25) Intermission

5. (10:45) Total Hip Replacement Prosthesis—A New Design

Kenneth C. Scholz, Lubbock

Total replacement of the hip joint utilizing a specially designed Vitallium acetabulo-femoral prosthesis has been used in approximately 50 cases since 1967. A design of the prosthesis and summary of the cases will be given in the presentation. Included in the summary of these cases will be a description of the surgical approach, roentgenograms, complications, and results to date.

6. (11:00) Total Hip Replacement as a Salvage Procedure

Cecil M. Christensen, Houston

Total hip replacement (Charnley procedure) has been utilized by the authors in a salvage procedure in numerous destroyed hip joints. The well-instrumented procedure and short convalescence results in a painless stable hip joint. It is particularly applicable to the aged. Complications have been few.

(11:15) Discusser

George H. Lane, Houston

(11:20) Discussion from Floor

7. (11:30) The Posterior Cruciate Ligament

Jack C. Hughston, Columbus, Ga.

(12:00) Intermission

12:10 P.M.

Garden Room, Fairmont Hotel

8. (12:10) Luncheon

9. (1:00) Presidential Address

10. (1:30) Business Session (Members Only)

(2:20) Recess

2:30 P.M.

Fountain Room, Fairmont Hotel

11. (2:30) Experience with Causalgia at Brooke General Hospital

Col. George E. Omer, Jr., Fort Sam Houston

The term "causalgia" represents a clinical picture encompassing a number of reflex sympathetic dystrophies which occur as a result of an injury to a major peripheral nerve. Early recognition of the problem is important since delay of treatment will lead to progressive symptoms. Various treatment modalities have been found to be effective. During the early phases, physical therapy and proprioceptive reorientation is necessary. Chemical sympathetic blocks may be therapeutic as well as diagnostic. Finally, surgical sympathectomy may be required.

(2:45) Discusser

L. Lee Lankford, Dallas

(2:50) Discussion from Floor

12. (2:55) The Pathology and Treatment of the Extensor Mechanism of the Knee

Jack C. Hughston, Columbus, Ga.

13. (3:25) Knowles Vertebral Support Operation

M. Ruth Jackson, Dallas

The Knowles vertebral prop for spinal fusion operations will be discussed. Special reference to its use with spondylolisthesis will be outlined. Solid bony fusion around the prop and early postoperative activity of these patients make the operations desirable. Results of 12 cases and the advantages of the operation will be given.

(3:40) Discusser

(3:45) Discussion from Floor

(3:50) Intermission

14. (4:05) Experimental Fat Embolism: The Basic Pathological Changes

Charles F. Gregory, Dallas

The results of a laboratory experimental project outlining some of the interesting aspects of fat embolism will be given. The basic pathological changes (both histopathologic and growth pathologic changes will be given).

(4:20) Discusser

E. Burke Evans, Galveston

(4:25) Discussion from Floor

15. (4:30) Early Clubfoot Surgery

Robert A. Dennison, Jr., Austin

An eight-year experience in primary surgical treatment of infantile clubfoot problems will be discussed. The surgical treatment (after preliminary cast immobilization of the forefoot), the exact surgical technique, and the aftercare will be described. Long term follow-up has shown that prolonged casting and recasting is unnecessary to prevent recurrences. Associated variations in the musculotendinous elements are described. A singular possible undesirable effect of a relatively weak gastro-soleus activity seen in the early months postoperatively will be described.

(4:45) Discusser

Hyman P. Roosth, Corpus Christi

(4:50) Discussion from Floor

(4:55) Announcements

(5:00) Adjournment

TEXAS OTOLARYNGOLOGICAL ASSOCIATION AND SECTION ON OTOLARYNGOLOGY

President, Texas Otolaryngological Association—H. Edward Maddox, III, Houston

President-Elect, Texas Otolaryngological Association—Edward A. Newell, Dallas

Vice President and Program Chairman, Texas Otolaryngological Association; Chairman, Section on Otolaryngology—Jesse D. Gomillion, Midland

Secretary, Texas Otolaryngological Association—James L. Baldwin, Dallas

Treasurer, Texas Otolaryngological Association—Ernest Nalle, Jr., Lubbock

Secretary, Section on Otolaryngology—William L. Draper, Houston

FRIDAY, MAY 1, 9 A.M.-5 P.M.

Far East Room, Fairmont Hotel

Jesse D. Gomillion, Midland, Presiding

1. (9:00) Refresher Course: Fatalities From Foreign Bodies

Gabriel F. Tucker, Jr., Philadelphia

2. (9:45) Management of Aural Cholesteatoma

James L. Sheehy, Los Angeles

This presentation will be a summary of the conclusions drawn from ten years' experience with the intact canal wall technique of tympanoplasty with mastoidectomy. A movie will be shown demonstrating the anatomy and the problems involved with this technique.

3. (10:30) Reflux Laryngitis

Claude D. Winborn, Dallas

4. (11:00) Laryngeal Reconstruction with Adaptation for Swallowing and Voice Production

Masashi Kawasaki, Dallas

12 Noon

Florentine Room, Fairmont Hotel

5. (12:00) Luncheon

6. (1:00) Business Meeting of Texas Otolaryngological Association

2 P.M.

Far East Room, Fairmont Hotel

H. Edward Maddox, III, Houston, Presiding

7. (2:00) Diagnostic Problems with Vertigo and Deafness

H. Edward Maddox, III, Houston
Loyd Storrs, Lubbock
Jack L. Turner, Odessa

8. (3:00) Laryngeal Carcinoma-Current Concepts in Evaluation and Management

Gabriel F. Tucker, Jr., Philadelphia

9. (4:00) Inner Ear Problems—Medical Aspects

James L. Sheehy, Los Angeles

The otologist is seeing an ever-increasing number of patients whose chief problem centers around the inner ear: dizziness, tinnitus, and/or sensorineural hearing impairment.

Case presentations will be used as a point of departure to discuss the diagnosis and treatment of some of these problems.

(5:00) Adjourn

6:30 P.M.

Fountain Room, Fairmont Hotel

10. (6:30) Social Hour—Texas Otolaryngological Association (Members, Wives, and Guests)

SATURDAY, MAY 2, 9 A.M.-4:30 P.M.

Far East Room, Fairmont Hotel

Jesse D. Gomillion, Midland, Presiding

11. (9:00) Problems in Stapes Surgery

James L. Sheehy, Los Angeles

There are a number of different techniques which may be used successfully in stapedectomy surgery. Failures continue to occur in a small percentage, however. This presentation will consider the causes of failure in stapes surgery and various approaches to their solution.

12. (10:00) Present Day Treatment of Esophageal Stenosis

Gabriel F. Tucker, Jr., Philadelphia

13. (11:00) The Tack Procedure for Meniere's Disease

Bert A. DeBord, Temple

14. (11:20) Benign Tumors of the External Auditory Canal

Jerome Kosoy, Galveston

15. (11:40) Nasal Vibrissae, Their Incidence and Function: An Original Study

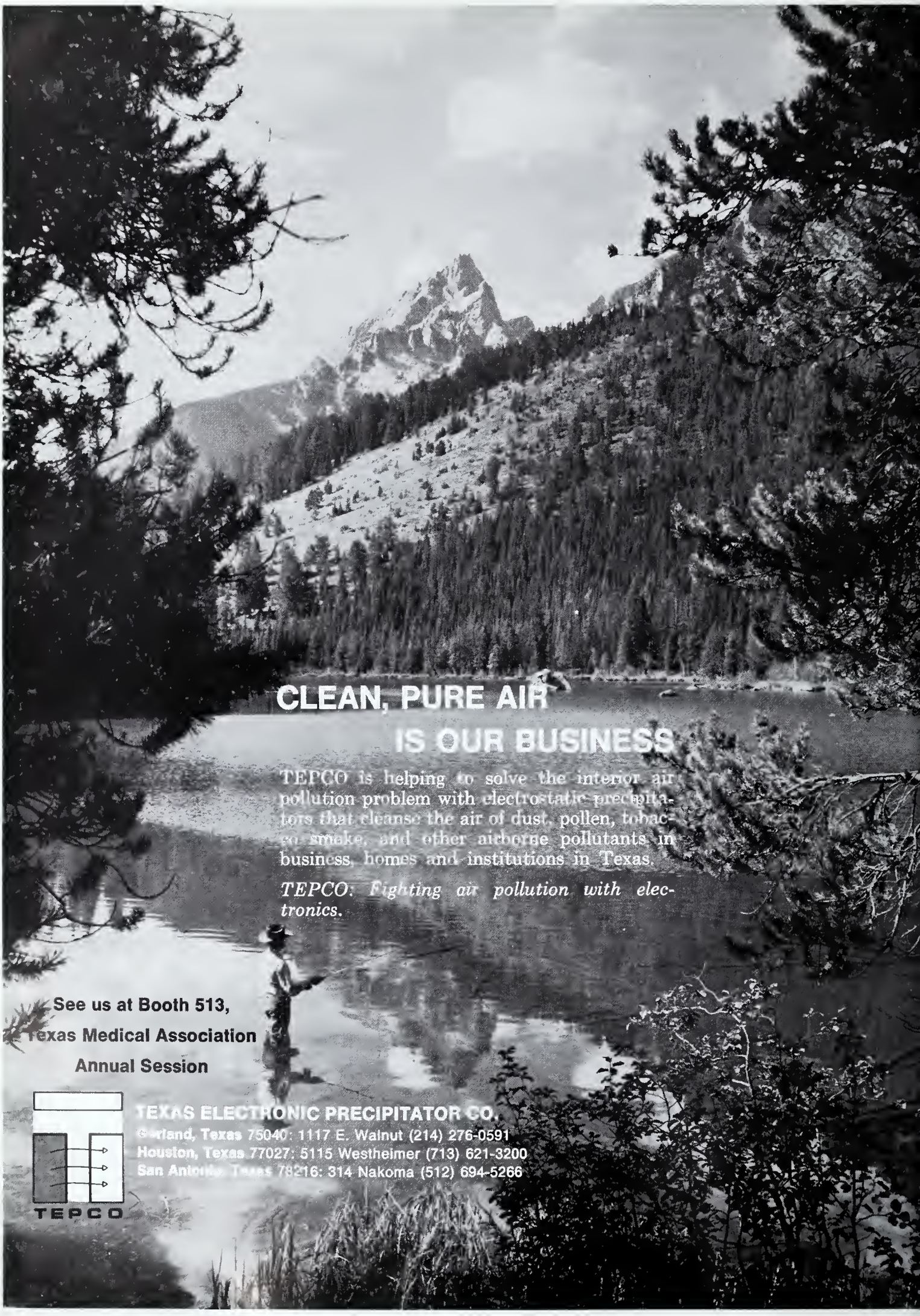
Stanley P. Howard, Waco

(12:00) Recess

2:30 P.M.

Far East Room, Fairmont Hotel

H. Edward Maddox, III, Houston, Presiding


CLEAN, PURE AIR
IS OUR BUSINESS
TEPCO is helping to solve the interior air pollution problem with electrostatic precipitators that cleanse the air of dust, pollen, tobacco smoke, and other airborne pollutants in business, homes and institutions in Texas.
TEPCO: Fighting air pollution with electronics.
See us at Booth 513,
Texas Medical Association
Annual Session
TEXAS ELECTRONIC PRECIPITATOR CO.
Garland, Texas 75040: 1117 E. Walnut (214) 276-0591
Houston, Texas 77027: 5115 Westheimer (713) 621-3200
San Antonio, Texas 78216: 314 Nakoma (512) 694-5266
TEPCO

16. (2:30) Newer Aspects in Management of Foreign Bodies

Gabriel F. Tucker, Jr., Philadelphia

17. (3:30) Ossicular Problems in Tympanoplasty

James L. Sheehy, Los Angeles

Techniques of reconstruction of the ossicular chain in cases of chronic otitis media have stabilized, to a large extent, in the last five years. Minor changes in technique are periodically made, however, based on observations of failures.

This presentation will deal with the techniques currently used at the Otologic Medical Group. Particular attention will be paid to the causes of failure, the techniques which are no longer used, and the solutions to our present problems.

(4:30) Adjournment

TEXAS PEDIATRIC SOCIETY, EXECUTIVE BOARD

(Related Organization)

President—Raymond Cohen, Houston

Secretary—Pat A. Cato, Austin

SATURDAY, MAY 2, 6:30 P.M.

El Corralito Room, Statler Hilton Hotel

1. (6:30) Dinner Meeting

TEXAS PROCTOLOGIC SOCIETY

(Related Organization)

President—Jack G. Kerr, Dallas

Secretary-Treasurer—James M. Hampton, Houston

THURSDAY, APRIL 30, 10 A.M.

Far East Room, Fairmont Hotel

1. (10:00) Grafting Procedures in Anal Stenosis

Irving M. Richman, Beaumont

2. (10:30) The "No-Touch" Method of Resection for Cancer of the Colon

Frank L. Weakley, Cleveland

Cancer cells are known to circulate in the blood stream of the host, having been shed from the primary tumor. A method of resection of cancer of the colon without touching the primary neoplasm until after it is completely isolated by ligation and division of lymphovascular pedicles will be described. The distinctly improved survival statistics for a large group of patients operated upon using this method will also be presented.

3. (11:00) Pseudocondylomata of the Perianal Area Heralding the Onset of Granulomatous Disease of the Bowel

H. Whitney Boggs, Jr., Shreveport, La.

4. (11:30) The Choice of Operations for Cancer of the Colon and Rectum

Frank L. Weakley, Cleveland

The factors that influence the choice of operations for cancer of the colon and rectum will be presented, showing that consideration should be given not only to factors concerning the presence of the tumor, but also to factors about its location, type, size, and to factors about the patient himself. The operations available will be presented as well as some of the important requirements for their success.

5. (12:00) Minor Rectal Surgery in the Miles Fashion

Colin D. L. Cromar, Pasadena

6. (12:30) The Management of Anogenital Pruritus

Barrett Kennedy, New Orleans

Since anogenital pruritus is not a disease entity, but only a symptom complex, we shall include a short discussion of the pathophysiology of the itch sensation. Our discussion will be based on an etiological classification in order to simplify our approach to the problem. Some practical methods of management and results to be expected will follow.

7. (1:00) Business Session

1:30 P.M.

State Room, Fairmont Hotel

8. (1:30) Luncheon

TEXAS SOCIETY FOR THE PREVENTION OF BLINDNESS, INC., MEDICAL CHAIRMEN

Executive Director—Mrs. Pauline Outland, Houston

SATURDAY, MAY 2, 7:30 A.M.

Century Room, Fairmont Hotel

1. (7:30) Breakfast Meeting

TEXAS SOCIETY OF ANESTHESIOLOGISTS

(Related Organization)

President—Gerald G. Mullikin, Longview

President-Elect—Valington F. Borum, Fort Worth

Vice President and Program Chairman—Harold Boehning, Dallas

Secretary-Treasurer—Presley H. Chalmers, Houston

SATURDAY, MAY 2, 1 P.M.

Oak Room, Fairmont Hotel

(The Board of Directors, Texas Society of Anesthesiologists, will meet Saturday, May 2, 9 a.m., in the Vista Room, Fairmont Hotel. A Seminar on Acute Medicine and Cardiopulmonary Resuscitation will be offered Thursday at The University of Texas Southwestern Medical School. See elsewhere in this Specialty Programs section for details.)

Symposium on Trauma and Respiratory Care

Adolph H. Giesecke, Jr., Dallas, Moderator

1. (1:00) Aspiration Pneumonitis, the Sequelae
Arnold Sladen, San Antonio

2. (1:30) Pulmonary Fat Embolism, Ventilation Emergency
John A. Jenicek, Galveston

3. (2:00) Treatment of Crushed Chest Syndrome With Volume Limited Ventilators
Charles H. Williams, Houston

(2:30) Intermission

4. (3:00) Inhalation Therapy 1970, Influence and Responsibility of Anesthesiology
Roy D. Wilson, Galveston

5. (3:30) Mannitol in the Treatment of Acute Oliguria Following Severe Trauma
Phiroze B. Sabawala, Houston

6. (4:00) Differences and Similarities Between Epidural and Subarachnoid Block
John Adriani, New Orleans

(5:00) Adjournment

6:30 P.M,

Panorama Room, Fairmont Hotel

7. (6:30) Cocktails (Members and Guests)

7:30 P.M.

Pavilion Room, Fairmont Hotel

8. (7:30) Dinner (Members and Guests)

SUNDAY, MAY 3, 9 A.M.

Oak Room, Fairmont Hotel

(Texas Society of Anesthesiologists' auxiliary members will Breakfast at Brennan's, One Main Place, Sunday, May 3, 9 a.m.)

Charles C. Tandy, Dallas, Moderator

9. (9:00) Experience With General Endotracheal Anesthesia in Horses
James R. McKinney, Wichita Falls

10. (9:30) Temperature Maintenance in Newborn Infants
Lida S. Dahm, Houston

(10:00) Intermission

11. (10:30)
D.A.B. Hopkin, London

12. (11:00) Metabolic Fate of Anesthetic Drugs and the Importance of Such Knowledge
John Adriani, New Orleans

(12:00) Recess

12:15 P.M.

Continental Room, Fairmont Hotel

13. (12:15) Luncheon

Business Meeting

(2:00) Adjournment

TEXAS SOCIETY OF ATHLETIC TEAM PHYSICIANS

(Related Organization)

President—Arthur M. Jansa, Houston

President-Elect—Albert A. Tisdale, Austin

Vice-President and Program Chairman—Stonie R. Cotten, Dallas

Secretary-Treasurer—John B. Gunn, Dallas

FRIDAY, MAY 1, 9 A.M.

Terrace Room, Fairmont Hotel

1. (9:00) Pre-Season Conditioning of the Athlete and Rehabilitation of the Injured Athlete
Fred L. Allman, Jr., Atlanta, Ga.

Knee injuries sustained during athletic participation are usually produced by circumstances inherent in respective ath-

letic performance and are therefore characterized by exposure to recurrent identical trauma, making reinjury likely.

Balanced bilateral and antagonistic muscle strength must be obtained with the ultimate goal being restoration of function to the greatest possible degree in the shortest possible time.

Haphazard, unproven methods of rehabilitation are usually ineffective and fall far short of the desired goal. Rehabilitation of the injured athlete must be individualized. No single known exercise or apparatus can be classified as a panacea. Normal muscle function is restored by a training program, which must include both quality and quantity with strength, endurance, and flexibility as the objectives.

2. (9:30) The Experiences in Using the Experimental Swivel Soled Shoe in Football
Bruce M. Cameron, Houston

(10:00) Intermission

3. (10:30) Protection of the Injured Player for Competition in Football
Mr. Larry Gardner, Dallas

4. (11:00) Head and Neck Injuries in Football
Mr. Elwyn Gooding,
Hank H. Gosch, Ann Arbor, Mich.

(12:15) Adjournment

TEXAS SOCIETY OF INTERNAL MEDICINE, INC.

President—J. Burke Morrison, San Antonio

(The Texas Society of Internal Medicine, Inc., will cosponsor Maj. Gen. J. Bruce Medaris, Winter Park, Florida, as guest speaker for the General Meeting Luncheon, Friday. See General Meetings and Luncheons section for details.)

TEXAS SOCIETY OF PATHOLOGISTS, INC.

(Related Organization)

President—Jack P. Abbott, Houston

Secretary-Treasurer—James C. Stinson, Temple

SATURDAY, MAY 2, 6-8 P.M.

Paisano Room, Chaparral Club (36th Floor, Southland Center)

1. (6:00) Cocktail Party

(Sponsored by Dallas Academy of Pathologists)

SUNDAY, MAY 3, 9 A.M.-12 Noon

Far East Room, Fairmont Hotel

2. (9:00) Business Session

TEXAS SOCIETY OF PLASTIC SURGEONS

(Related Organization)

President—James R. Smith, San Antonio

Secretary-Treasurer and Program Chairman—E. Frank Dunton, Dallas

SATURDAY, MAY 2, 9 A.M.

Gold Room, Statler Hilton Hotel

Plastic and Reconstructive Surgery Panel Discussions

1. (9:00) Present Concepts in Secondary Hand Tendon Repair

Panelists: Edward J. Kirby, Houston
John B. Patterson, Fort Worth
Willard C. Sellman, Jr., Dallas

(9:30) Discussion

2. (9:50) Problems of Thick Skin Rhinoplasties

Panelists: Sanford Glanz, Corpus Christi
Donald R. Klein, Dallas
Mark L. Lemmon, Dallas

(10:20) Discussion

(10:40) Intermission

3. (11:00) Male Face Lifts

Panelists: E. Frank Dunton, Dallas
Bromley S. Freeman, Houston
Melvin Spira, Houston

(11:30) Discussion

(11:50) Recess

12 Noon

Silver Room, Statler Hilton Hotel

4. (12:00) Luncheon

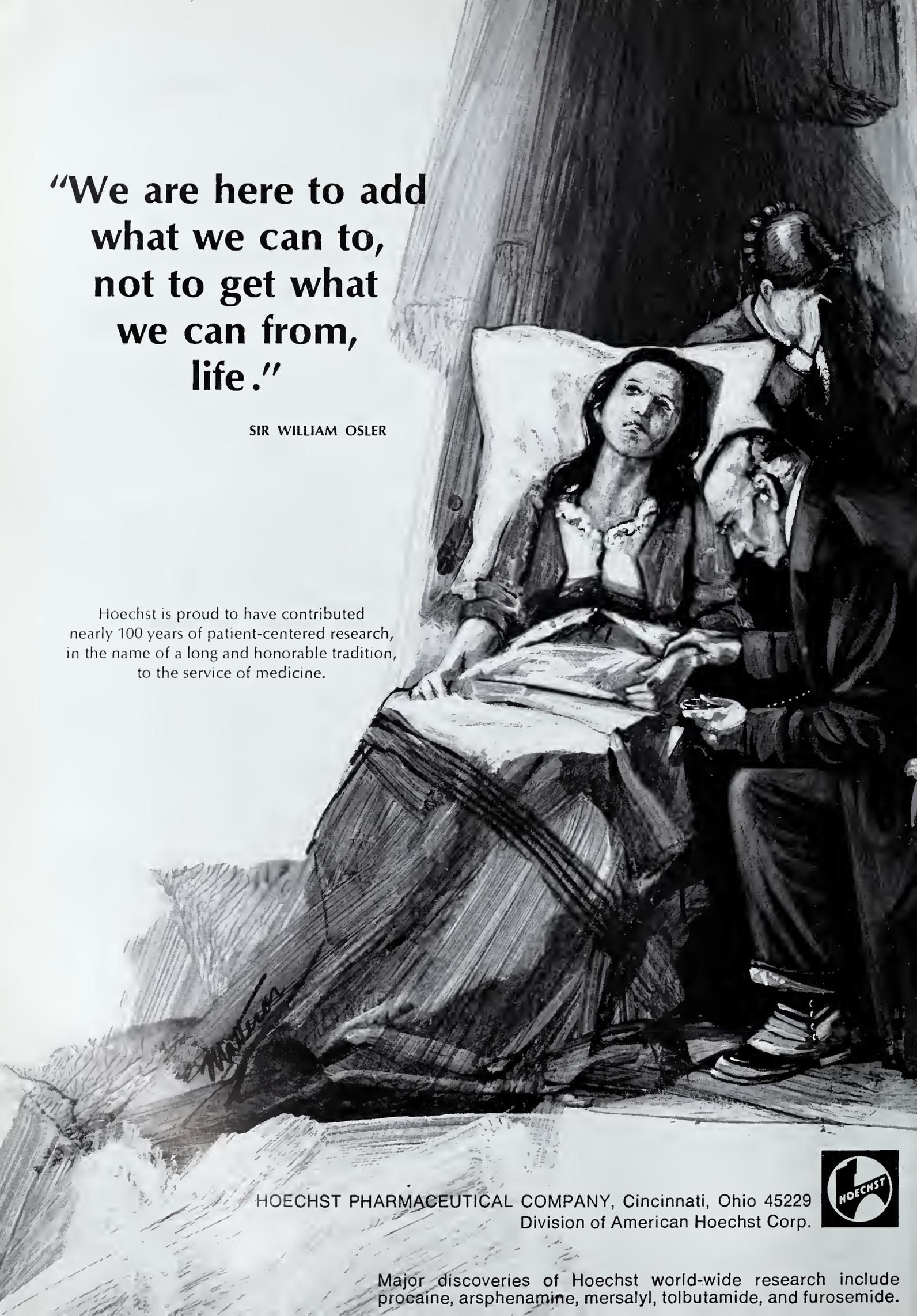
1 P.M.

Gold Room, Statler Hilton Hotel

5. (1:00) Chemical Peel in Meloplasties, Facts and Fallacies

Panelists: Simon Fredericks, Houston
Dean C. Kipp, Dallas
James R. Smith, San Antonio

(1:30) Discussion



"We are here to add what we can to, not to get what we can from, life."

SIR WILLIAM OSLER

Hoechst is proud to have contributed nearly 100 years of patient-centered research, in the name of a long and honorable tradition, to the service of medicine.

HOECHST PHARMACEUTICAL COMPANY, Cincinnati, Ohio 45229
Division of American Hoechst Corp.

HOECHST

Major discoveries of Hoechst world-wide research include procaine, arsphenamine, mersalyl, tolbutamide, and furosemide.

6. (1:50) Surgery of the Disproportionate Breasts

Panelists: Frank J. Gerow, Houston
David A. Grant, Fort Worth
Sydnie G. Smith, Dallas

(2:20) Discussion

7. (2:30) Business Meeting (Members Only)

UNITED CEREBRAL PALSY ASSOCIATION OF TEXAS, INC.

Executive Director—Mr. Wallace Christensen, Austin

(United Cerebral Palsy Association of Texas, Inc., will sponsor Dr. J. William Hillman of Nashville as guest speaker on programs of the Texas Medical Association 1970 Annual Session. See Speakers section for appearances.)

EXHIBITS

ART EXHIBITION

The Third Annual Physicians' and Wives' Art Exhibition of the Texas Medical Association will be held Thursday through Saturday of the annual session in the International Ballroom, Fairmont Hotel. Following are the exhibiting hours:

Thursday 11 a.m.-5:30 p.m.

Friday 8 a.m.-5:30 p.m.

Saturday 8 a.m.-5 p.m.

Paintings (including water color, drawings, graphics), sculpture, and photographs by Texas Medical Association members and Auxiliary members will be displayed.

The nine categories are as follows: oil painting—classical, oil painting—modern; water color—classical, water color—modern; sculpture—classical, sculpture—modern; drawings and prints; arts and crafts; and photography.

Awards, to be given in each category, will be presented at the General Meeting Luncheon, Friday, 12:30 p.m., Embassy Garden, Statler Hilton Hotel.

Judging will be done by Otis Dozier, Dallas artist and member of the senior teaching staff of the Dallas Fine Arts Museum, and DeForrest Judd, Professor of Art, Southern Methodist University.

Information and application forms may be secured by writing the Texas Medical Association Art Exhibition, 1801 North Lamar Boulevard, Austin, Texas 78701. A $5 fee per item displayed will be charged. Deadline for receipt of applications is April 1. Dr. Howard C. Coggeshall, Sr., Dallas, and G. Cooley Nabors, Dallas, are Cochairmen of the Art Exhibition.

FILM PROGRAM

FRIDAY, MAY 1, 10:30 A.M.

State Room, Fairmont Hotel

1. (10:30) The Technique of Intra-Articular and Peri-Articular Injection

1969. Color. Dr. Edward W. Boland. Dr. Boland demonstrates the technique used in giving this type of injection. Animation is used to show where the needle penetrates. The usefulness as well as the limitations of this procedure are explained.

2. (10:55) Cold-Light Endoscopy

1968. Color. The principle of cold-light endoscopy is explained and the film demonstrates the value of using it in diagnosis and evaluation of therapy. Included are examinations of the liver, stomach, and ovaries. The climax of the film shows the successful correction of hydrocephalus in which both the operation and the photography were done through endoscopes.

3. (11:21) Renal Hypertension/Bilateral Nephrectomy/Kidney Transplantation

1966. Color. Three outstanding authorities are presented in this film—William J. Kolff, M.D., the inventor of the rotating-drum artificial kidney machine; Irvine H. Page, M.D., the co-discoverer of angiotensin; Harry Goldblatt, M.D., the father of the Goldblatt clamp technique of producing renal ischemia.

4. (11:49) Bronchospasm

1969. Color. This film was chosen as one of the best medical films of 1969. It demonstrates pathophysiological changes in bronchial mucosa under direct vision via the bronchoscope as well as on fixed sections. It correlates pathological-clinical-laboratory findings in chronic and acute obstructive lung disease.

5. (12:16) Facial Reconstruction—Psychiatric Implications

1969. This film represents the transformation of a man's congenitally deformed face and deals with the attendant emotional upheaval. The plastic surgeon, Bruce W. Taylor, M.D., Scott and White Clinic, outlines and demonstrates the surgical techniques necessary to change a deformed face into a normal one.

SATURDAY, MAY 2, 2 P.M.

State Room, Fairmont Hotel

1. (2:00) The Team Physician

1969. Color. Distributed by the American Medical Association, this film concerns coaches, parents, athletes, and physicians. It emphasizes the role of the team physician in the prevention of athletic injuries. Bud Wilkinson is the narrator.

2. (2:34) A Storm—A Strife

1969. Color. A dramatization of a family's problems with children, health and marriage. The film draws attention to the need for a physician and a clergyman to work together to serve the "whole" family and ways to do this.

3. (3:07) What Time Is It Now?

1969. Color. Aimed primarily at teenagers, this film examines briefly the reasons why people drink—to be accepted, lower inhibitions, etc. It points out that young people lack the experience to cope with alcohol.

We put ourselves in the customer's shoes. Try us on for size!

We're willing to pay the price to make you No. 1. We give S & H Green Stamps, keep our cars in the best condition, confirm reservations, accept any recognized credit card. Call us now.

NATIONAL CAR RENTAL

The customer is always No. 1

Featuring General Motors Cars

Make National Your Car Rental Headquarters

1326 Commerce St.
Dallas, Texas
742-8484

Dallas Love Field
Dallas, Texas
357-4639 357-1273

T. ROWE PRICE GROWTH STOCK FUND, INC.

Est. 1950

A NO-LOAD FUND

Investing in stocks carefully selected for long term growth possibilities

Individuals & institutions are invited to request free prospectus

NO SALES CHARGE

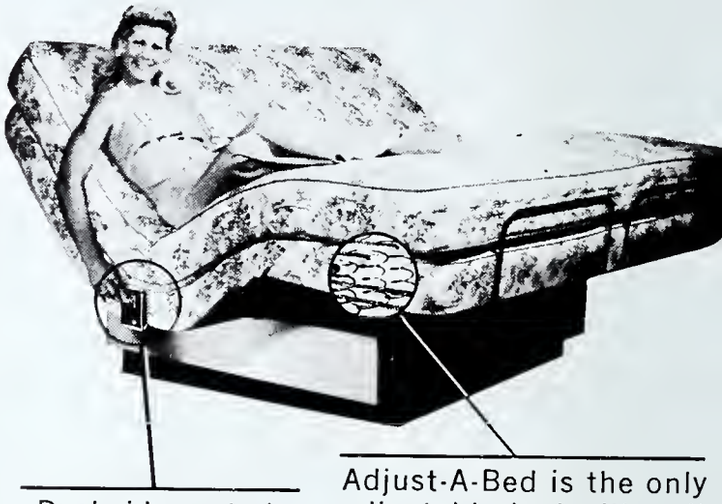
T. Rowe Price Growth Stock Fund, Inc.
One Charles Center, Dept. F-1
Baltimore, Md. 21201 Phone (301) 539-1992

Name _____

Address _____

_____ Zip _____

Comfort At A Touch!



Dual side controls with no cords for greater convenience.

Adjust-A-Bed is the only adjustable bed with coil box springs! This is the only way fine beds have been made for the last forty years.

ADJUST-A-BED

- Aids Back Pain Relief
- Rest Your Heart
- Eases Breathing
- Relieves Swollen Tired Legs, Feet
- Excellent for Recuperation
- Lessens TV, Reading Eyestrain
- Tends to Relieve Arthritis Pain

Sizes: Twin through King or any custom size.
Any Firmness: Soft, Medium, Firm, Extra-Firm, Orthomatic.

PERFECT POSITIONING BUT NEVER A SICKROOM LOOK!

Medically approved support while:

Ask about free beds under Medicare and Veteran's Plans!

For 24-hour nationwide service, call **602-955-7600**

SEE OUR DISPLAY
at the Texas Medical Convention. Ask about a special Convention Discount or write for a brochure.

ORTHO COMFORT STORES

Town & Country Shopping Center
2051 East Camelback Road Phoenix, Arizona 85016

4. (3:27) Neurological Examination of the One-Year-Old

1969. Color. This film demonstrates methods which can be used in examining the neurological conditions of an infant. Responses from normal infants are contrasted with responses obtained from infants with defects such as cerebral palsy. Methods of testing the use of hands, eye movements, locomotion, and facial expression are demonstrated.

5. (4:02) Anomalies of the Aortic Arch

N.D. Color. George H. Humphreys, II, M.D. Several variations in the normal pattern of the development of the aortic arch are depicted in diagrams. Sections on surgery are shown to better illustrate various conditions the surgeon may find.

SCIENTIFIC EXHIBITS

All scientific exhibits are located in the Gold Room, Fairmont Hotel. Exhibits will be displayed during the following hours:

Thursday 11 a.m.-5:30 p.m.

Friday 8 a.m.-5:30 p.m.

Saturday 8 a.m.-5 p.m.

Exhibitors may register Wednesday, 1:30-5 p.m., International Ballroom Lobby, Fairmont Hotel.

Awards

First, second and honorable mention awards will be given in each of the four categories: Group 1, Individual Exhibits; Group 2, Group Exhibits; Group 3, Institutional Exhibits; and Group 4, Educational-Promotional Exhibits.

Aesculapius Award: An additional award also will be given for the most outstanding scientific exhibit displayed by a Texas physician.

Announcement of the winners will be made at the General Meeting Luncheon, Friday, 12:30 p.m., Embassy Garden, Statler Hilton Hotel.

Identification and Floor Plans

Scientific exhibitors may be recognized by special ribbons attached to their identification badges.

Floor plans, showing location of scientific and technical exhibits, will be available upon registration.

Following is a roster of exhibitors and their exhibits:

Air Pollution in Texas
Texas State Department of Health, Austin, Texas

American College of Emergency Physicians
East Lansing, Mich., Ben E. Moore, M.D., Dallas, Texas

Anorexigenic Agents in Perspective
S. K. Fineberg, M.D., New York

Antibiotic Selection in the Seriously Ill Patient
William J. Holloway, M.D.; William A. Taylor, M.D., Wilmington, Del.; Russell Labowitz, M.D., Philadelphia

Cancer of the Skin: The Most Common and Most Preventable Cancer
American Cancer Society, Texas Division, Inc., Austin

Care of the Burned Hand
Sally Abston, M.D.; Duane L. Larson, M.D.; E. Burke Evans, M.D., Galveston

Case Selection in the Surgical Care of the Ischemic Lower Limb
Charles H. Fuller, M.D.; O. L. Willbanks, M.D., Dallas

Diagnosis of Congenital Heart Disease (self-testing unit)
Everett C. Price, M.D., Houston

Educational Facts and Materials to Assist the Ophthalmologist
Texas Society for the Prevention of Blindness, Inc., Houston

Electromyography in Surgery of the Hand
Morton H. Leonard, M.D.; J. Edward Stern, M.D.; Louis W. Breck, M.D., El Paso

Help for the Arthritic Hand
L. Lee Lankford, M.D., Dallas

Immediate Revascularization of the Heart
Maurice Adam, M.D., Ben F. Mitchel, M.D., Cary J. Lambert, M.D., Maurice Adam, M.D., Dallas

Making Health Audible, Visible and Interesting
Dallas Community Health Focus, Dallas
Texas Medical Association, Austin

Management of Venous Thromboembolic Disease
Charles H. Fuller, M.D.; O. L. Willbanks, M.D., Dallas

Man Versus Arthropods
Committee on Cutaneous Health and Cosmetics, American Medical Association, Chicago

Medicine & Religion
Texas Medical Association Committee on Medicine and Religion

Oral Glucose Tolerance Test—Results at Various Adult Ages
Harry A. Tubbs, M.D., Post

Perceptual Deprivation in Children with Maturational Brain Dysfunction
R. Ray Battin, Ph.D., Irvin A. Kraft, M.D., Houston, Texas

Pilot Disorientation
Federal Aviation Administration, Washington, D.C.

Problems in Rheumatoid Arthritis Requiring Early Surgical Intervention; Relations to Stage and Mechanism
American Academy of Orthopaedic Surgeons, Chicago

Rehabilitation of the Aged in Skilled Nursing Centers
Allen Maurice Fain, M.D., Duncanville, Texas

Restraining Devices for Children
Division of Planning and Standards, BCEM, Injury Control Branch, Cincinnati

Results of a Computerized Study of Cyclic Hormonal Treatment
F. P. Rhoades, M.D., Detroit

Surgical Management of Cardiovascular Trauma
Arthur C. Beall, Jr., M.D.; Donald L. Bricker, M.D.; George P. Noon, M.D.; Michael E. DeBakey, M.D., Houston

Surgical Treatment for Cerebrovascular Insufficiency
R. Don Patman, M.D., Jesse E. Thompson, M.D., Dallas, Texas

Teaching of Cardiopulmonary Resuscitation
Thomas K. Burnap, M.D., Dallas, Texas

Texas Commission on Alcoholism
Austin, Texas

Texas League of Vocational Nurses

Texas Medical Assistants' Association

Texas Rehabilitation Association
Austin

Texas Rehabilitation Commission
Division of Disability Determination, Austin, Texas

Texas State Commission for the Blind
Austin

The University of Texas Medical Branch . . . making an impact 'round the world
Galveston, Texas

Transplantation of Human Heart
Grady L. Hallman, M.D.; Robert D. Leachman, M.D.; Louis L. Leatherman, M.D.; Donald G. Rochelle, M.D.; James J. Nora, M.D.; Denton A. Cooley, M.D.; Domingo S. Liotta, M.D.; Donald J. Fernbach, M.D.; William T. Butler, M.D.; John J. Trentin, Ph.D.; John D. Milam, M.D., Houston

Unusual Problems in Hair Transplantation
D. B. Stough, III, M.D., Hot Springs, Ark.

Vascular Survey-Diagnosis and Functional Evaluation
Ronald Hayward, M.D., Edward Best, M.D., Scott and White Hospital, Robert D. Allison, Ph.D., Scott and White Clinic

TECHNICAL EXHIBITS

Technical exhibits are displayed in the International Ballroom, Fairmont Hotel. Representatives from the pharmaceutical industry, business equipment companies, insurance and investment companies, and other related fields will be present to discuss equipment and products with physicians. Exhibits will be displayed during the following hours:

Thursday 11 a.m.-5:30 p.m.

Friday 8 a.m.-5:30 p.m.

Saturday 8 a.m.-5 p.m.

Exhibitors may register for the annual session Wednesday, 1:30-5 p.m., International Ballroom Lobby, Fairmont Hotel.

Floor Plans

Floor plans, showing location of scientific and technical exhibits, will be available upon registration.

Following is a list of exhibitors:

EXHIBITOR	BOOTH
A	
Abbott Laboratories, North Chicago, Ill.	112
Affiliated Computer Systems, Dallas, Tex.	606
American Optical Company, Dallas	402
Ames Co., Div. Miles Laboratories, Inc., Elkhart, Ind.	604
Armour Pharmaceutical Company, Chicago	511
Arnar-Stone Laboratories, Inc., Mt. Prospect, Ill.	619
Astra Pharmaceutical Products, Inc., Worcester, Mass.	118
Audio Digest Foundation, Los Angeles	600
Ayerst Laboratories, New York	405
B	
Blue Cross-Blue Shield of Texas, Dallas	500
The Borden Company, Houston	702, 703, 704
Borden Pharmaceutical Division, New York	701
Breon Laboratories, Inc., New York	110
Bristol Laboratories, Syracuse, N.Y.	504
The Brown Schools, Austin	300
Burroughs Wellcome & Co., Inc., Tuckahoe, N.Y.	217
Business Data Center, Inc., San Antonio	505
Burton, Parsons & Company, Inc., Washington. D. C.	612
C	
Carnrick Laboratories, Houston	601
Ciba Pharmaceutical Company, Summit, N.J.	208, 509
Coca-Cola USA, Atlanta	607
Comatic Laboratories, Inc., New York	602
Contour Chair Lounge Company, Dallas	411, 413
Cornish Medical Electronics Co., Dallas, Tex.	613
Creative Business Consultants (Medi-Mac), Dallas, Tex.	608
D	
Dairy Council, Inc., San Antonio	507
Devereux Foundation, Victoria	215
Dictaphone Corporation, Rye, N.Y.	408
Ford Dixon Company, Dallas	315
The Dow Chemical Company, Midland, Mich.	506
E	
Emerson Laboratories, Dallas	101
The Emko Company, St. Louis	603
Encyclopaedia Britannica, Inc., Chicago	212
Endo Laboratories, Inc., Garden City, N. Y.	609
Marshall Erdman and Associates, Inc., Madison, Wis.	706
Ethisol Corporation, Dallas, Texas	610
F	
Flint Laboratories, Deerfield, Ill.	617
Fuller Laboratories, Inc., Eden Prairie, Minn.	210
G	
Gebauer Chemical Company, Cleveland	512
General Electric Company, X-Ray Department, Dallas	400
Gerber Products Company, Fremont, Mich.	410
The Gilbert X-Ray Company of Texas, Dallas	202
Russell Grace Insurance, Fort Worth	108
H	
Hoechst Pharmaceutical Company, Cincinnati	404
Hollister-Stier Laboratories, Inc., Dallas	502
I	
Ives Laboratories, Inc., New York	216
J	
Janrus Recorders Corp., Beverly Hills, Calif.	103
Mead Johnson Laboratories, Evansville, Ind.	306
George Jordan and Associates, Corpus Christi	307
K	
Kilpatrick Equipment Company, Dallas	415
L	
Lakeside Laboratories, Inc., Milwaukee	206
Landry Pharmaceuticals, Inc., Houston	700
Lederle Laboratories, Pearl River, N.Y.	105
Eli Lilly & Company, Indianapolis	201
J. B. Lippincott Company, Philadelphia	106
Loma Linda Foods, Riverside, Calif.	615
M	
Mallinckrodt Pharmaceuticals, St. Louis, Mo.	600
Marion Laboratories, Inc., Kansas City, Mo.	314
The McCrary Company, Dallas	205
The Medical Bureau, Dallas	312
Medical Plastics Laboratory, Inc., Gatesville	605
The Medical Protective Company, Fort Wayne, Ind.	501
Medical Specialty Company, Fort Worth	401, 403
Medica Rents, Inc., Fort Worth	308

Meiller Research, Inc., College Station 508
Merck Sharp & Dohme, West Point, Pa. 416
The Wm. S. Merrell Company, Cincinnati 111
Metro Med Inc., Houston 621
Meyer Laboratories, Inc., Fort Lauderdale 510
Mission Pharmacal Company, San Antonio 301

N
Neutrogena Corporation, Santa Monica, Calif. 117

O
Ortho Comfort Stores, Phoenix 113, 115
Ortho Pharmaceutical Corporation, Raritan, N.J. 317

P
Paine, Webber, Jackson & Curtis, Dallas 310
Parke, Davis & Company, Detroit 302
Person & Covey, Inc., Glendale, Calif. 304
Pfizer Laboratories, New York 407
Pharmacraft Division, Pennwalt Corp., Rochester, N. Y. 214
William P. Poythress & Company, Inc., Richmond, Va. 311
T. Rowe Price and Associates, Baltimore 514
Professional Pharmacal Company, Inc., San Antonio 316
The Prudential Insurance Company of America, Houston 200

R
Ritter Equipment Company, Rochester, N.Y. 614
A. H. Robins Company, Inc., Richmond, Va. 109
William H. Rorer, Inc., Fort Washington, Pa. 303

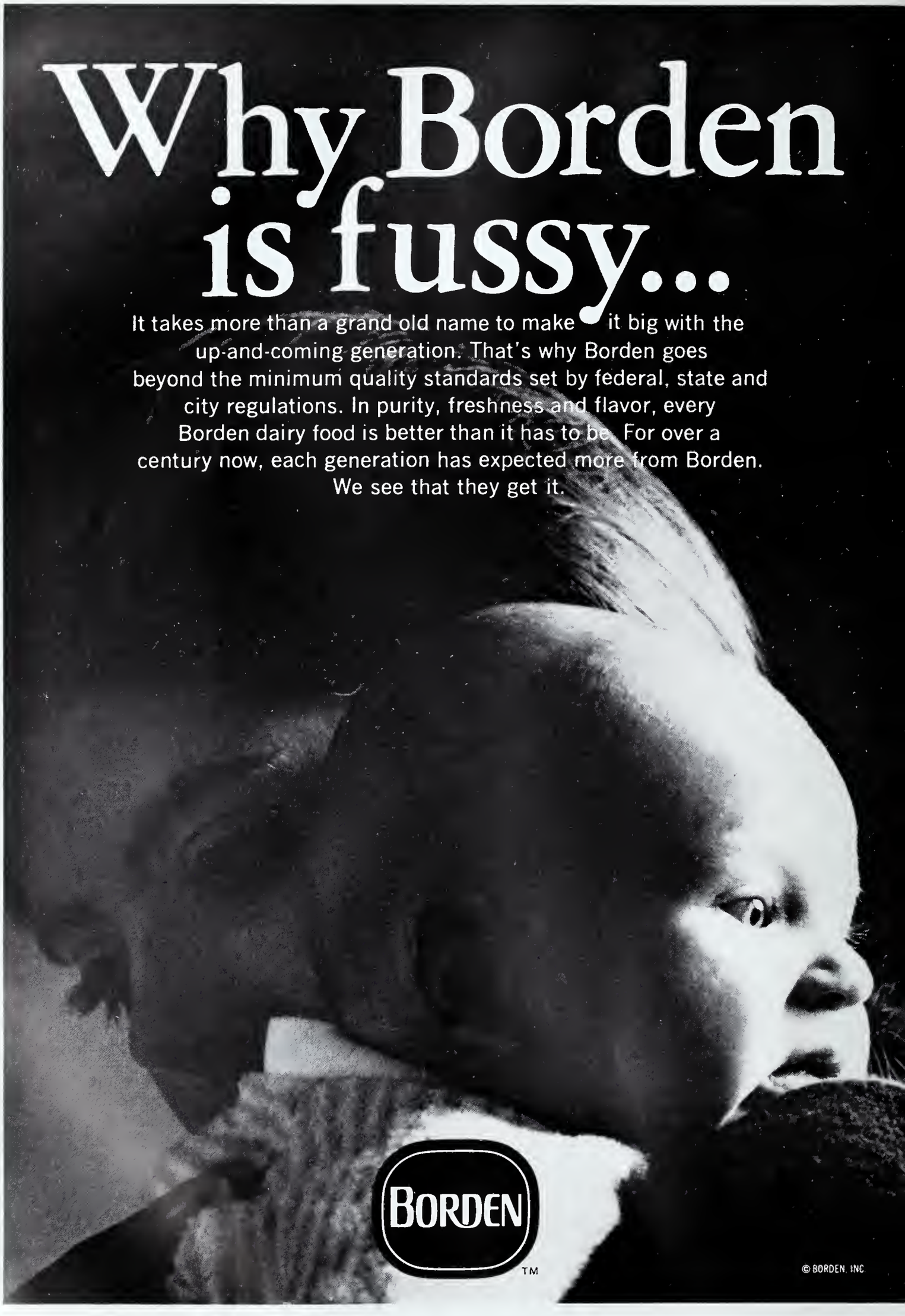
S
Safeguard Business Systems, Dallas, Tex. 611
Sandoz Pharmaceuticals, Hanover, N.J. 102
W. B. Saunders Company, Philadelphia 503
Schering Laboratories, Union, N.J. 207
The Scholl Manufacturing Company, Inc., Chicago 515
G. D. Searle & Company, Chicago 104
Smith Kline & French Laboratories, Philadelphia 305
Smith Miller & Patch, Inc., New York 616
E. R. Squibb & Sons, New York 209
Stiefel Laboratories, Inc., Oak Hill, N.Y. 309
Storz Instrument Company, St. Louis 211
The Stuart Company, Pasadena, Calif. 203
Surgical Mechanical Research, Inc., Newport Beach, Calif. 100
Syntex Laboratories, Pala Alto, Calif. 705

T
Terrell Supply Company, Inc., Fort Worth 120
Texas Central Credit Union, Dallas 406
Texas Electronic Precipitator Company, Garland 513
Texas Medical Association Group Insurance, Austin, Tex. 200
Texas Pharmacal Company, San Antonio 517
Texas Physicians Computer Services, Inc., Austin 107
Tex-O-Con Optics, Inc., Dallas 412

U
Upjohn Company, Kalamazoo, Mich. 414

V
Vaisey-Bristol Shoe Company, Cincinnati 516

W
Wallace Laboratories, Cranbury, N.J. 213
Warner-Chilcott Laboratories, Morris Plains, N.J. 417
Warren-Teed Pharmaceuticals, Inc., Columbus 409
Westinghouse Electric Corporation, Dallas 116
Winthrop Laboratories, New York 313
Wyeth Laboratories, Philadelphia 204


Why Borden is fussy...
It takes more than a grand old name to make it big with the up-and-coming generation. That's why Borden goes beyond the minimum quality standards set by federal, state and city regulations. In purity, freshness and flavor, every Borden dairy food is better than it has to be. For over a century now, each generation has expected more from Borden. We see that they get it.
BORDEN
TM
© BORDEN, INC.

PROGRAM
Woman's Auxiliary to the Texas Medical Association 52nd Annual Convention Dallas April 30-May 3, 1970

TUESDAY, APRIL 28

1 p.m.-5 p.m. **Ad Hoc Committee to Study Bylaws**
Suite of President
(Presidential Suite, 29th Floor)
Sheraton-Dallas Hotel

WEDNESDAY, APRIL 29

9 a.m.-1 p.m. **Ad Hoc Committee to Study Bylaws**
Suite of President
Sheraton-Dallas Hotel

4 p.m. **Advisory Committee Meeting**
Suite of President
Sheraton-Dallas Hotel

7 p.m. **Advisory-Finance Committees Dinner**
Suite of President
Sheraton-Dallas Hotel

8 p.m.-10 p.m. **Finance Committee Meeting**
Suite of President
Sheraton-Dallas Hotel

THURSDAY, APRIL 30

8 a.m.-4 p.m. **Registration and Information**
2nd Floor, North Concourse
Sheraton-Dallas Hotel

8 a.m.-4 p.m. **Registration and Information**
International Ballroom Lobby
(Ground Floor)
Fairmont Hotel

8 a.m.-4 p.m. **Exhibits**
2nd Floor, North Concourse,
Sheraton-Dallas Hotel

8 a.m.-4 p.m. **Hospitality Room**
Sheraton Lounge, 2nd Floor
Sheraton-Dallas Hotel
(Courtesy of Great American Reserve Insurance Company)

8 a.m. **Reference-Revisions Committees Breakfast**
Suite of President
Sheraton-Dallas Hotel

10:30 a.m. **Auxiliary President's Report to TMA House of Delegates**
Grand Ballroom
Statler Hilton Hotel
(Everyone invited)

12 noon **Executive Board Luncheon**
"Fairest Wheels"
Chaparral Club, 37th Floor,
(Southland Center)
Sheraton-Dallas Hotel

(State Officers, Council Women, State Committee Chairmen, Past State Presidents, County Presidents). All incoming Board Members and State Committee Members welcome.

Mrs. Marvin P. Knight, Dallas, President, presiding

Invocation — Mrs. Bradford Hardie, El Paso

Welcome — Mrs. H. C. Henderson, Dallas, Convention Chairman

Response — Mrs. Mylie Durham, Jr., Houston

Greetings — Charles Max Cole, M.D., Dallas, President, Texas Medical Association

Presentation of President-Elect

Introduction of Past Presidents
Mrs. Frank M. Posey, San Antonio

Presentation of Special Guests

Business:

Approval of Convention Agenda

Appointment of Reading Committee:
Mrs. E. W. Coyle, San Antonio
Mrs. Seth L. Witcher, Clifton
Mrs. T. June Melton, Midland

Convention Rules

Minutes — Mrs. Andrew G. Goesl, Texarkana, Recording Secretary

Treasurer's Report — Mrs. Jack D. Gerdes, Houston, Treasurer

Reading of Correspondence — Mrs. Harold Brown, Garland, Corresponding Secretary

Report of President — Mrs. Marvin P. Knight, Dallas

Recommendations of Officers and Committee Chairmen

Announcements — Mrs. H. C. Henderson, Dallas, Convention Chairman

Adjournment

*1:30 p.m.-2:30 p.m. Departure — **SPECIAL EVENT** "Star Treks"

Tours to: Northpark Shopping Center; Sale St. Antiques; The Quadrangle; Fine Arts Museum; Owen Fine Arts Center, Bob Hope Theatre Center (SMU); Arnold's; Frank Lloyd Wright-designed Theatre Center (SMU).

Ticket for tour of your choice provided complimentary by Dallas Auxiliary—but tickets available only through pre-registration.

*(Private cars furnished by Dallas members will leave Sheraton-Dallas from 1:30 p.m. until about 2:30 p.m.)

5 p.m.-6:30 p.m. — **President's Reception**
Presidential Suite, 29th Floor
Sheraton-Dallas Hotel

7 p.m. — **Past Presidents' Dinner**
Chaparral Club
(By invitation only)

FRIDAY, MAY 1

8 a.m.-4 p.m. — **Registration and Information**
2nd Floor, North Concourse
Sheraton-Dallas Hotel

8 a.m.-4 p.m. — **Registration and Information**
International Ballroom Lobby
(Ground Floor)
Fairmont Hotel

8 a.m.-4 p.m. — **Exhibits**
2nd Floor, North Concourse
Sheraton-Dallas Hotel

8 a.m.-4 p.m. — **Hospitality Room**
Sheraton Lounge, 2nd Floor
Sheraton-Dallas Hotel
(Courtesy of Great American Reserve Insurance Company)

8 a.m.-9:30 a.m. — **Organization-Membership "Continental Breakfast" Meeting**
Sam Houston Room
Sheraton-Dallas Hotel
(Current and Incoming Regional Vice-Presidents, Council Women, Council Women-elect, and Members-at-Large) All current and incoming officers and members welcome.
Mrs. Paul Klinger, San Antonio, First Vice-President, presiding.

9:45 a.m.-12:30 p.m. — **First Business Meeting**
Sam Houston Room
Sheraton-Dallas Hotel

Mrs. Marvin P. Knight, Dallas, President, presiding

Invocation — Mrs. Wm. B. Langston, Jr., Longview

Auxiliary Credo and Pledge — Mrs. E. L. Haag, Jr., Abilene

Pledge of Allegiance (stand)

Welcome — Mrs. Wm. David Barnett, Dallas, Convention Cochairman

Recommendations of Executive Board

Reports of Regional Vice-Presidents, Council Women, and County Presidents

Announcements — Mrs. Wm. David Barnett, Dallas, Convention Cochairman

1 p.m.-3 p.m. — **Luncheon Honoring County Presidents**
"Salute to the Stars"
(Awards Luncheon)
Ballroom Foyer
Sheraton-Dallas Hotel
(Everyone invited)

Mrs. Marvin P. Knight, Dallas, President, presiding

Invocation — Mrs. T. H. Holmes, Lubbock

Introduction of Speaker — Mrs. R. C. L. Robertson, Houston

Address — Mrs. G. Prentiss Lee, Portland, Oregon, First Vice-President, Woman's Auxiliary to the American Medical Association

Introduction of Special Guests and Recognition of Past Presidents — Mrs. Hamilton Ford, La Marque

Presentation of Awards — Mrs. John C. Koch, Lufkin, Awards Chairman

Announcements — Mrs. Wm. David Barnett, Dallas, Convention Cochairman

SATURDAY, MAY 2

8 a.m.-12 noon — **Registration and Information**
Sheraton-Dallas Hotel and Fairmont Hotel

8 a.m.-4 p.m. — **Exhibits**
2nd Floor, North Concourse,
Sheraton-Dallas Hotel

8 a.m.-4 p.m. — **Hospitality Room Open**
Sheraton Lounge, 2nd Floor
Sheraton-Dallas Hotel
(Courtesy of Great American Reserve Insurance Company)

8:30 a.m.-11:30 a.m. — **Second Business Meeting**
Sam Houston Room
Sheraton-Dallas Hotel

Mrs. Marvin P. Knight, Dallas, President, presiding

Invocation — Mrs. James Dowling, Denton

Greetings — Mrs. Gordon Peek, Baton Rouge, La., President, Woman's Auxiliary to the Southern Medical Association

Reports of Officers (except Regional Vice-Presidents) and Committee Chairmen—Standing and Special

Election of Officers

Other Business

Announcements

Adjournment

12 Noon **Installation-Style Show Luncheon**
"A Star Is Born"
Grand Ballroom
Sheraton-Dallas Hotel

Mrs. Marvin P. Knight, Dallas, President, presiding

Invocation — Mrs. Elmer Vogelpohl, Galveston
Recognition of Past Presidents and Guests
Fashions—by Titche-Goettinger of Dallas
Courtesy Resolutions — Mrs. Edward F. Thomas, Amarillo
Installation of Officers — Mrs. H. S. Renshaw, Fort Worth
Presentation of Gavel and President's Pin — Mrs. Marvin P. Knight, Dallas
Acceptance of Gavel and President's Pin — Mrs. Eugene P. Schoch, Jr., Austin
Presentation of Past President's Pin — Mrs. Ramsay H. Moore, Dallas
Announcements — Mrs. H. C. Henderson, Dallas, Convention Chairman
Adjournment of 1969-1970 Convention

3 p.m. **Post-Convention Executive Board Meeting**
State Room, 3rd Floor
Sheraton-Dallas Hotel
(1970-1971 Executive Board members expected to attend)

Mrs. Eugene P. Schoch, Jr., Austin, President, presiding

Invocation — Mrs. A. O'Brien McCary, Lake Jackson
Introduction of TMA Advisors to the Woman's Auxiliary — Albert F. Vickers, M.D., Austin, Chairman; George V. Launey, M.D., Dallas; Appointment by President-Elect
Greetings — Albert F. Vickers, M.D., Austin, Chairman
Introduction of President-Elect — Mrs. G. G. Zedler, Austin
Response of President-Elect
Presentation of Past Presidents and Special Guests — Mrs. G. G. Zedler, Austin
Introduction of Officers, Council Women, Council Women-Elect, County Presidents and Presidents-Elect, Standing and Special Committee Chairmen
1970-1971 Workbook Presentation — Mrs. John R. Rainey, Austin
Business:
- Reading of Correspondence
- Appointment of Reading Committee
- Presentation and Adoption of Budget — Mrs. Bland H. Schwarting, San Antonio, Finance Chairman
- Treasurer Recommendations
- Delegate Appointments to WA-AMA Convention
- Election of Nominating Committee

Announcements
Adjournment

8 p.m.-12:30 a.m. **"Saturday Night at the Fairmont"**
Regency Ballroom
Fairmont Hotel
Cocktails and Dinner—8 p.m.
Dancing—9 p.m.-12:30 a.m. (BYOL)

SUNDAY, MAY 3

9 a.m.-9:30 a.m. **Memorial Service**
Embassy Ballroom
Statler Hilton Hotel

John T. Binion, M.D., Dallas, Chairman
Mrs. Joe W. King, Houston, Cochairman
Mrs. O. M. Marchman, Jr.,
Auxiliary Local Arrangements

Prelude: **Our Father in Heaven Who Art** and **When in the Hour of Deepest Need** — Johann Sebastian Bach. Mrs. Martha Binion, Dallas
Invocation: — Harold M. Mims, M.D., Dallas
Memorial Address for Deceased Wives of Physicians — Mrs. Joe W. King, Houston
Solo: **Like as a Father** — John Priddle Scott. Mrs. Carolyn Gagas, Dallas
Memorial Address for Deceased Physicians — Floyd A. Norman, M.D., Dallas
Solo: **But the Lord is Mindful** — Mendelssohn. Mrs. Carolyn Gagas, Dallas
Benediction: — Dan R. Sutherland, M.D., Dallas
Postlude: **Fugue in E Flat** — Johann Sebastian Bach. Mrs. Martha Binion, Dallas

RELATED ACTIVITIES

REGISTRATION: The "Star Spangled Salute" will begin with registration at the Sheraton-Dallas Hotel, second floor, north concourse, or at the Fairmont Hotel, near TMA registration, on Thursday, April 30.

HOSPITALITY: Again the Great American Reserve Insurance Company will graciously provide a convenient and picturesque place to relax—this year, conveniently located in the Sheraton Lounge of the Sheraton-Dallas Hotel, second floor.

HOUSE OF DELEGATES REPORT: Mrs. Marvin P. Knight, president of the Woman's Auxiliary to the Texas Medical Association, will report the accomplishments of the Auxiliary to the TMA House of Delegates in the Grand Ballroom, Statler Hilton Hotel, at 10:30 a.m., Thursday, April 30. All members are invited to attend.

THURSDAY LUNCHEON: "Fairest Wheels", the Executive Board Luncheon, will be held in the Chaparral Club, 37th Floor, Sheraton-Dallas Hotel (Southland Center Elevators).

SPECIAL EVENT: "STAR TREKS," exciting tours to some of the most interesting and perhaps otherwise inaccessible attractions of Dallas will be provided by Dallas Auxiliary members on Thursday, April 30. Tours will begin from 1:30 until about 2:30 p.m., originating from the Sheraton-Dallas Hotel. Antique Row, the Fine Arts Center, Arnold's Creative Shop, and other intriguing places are on the agenda. PRE-REGISTRATION IS REQUIRED!

PRESIDENT'S RECEPTION: Thursday, April 30, in the Presidential Suite, 29th Floor, Sheraton-Dallas Hotel, 5-6:30 p.m. All members are invited.

FRIDAY LUNCHEON: "Salute to the Stars," the Awards Luncheon honoring County Presidents, will be held at the Sheraton-Dallas Hotel, Ballroom Foyer. Everyone invited.

SATURDAY LUNCHEON: "A Star Is Born" will feature a style show presented by Titche's, as well as the installation of new officers, in the Grand Ballroom, Sheraton-Dallas Hotel.

CLASS REUNIONS (TMA): Thursday, April 30, 6:30 p.m.; **FRATERNITY PARTIES (TMA)**—Friday, May 1, 6:30 p.m.; **ALUMNI GROUPS (TMA)**—Saturday, May 2, 6 p.m.

ASSOCIATION PARTY: "Saturday Night at the Fairmont." Cocktails, Dinner, and Dancing, planned by the Fairmont Hotel. 8 p.m., Saturday, May 2. Dress: Optional.

MEMORIAL SERVICE: The annual event honoring the memory of deceased physicians and physicians' wives will be held from 9 a.m. until 9:30 a.m., Sunday, May 3, in the Embassy Ballroom of the Statler Hilton Hotel.

SHUTTLE BUSES: These are scheduled between the Fairmont, Adolphus, Baker, Statler Hilton, and Sheraton-Dallas Hotels, operating all day on Thursday, Friday, and Saturday. Fare—25 cents. Schedule will be posted in hotel lobby.

GENERAL INFORMATION: Information concerning special events and attractions, things to do, and places to go in Dallas, and baby sitters may be obtained from the Auxiliary information desks, in the Sheraton-Dallas and Fairmont Hotels.

DALLAS CONVENTION COMMITTEE CHAIRMEN

Convention Chairman	Mrs. H. C. Henderson, Jr.
Convention Cochairman	Mrs. Wm. David Barnett

General Chairmen:

Business Meetings	Mrs. Walter H. Patton
Convention Dress	Mrs. David W. Young
Courtesy	Mrs. Michael Kurilecz
Decorations	Mrs. Bruce Dwight Fallis
Exhibits	Mrs. William M. Hibbitts
Finance	Mrs. J. S. Minnett
Hospitality	Mrs. A. J. Gill, Mrs. Robert G. Campbell
Information	Mrs. David L. Bond, Mrs. Benjamin Barzune
Pages and Door Prizes	Mrs. Wilson Weatherford
Publicity	Mrs. Edwin E. Harrison, Jr.
Registration	Mrs. Jesse E. Thompson, Mrs. Edward S. Ross
Advance Registration Tickets	Mrs. Charles B. Mullins Mrs. Fouad Bashour

Chairmen of Special Activities:

Executive Board Luncheon	Mrs. Robert Sparkman
County Presidents' Luncheon	Mrs. Reuben H. Adams
Installation-Style Show Luncheon	Mrs. Paul C. Peters Mrs. Melvin Kadesky
Memorial Service	Mrs. O. M. Marchman, Jr.
Special Event—"Star Treks" (Tours)	Mrs. Robert K. Bass Mrs. Warren Greene
Past Presidents' Dinner	Mrs. S. Minter Hill Mrs. S. F. Harrington

Officers and Committees

Past Presidents

Honorary Life Presidents

Mrs. E. H. Cary, Dallas
*Mrs. S. C. Red, Houston
*Mrs. M. L. Graves, Houston
*Mrs. W. A. Wood, Waco
*Mrs. John O. McReynolds, Dallas
*Mrs. S. A. Collom, Texarkana
*Mrs. E. V. DePew, San Antonio
*Mrs. H. B. Trigg, Fort Worth
*Mrs. Joe Gilbert, Austin
*Mrs. H. C. Haden, Houston
Mrs. O. M. Marchman, Dallas
*Mrs. H. R. Dudgeon, Waco
Mrs. G. V. Brindley, Temple
Mrs. Frank N. Haggard, San Antonio
*Mrs. Preston Hunt, Texarkana
*Mrs. S. D. Whitten, Greenville
*Mrs. John T. Moore, Houston
*Mrs. R. B. Homan, El Paso
*Mrs. W. R. Thompson, Fort Worth
Mrs. F. F. Kirby, Waco
*Mrs. S. H. Watson, Waxahachie
Mrs. Scott C. Applewhite, San Antonio
Mrs. William Hibbitts, Texarkana
Mrs. S. F. Harrington, Dallas
Mrs. P. R. Denman, Houston
Mrs. A. B. Pumphrey, Fort Worth
*Mrs. Sam E. Thompson, Kerrville
*Mrs. Charles B. Alexander, San Antonio
Mrs. George Turner, El Paso
Mrs. Edward C. Ferguson, Beaumont
Mrs. S. Minter Hill, Dallas
Mrs. Joseph B. Foster, Houston
*Mrs. William M. Gambrell, Texas City
Mrs. Oscar W. Robinson, Paris
Mrs. Robert Farris Thompson, El Paso
Mrs. E. W. Coyle, San Antonio
Mrs. Mark H. Latimer, Houston
*Mrs. Joseph H. McCracken, Jr., Dallas
Mrs. Richard C. Bel'amy, Liberty
Mrs. H. S. Renshaw, Fort Worth
Mrs. John D. Gleckler, Denison
Mrs. Haskell D. Hatfield, El Paso
Mrs. Ramsay H. Moore, Dallas
Mrs. G. G. Zedler, Austin
Mrs. R. C. L. Robertson, Houston
Mrs. Hamilton Ford, LaMarque
Mrs. W. D. Nicholson, Lake Jackson
Mrs. Russell L. Deter, El Paso
Mrs. James A. Hallmark, Fort Worth
Mrs. Frank M. Posey, San Antonio
Mrs. Travis Smith, Abilene

*Deceased

National Honorary Members

Mrs. Frank N. Haggard, San Antonio
Mrs. George Turner, El Paso

State Honorary Members

Mrs. E. H. Cary, Dallas
Mrs. S. A. Collom, Texarkana
Mrs. O. M. Marchman, Dallas
Mrs. Frank N. Haggard, San Antonio
Mrs. George Turner, El Paso

Honorary Life Members

Mrs. H. Leslie Moore, Dallas
May Owen, M.D., Fort Worth
Mrs. James C. Terrell, Stephenville
Mrs. W. Frank Armstrong, Fort Worth
Mrs. V. M. Longmire, Temple

Elected Officers 1969-1970

President	Mrs. Marvin P. Knight, Dallas
President-Elect	Mrs. Eugene P. Schoch, Jr., Austin
First Vice-President	Mrs. Paul Klinger, San Antonio
Western Regional Vice-President (Districts 1, 2, 3, and 4)	Mrs. Paul M. Wheelis, Brownwood
Southern Regional Vice-President (Districts 5, 6, 7, and 8)	Mrs. J. Hardin Perry, Fredericksburg
Eastern Regional Vice-President (Districts 9, 10, 11, and 15)	Mrs. Charles W. Castle, Liberty
Northern Regional Vice-President (Districts 12, 13, and 14)	Mrs. Edwin Goodall, Breckenridge
Recording Secretary	Mrs. Andrew G. Goesl, Texarkana
Corresponding Secretary	Mrs. Harold Brown, Garland
Treasurer	Mrs. Jack D. Gerdes, Houston
Publicity Secretary	Mrs. H. H. Trippet, Waco
Parliamentarian	Mrs. Van Doren Goodall, Clifton

Council Women 1969-1970

District 1	Mrs. Russell Holt, El Paso
District 2	Mrs. T. June Melton, Midland
District 3	Mrs. Paul Spring, Friona
District 4	Mrs. E. C. Winkelmann, San Angelo
District 5	Mrs. Dor Brown, Fredericksburg
District 6	Mrs. George C. Hudson, Corpus Christi
District 7	Mrs. V. C. Smart, Jr., Austin
District 8	Mrs. Clinton Woodson, Wharton
District 9	Mrs. Haden McKay, Humble
District 10	Mrs. Charles W. Coussons, Nacogdoches
District 11	Mrs. Jo Ed Smith, Athens
District 12	Mrs. Seth L. Witcher, Clifton
District 13	Mrs. Owen Berg, Wichita Falls
District 14	Mrs. Larry Renshaw, Plano
District 15	Mrs. Walter C. Barnes, Texarkana

Standing Committees 1969-1970

Advisory: Mrs. Travis Smith, Abilene, Chairman

AMA-ERF: Mrs. Wm. F. McLean, Austin, Chairman

Awards: Mrs. John C. Koch, Lufkin, Chairman

Civil Defense (Disaster Preparedness): Mrs. Ralph Renshaw, Sherman, Chairman

Convention: Mrs. H. C. Henderson, Jr., Dallas, Chairman; Mrs. Wm. David Barnett, Dallas, Cochairman

Courtesy Resolutions: Mrs. Edward F. Thomas, Amarillo, Chairman

Finance: Mrs. O. P. Griffin, Fort Worth, Chairman

Health Careers: Mrs. E. L. Haag, Jr., Abilene, Chairman

Historical: Mrs. E. W. Coyle, San Antonio, Chairman

Legislative: Mrs. Herbert B. Daniels, Jr., Tyler, Chairman

Library Fund: Mrs. Charles T. Stone, Jr., Galveston

Memorial Service: Mrs. Joe King, Houston, Chairman

Mental Health: Mrs. Robert C. Page, Dallas, Chairman

News Letter: Mrs. Brad Oxford, San Antonio, Editor

Nominating: Mrs. Travis Smith, Abilene, Chairman

Organization and Membership: Mrs. Paul Klinger, San Antonio, Chairman

Physicians Benevolent Fund of Texas Medical Association and Woman's Auxiliary: Travis Smith, M.D., Abilene, Chairman; Mrs. R. C. L. Robertson, Houston, Cochairman

Program (Workbook): Mrs. George V. Launey, Dallas

Public Relations (Community Service): Mrs. Elmer Vogelpohl, Jr., Galveston

Reference: Mrs. H. S. Renshaw, Fort Worth, Chairman

Research and Romance of Medicine: Mrs. Oscar W. Robinson, Paris, Chairman

Revisions: Mrs. Hamilton Ford, La Marque, Chairman

Safety: Mrs. Charles Rennick, El Paso, Chairman

School of Instruction: Mrs. B. L. Aronoff, Dallas, Chairman

Student Loan Fund: Mrs. Lynn L. Bourdon, Houston, Chairman

Committees—Special Appointments 1969-1970

Ad Hoc Committee for Study of Bylaws: Mrs. Frank M. Posey, San Antonio, Chairman

Doctors' Day: Mrs. Collier Rucker, Jacksonville, Chairman

International Health Activities: Mrs. Warren Binion, Fort Worth, Chairman

Medicine and Religion: Mrs. O. Wendell Lowrey, Gatesville, Chairman

Members-at-Large: Mrs. Phillip L. Day, San Antonio, Chairman

Rural Health: Mrs. Harry N. Thomas, Brownwood, Chairman

Science Fair: Mrs. Herbert Liberty, Seguin, Chairman

Senior Citizens: Mrs. Wm. B. Langston, Jr., Longview, Chairman

Special Advisors to the President: Mmes. O. M. Marchman, S. F. Harrington, S. Minter Hill and Ramsay H. Moore, Dallas

TMA Advisory Committee: George V. Launey, M.D., Dallas, Chairman

Other Special Appointments 1969-1970

Governor's Committee on Children and Youth: Mrs. C. F. Hamilton, Dallas, and Mrs. Elmer Vogelpohl, Galveston

Texas Hospital Association Advisory Panel: Mrs. Travis Smith, Abilene, Representative

TEXPAC: Mrs. C. F. Hamilton, Dallas, and Mrs. Paul Cunningham, Galveston

County Presidents 1969-1970

DISTRICT 1

El Paso — Mrs. Bradford Hardie, El Paso
Pecos-Jeff Davis-Presidio-Brewster (Big Bend)
Reeves-Ward-Winkler-Loving-Culberson-Hudspeth — Mrs. Gordon Tekell, Kermit

DISTRICT 2

Andrews-Ector — Mrs. Ralph Bowman, Odessa
Dawson-Lynn-Terry-Gaines-Yoakum (Five Counties) — Mrs. Skiles Thomas, Tahoka
Howard-Martin-Glasscock (Permian Basin) — Mrs. John Affleck, Big Spring
Midland — Mrs. B. J. Youngblood, Midland
Nolan-Fisher-Mitchell-Scurry-Borden-Kent-Stonewall (Colorado Basin) — Mrs. Clark Johnson, Sweetwater

DISTRICT 3

Armstrong-Donley-Childress-Collingsworth-Hall-Wheeler (Greenbelt)
Dallam-Hartley-Sherman-Moore
Deaf Smith-Parmer-Castro-Oldham-Swisher (Tierra Blanca) — Mrs. M. W. Nobles, Hereford
Gray-Hansford-Hemphill-Lipscomb-Roberts-Ochiltree-Hutchinson-Carson (Top O'Texas) — Mrs. Roy K. Sanford, Perryton
Hale-Floyd-Briscoe — Mrs. Joe J. Horn, Plainview
Hardeman-Cottle-Foard-Motley-Dickens-King
Lamb-Bailey-Hockley-Cochran
Lubbock-Crosby-Garza — Mrs. T. H. Holmes, Lubbock
Potter-Randall — Mrs. Houston Burk, Amarillo

DISTRICT 4

Brown-Comanche-Mills-San Saba — Mrs. Paul Wheelis, Brownwood
Coleman
Crane-Upton-Reagan
Kimble-Mason-Menard-McCulloch — Mrs. A. M. McCulloh, Brady
Runnels
Tom Green-Coke-Crockett-Concho-Irion-Sterling-Sutton-Schleicher (Tom Green Eight) — Mrs. W. T. Gordon, Jr., San Angelo

DISTRICT 5

Atascosa
Bexar — Mrs. Oliver H. Timmins, Jr., San Antonio
Comal
Gonzales
Guadalupe — Mrs. Leroy Weiss, Seguin
Karnes-Wilson
Kerr-Kendall-Gillespie-Bandera — Mrs. Dan W. Bacon, Kerrville
La Salle-Frio-Dimmit
Medina-Uvalde-Maverick-Val Verde-Edwards-Real-Kinney-Terrell-Zavala (Nine Counties)

DISTRICT 6

Bee-Live Oak-McMullen
Brooks-Duval-Jim Wells
Cameron-Willacy — Mrs. John Tucker, Harlingen
Hidalgo-Starr — Mrs. Donald Walker, McAllen
Kleberg-Kenedy — Mrs. L. M. Barnett, Kingsville
Nueces — Mrs. C. R. Little, Corpus Christi
San Patricio-Aransas-Refugio
Webb-Zapata-Jim Hogg — Mrs. George V. Garcia, Laredo

DISTRICT 7

Bastrop-Lee
Caldwell
Hays-Blanco
Lampasas-Burnet-Llano — Mrs. W. I. Shepperd, Marble Falls
Travis — Mrs. Hardy E. Thompson, Jr., Austin
Williamson

DISTRICT 8

Brazoria — Mrs. Ray Jordan, Lake Jackson
Colorado-Fayette — Mrs. R. R. Thomas, Eagle Lake
DeWitt-Lavaca — Mrs. Patrick J. Wagner, Shiner
Galveston — Mrs. Jesse B. Johnson, Jr., LaMarque
Victoria-Calhoun-Goliad — Mrs. Gilbert Pyle, Victoria
Wharton-Jackson-Matagorda-Fort Bend — Mrs. Barton Griffin, Bay City

DISTRICT 9

Austin-Grimes-Waller
Harris — Mrs. Mylie E. Durham, Jr., Houston
East Harris Chapter — Mrs. Louis B. Hughes, Baytown
Southeast Harris Chapter — Mrs. M. L. Doncaster, Pasadena
Montgomery
Polk-San Jacinto
Walker-Madison-Trinity (Tri County)
Washington-Burleson — Mrs. Thomas Giddings, Brenham

DISTRICT 10

Angelina — Mrs. Gordon Jones, Lufkin
Hardin-Tyler
Jasper-Newton-Sabine — Mrs. C. Bryce Thomas, Jasper
Jefferson:
Beaumont Chapter — Mrs. Kenneth T. Miller, Beaumont
Port Arthur Chapter — Mrs. Robert E. Moore, Nederland
Liberty-Chambers — Mrs. Lloyd Fahring, Anahuac
Nacogdoches-San Augustine — Mrs. Loma LaVelle Laird, Nacogdoches
Orange — Mrs. Arthur R. Watson, Orange
Shelby

DISTRICT 11

Anderson-Leon	Mrs. Jack Thompson, Palestine
Cherokee	Mrs. John T. Scogin, Jacksonville
Freestone	
Henderson	Mrs. Ben L. Johnson, Athens
Houston	
Rusk	
Panola	
Smith	Mrs. George W. Brown, Tyler
Wood	

DISTRICT 12

Bell	Mrs. Wayne Reeser, Temple
Bosque-Hamilton	Mrs. Van Doren Goodall, Clifton
Brazos-Robertson	Mrs. T. T. Walton, Jr., Bryan
Coryell	Mrs. O. W. Lowrey, Gatesville
Erath-Hood-Somervell (Tri-County)	Mrs. James C. Terrell, Jr., Stephenville
Falls	
Hill	Mrs. Richard N. Beskow, Hillsboro
Johnson	Mrs. Gates Barker, Cleburne
Limestone	
McLennan	Mrs. S. B. Morrison, Waco
Milam	Mrs. Sidney Richardson, Cameron
Navarro	Mrs. Louis Gibson, Corsicana

DISTRICT 13

Baylor-Knox-Haskell
Clay-Montague-Wise
Eastland-Callahan-Stephens-Shackelford-Throckmorton
Palo Pinto-Parker-Jack

Tarrant	Mrs. Asa C. Watson, Jr., Fort Worth
Taylor-Jones	Mrs. Frank Barker, Abilene
Wichita-Young-Archer	Mrs. V. C. Saied, Wichita Falls
Wilbarger	Mrs. James P. Eaton, Vernon

DISTRICT 14

Collin	Mrs. Emmett Quattlebaum, McKinney
Cooke	
Dallas	Mrs. H. C. Henderson, Jr., Dallas
Denton	Mrs. James K. Dowling, Denton
Ellis	Mrs. William H. Lindsey, Waxahachie
Fannin	
Grayson:	
North	Mrs. Harry Denison, Denison
South	Mrs. Van R. Jackson, Sherman
Hopkins-Franklin	Mrs. W. Ray Hanna, Sulphur Springs
Hunt-Rockwall-Rains	Mrs. Jerry Coker, Greenville
Kaufman	
Lamar-Delta	Mrs. M. A. Walker, Paris
Van Zandt	

DISTRICT 15

Bowie-Miller	Mrs. J. B. Rochelle, III, Texarkana
Camp-Morris-Titus	Mrs. Jorge Toledo, Mt. Pleasant
Cass-Marion	Mrs. Blocker Joslin, Atlanta
Gregg	Mrs. B. R. Clanton, Longview
Harrison	Mrs. Marvin K. Hall, Marshall
Red River	Mrs. Rex Edwards, Clarksville
Upshur	

TMA Officers, Councils, & Committees, 1969-1970

OFFICERS

Charles Max Cole, President, Dallas
Walter Walthall, President-Elect, San Antonio
G. V. Brindley, Jr., Past President, Temple
George V. Pazdral, Vice President, Somerville
Byron P. York, Secretary, Houston
C. Lincoln Williston, Executive Secretary, Austin
Howard O. Smith, Treasurer, Marlin
W. H. Hamrick, Speaker of the House, Houston
Jack B. Lee, Vice Speaker of the House, San Antonio

BOARDS, COUNCILS, AND COMMITTEES

BOARD OF TRUSTEES

C. P. Hardwicke, Chairman, Austin (1971)
John M. Smith, Jr., Vice Chairman, San Antonio (1971)
R. Harvey Bell, Secretary, Palestine (1974)
Charles W. Yates, Rosenberg (1973)
James A. Hallmark, Fort Worth (1972)
N. L. Barker, Paris (1974)
Don G. Harrel, Dallas (1970)

Committee on Physicians Benevolent Fund (standing)

Travis Smith, Chairman, Abilene (1971)
Denton Kerr, Houston (1971)
Charles L. Gary, Jr., Corsicana (1970)
William Lacey Smith, San Angelo (1972)
Choice B. Matthews, Kerrville (1972)
Ralph C. Crawford, Longview (1970)
C. A. Rush, Jr., Fort Worth (1972)
Edward S. Crocker, Houston (1970)
John Q. Gilchrist, Woodville (1971)
May Owen, Fort Worth (Emeritus Member)
Auxiliary Liaison Members:
Mrs. Travis Smith, Co-Chairman, Abilene
Mrs. Cone Johnson, Dallas
Mrs. G. G. Zedler, Austin
Mrs. W. D. Nicholson, Lake Jackson
Mrs. S. Braswell Locker, Brownwood
Mrs. Russell Deter, El Paso
Mrs. Marvin Knight, Dallas (ex officio)
Mrs. Eugene Schoch, Austin (ex officio)

Committee on Medical History (standing)

Joe C. Rude, Chairman, Austin (1972)
Lyman Blair, Houston (1972)
H. Irving Schweppe, Jr., Houston (1970)
Clifford L. Montgomery, Lubbock (1970)
Robert B. Krause, San Antonio (1972)
Allen T. Stewart, Lubbock (1971)
S. N. Key, Jr., Austin (1971)
L. Gayle Burton, Woodville (1971)
Robert S. Sparkman, Dallas (1970)
Herbert Donnell, Waxahachie (ex officio)
G. V. Brindley, Sr., Temple (Emeritus Member)

Advisory Committee to the Woman's Auxiliary (standing)

George V. Launey, Chairman, Dallas (1971)
Albert F. Vickers, Austin (1972)
J. T. Billups, Houston (1970)

BOARD OF COUNCILORS

First District
Russell Holt, El Paso (1970)
John C. Hundley, Fort Stockton, Vice Councilor

Second District
A. H. Daniell, Brownfield (1972)
T. D. Young, Sweetwater, Vice Councilor

Third District
James G. Morris, Lubbock (1971)
Charles R. Nester, Canyon, Vice Councilor

Fourth District
S. Braswell Locker, Chairman, Brownwood (1970)
Gus F. Eckhardt, San Angelo, Vice Councilor

Fifth District
George H. Herrmann, Del Rio (1971)
C. B. Jackson, San Antonio, Vice Councilor

Sixth District
Harold E. Griffin, Corpus Christi (1971)
Sheridan S. Evans, McAllen, Vice Councilor

Seventh District
Ray L. Shepperd, Burnet (1972)
Ruth M. Bain, Austin, Vice Councilor

Eighth District
Stanley E. Thompson, Richmond (1972)
Paul J. Cunningham, Galveston, Vice Councilor

Ninth District
Haden E. McKay, Humble (1972)
Max C. Butler, Houston, Vice Councilor

Tenth District
Paul R. Meyer, Port Arthur (1972)
George E. Thannisch, Lufkin, Vice Councilor

Eleventh District
J. Collier Rucker, Jacksonville (1970)
Norris E. Holt, Athens, Vice Councilor

Twelfth District
Dick Cason, Secretary, Hillsboro (1971)
Woodrow M. Avent, Waco, Vice Councilor

Thirteenth District
Charles B. Dryden, Jr., Vice Chairman, Wichita Falls (1970)
Drue O. D. Ware, Fort Worth, Vice Councilor

Fourteenth District
Vacancy (1970)
John W. Stack, Mesquite, Vice Councilor

Fifteenth District
Walter C. Barnes, Texarkana (1971)
William A. King, Naples, Vice Councilor

Committee on Contract Medicine (standing)

Hugh L. Wolff, Chairman, San Antonio (1970)
Sterling H. Fly, Jr., Uvalde (1972)
Eleanor S. Irvine, Wichita Falls (1971)
Sanford Glanz, Corpus Christi (1972)
Harry W. Garrett, Jr., Linden (1970)
Richard L. Berry, Marshall (1970)
Norman Monk, Lubbock (1972)
James C. George, II, Brownsville (1971)
H. M. Seybold, Houston (1971)

Committee on Liaison with State Bar of Texas (standing)

Jesson L. Stowe, Chairman, El Paso (1971)
John M. Travis, Jr., Beaumont (1972)
John L. Dean, Jr., Crockett (1970)
Walter F. Speakman, Wichita Falls (1970)
Arthur C. Ressmann, San Antonio (1972)
Norris E. Holt, Athens (1971)
Euell W. Crisp, Alice (1970)
James K. Peden, Dallas (1972)
Vincent P. Collins, Houston (1971)

Committee on Orientation (ex officio)

Chairman, Board of Councilors
Chairman, Board of Trustees
Chairman, Council on Medical Service and Insurance
Chairman, Council on Medical Jurisprudence
Chairman, Council on Public Relations and Public Service

DELEGATES AND ALTERNATES TO THE AMERICAN MEDICAL ASSOCIATION

(Terms expire on Dec. 31 of year indicated)

Harvey Renger, Chairman, Hallettsville (1970)
Haden E. McKay, Humble, Alternate
James H. Sammons, Vice Chairman, Baytown (1970)
N. L. Barker, Paris, Alternate
G. W. Cleveland, Austin (1970)
Floyd A. Norman, Dallas, Alternate
Vacancy (1970)
James D. Murphy, Fort Worth, Alternate
Walter Walthall, San Antonio (1971)
S. Braswell Locker, Brownwood, Alternate
E. P. Hall, Jr., Fort Worth (1971)
Mylie E. Durham, Jr., Houston, Alternate
Charles Max Cole, Dallas (1971)
G. V. Brindley, Jr., Temple, Alternate
R. D. Moreton, Houston (1971)
Sam A. Nixon, Floresville, Alternate
Joe T. Nelson, Weatherford (1971)
J. E. Miller, Dallas, Alternate

EXECUTIVE BOARD

Ex Officio: President, Vice President, President-Elect, Immediate Past President, Secretary, Treasurer, Speaker of the House of Delegates, Vice Speaker of the House of Delegates, Trustees, Councilors, Texas Delegates and Alternates to AMA, Council on Medical Jurisprudence, and Chairmen of Councils.

COUNCIL ON ANNUAL SESSION

O. A. Fly, Jr., Chairman, Houston (1972)
Alice Smith, Dallas (1971)
Guy T. Denton, Jr., Dallas (1970)
Roy H. Baskin, Jr., Waco (1970)
P. Clift Price, Austin (1972)
Nathan Cedars, Stephenville (1972)
Robert E. Stevens, San Antonio (1971)

Committee on General Arrangements for Annual Session (special)

Oscar M. Marchman, Jr., Chairman, Dallas
Chester E. Cook (Alumni & Fraternity Functions), Dallas
Wayne H. Gossard (Entertainment), Dallas
Howard C. Coggeshall (Exhibits, Art), Dallas
John H. Childers (Exhibits, Scientific), Dallas
Joseph C. Ogle (Exhibits, Technical), Dallas
George Taylor James (First Aid), Dallas
Jack T. Chisolm (Information), Dallas
John T. Binion (Memorial Service), Dallas
Walter H. Patton (Public Lectures), Dallas
Robert K. Portman (Publicity), Dallas
George Truett James (Sports), Dallas
Marvine Weatherby (Women Physicians), Dallas

Committee on Scientific Exhibits (standing)

P. W. Voltz, Jr., Chairman, San Antonio (1972)
Charles C. Jones, Jr., Kerrville (1971)
Walter Long, Austin (1970)
W. L. Carrington, Mexia (1970)
Mavis P. Kelsey, Houston (1971)
Frank M. Covert, III, Austin (1971)
Hussam A. Fadhli, Port Arthur (1972)

Heinrich Lamm, Harlingen (1972)
Joseph C. Ogle, Dallas (1970)

Committee on Technical Exhibits (special)

Alice Smith, Dallas
Charles B. Dryden, Wichita Falls
John H. Childers, Dallas
Joseph C. Ogle, Dallas

COUNCIL ON CONSTITUTION AND BY-LAWS

Robert Mayo Tenery, Chairman, Waxahachie (1972)
Stephen R. Lewis, Galveston (1971)
Milton V. Davis, Dallas (1971)
Eugene L. Slataper, Houston (1972)
R. B. Johns, Abilene (1970)
Tom M. Oliver, Waco (1970)
A. Fletcher Clark, Jr., San Antonio (1972)
(Ex officio members: Speaker and Vice Speaker of the House of Delegates)

COUNCIL ON MEDICAL EDUCATION AND HOSPITALS

Weldon G. Kolb, Chairman, La Marque (1972)
Bryan V. Williams, Houston (1970)
Jack M. Partain, San Antonio (1971)
J. G. Rodarte, Temple (1972)
H. Frank Connally, Jr., Waco (1970)
Charles A. LeMaistre, Austin (1971)
E. Russell Hayes, Dallas (1971)
O. Brandon Hull, Lubbock (1970)
W. D. Nicholson, Freeport (1972)

Committee on Health Careers (standing)

John D. Bonnet, Chairman, Temple (1970)
Winton L. Coleman, Victoria (1971)
John B. Gunn, Dallas (1971)
Mark J. Kubala, Beaumont (1972)
Robert G. McCorkle, Houston (1972)
Margie B. Peschel, Fort Worth (1970)
May Owen, Fort Worth (Emeritus Member)
Council representative: J. G. Rodarte, Temple

Committee on Liaison with Medical Schools (standing)

Gerald S. Ahern, Chairman, Corpus Christi (1971)
W. W. Goldman, Jr., Arlington (1972)
May Owen, Fort Worth (1970)
Jack A. Haley, Houston (1971)
Preston W. DeShan, Lubbock (1970)
James R. Schofield, Houston (1971)
Merton Minter, San Antonio (1972)
William C. Brooks, Dallas (1972)
Earl H. Rafes, Beaumont (1970)

Ex Officio Members:

F. C. Pannill, Jr., San Antonio
Charles C. Sprague, Dallas
Joseph M. White, Galveston
Council representative: O. Brandon Hull, Lubbock

Committee on Hospital Accreditation (standing)

R. E. Speegle, Chairman, Garland (1970)
Drue O. D. Ware, Fort Worth (1970)
A. F. Herff, Jr., San Antonio (1971)
James L. Robins, Plainview (1971)
Joe D. Crawford, Jacksonville (1970)
Dan C. Gill, Dallas (1972)
George P. Beck, Jr., Lubbock (1971)
Quentin J. Florence, Linden (1972)
Robert E. Leslie, El Campo (1972)
William F. Ross, San Benito (ex officio)
Council representative: W. D. Nicholson, Freeport

Committee on Nursing Homes (standing)

A. R. Ponton, Chairman, Alpine (1971)
Lloyd J. Gregory, Jr., Houston (1972)
Bernard Rosen, Corsicana (1971)
Donald H. Brandt, Denison (1971)
David J. Pillow, Fort Worth (1970)
Carl F. Page, Lubbock (1970)
Richard E. Block, Dallas (1972)
Robert K. Harrison, Texarkana (1970)
Raymond Benski, Nederland (1972)
Council representative: Jack M. Partain, San Antonio

Committee on Nursing (standing)

Robert W. Grace, Chairman, Dallas (1971)
William D. Seybold, Houston (1970)
Thomas J. Coleman, Fort Worth (1972)
Emmett N. Wilson, Jr., Pearsall (1970)
William J. Powell, Richardson (1971)
Ted H. Forsythe, Lubbock (1971)
James C. Price, Gonzales (1972)
Charles D. Walther, Port Arthur (1972)
Meyer Kurzner, Corpus Christi (1970)
Max E. Johnson, San Antonio (ex officio)
Council representative: E. R. Hayes, Dallas

Committee on Continuing Education (special)

R. D. Haines, Chairman, Temple
Ronald Goelzer, Wharton
Asa W. DeLoach, Dallas
Robert B. Crouch, Houston
John S. Chapman, Dallas
Phil Davis, Houston
Leonard A. Charpentier, Galveston
Newton E. Dudney, League City
Edwin M. Sykes, Jr., San Antonio
H. Grant Taylor, Houston
Arthur E. Grant, San Antonio
Joseph L. Koch, Jr., Beaumont
Garner F. Klein, Harlingen
Bernard Rosen, Corsicana
Council representative: Bryan V. Williams, Houston

COUNCIL ON MEDICAL JURISPRUDENCE

Joe T. Nelson, Chairman, Weatherford (1971)
Robert L. Daily, Wichita Falls (1972)
Courtney M. Townsend, Paris (1972)
Doyle W. Ferguson, Dallas (1970)
Max E. Johnson, San Antonio (1971)
James M. Graham, Austin (1972)
Joseph T. Ainsworth, Houston (1970)

Committee on Military and Veterans Affairs (standing)

James C. Whittington, Chairman, Fort Worth (1970)
James E. Watson, Jr., Houston (1972)
Ivey E. Lamberth, Tyler (1971)
Joseph V. Land, Crockett (1972)
Thomas G. Glass, Jr., San Antonio (1971)
James T. Hall, Lubbock (1970)
G. R. Solis, Port Arthur (1972)
A. O. Jensen, Denison (1971)
Otis W. English, Lubbock (1970)
E. A. Rowley, Amarillo (ex officio)

Committee on Government Health Programs (special)

James D. Murphy, Chairman, Fort Worth
H. W. Anderson, Jr., Fort Worth
Frederick J. Bonte, Dallas
Robert F. Gossett, San Antonio
Silas W. Grant, Hillsboro
Ernest A. Maxwell, Dallas
Robert W. Shirey, Hillsboro
A. H. Daniell, Brownfield
Herman C. Sehested, Fort Worth
G. V. Brindley, Jr., Temple (ex officio)
Charles Max Cole, Dallas (ex officio)

Committee on Abortion Laws in Texas (special)

Hugh W. Savage, Chairman, Fort Worth
James T. Downs, III, Dallas
Van D. Goodall, Clifton
Hiram P. Arnold, Houston
Edgar W. Santa Cruz, San Antonio
Gray E. Carpenter, El Paso
Robert D. Rice, Tyler
C. Forrest Jorns, Houston
M. J. Meynier, Jr., Houston
Ted H. Forsythe, Lubbock
John W. Jones, Texarkana

COUNCIL ON MEDICAL SERVICE AND INSURANCE

Robert F. Gossett, Chairman, San Antonio (1970)
William E. Sharp, Baytown (1971)
William M. Sherrill, Houston (1971)
Alford R. Hazzard, Austin (1970)
Walter A. Brooks, Quanah (1972)
J. L. Jackson, III, Wichita Falls (1972)
Porter K. Mason, Dallas (1971)

Committee on Association Insurance Programs (standing)

Joseph T. Painter, Chairman, Houston (1971)
Donald S. Gibbs, Fort Worth (1972)
C. W. Castle, Liberty (1971)
E. Peter Garber, Galveston (1970)
Perry W. Nadig, San Antonio (1970)
Richard L. Vardy, Lubbock (1971)
C. Ferrill Hamilton, Dallas (1972)
George V. Pazdral, Somerville (ex officio)

Committee on Professional Insurance (standing)

R. E. Read, Chairman, Lufkin (1971)
Richard H. Jackson, Houston (1970)
William F. Pipes, San Antonio (1970)
Frank L. Bynum, Fort Worth (1970)
Robert W. Paret, Del Rio (1972)
David M. Shelby, Pasadena (1972)
James S. Bussell, Marlin (1972)
Guy K. Driggs, Dallas (1971)
D. Clifford Burross, Wichita Falls (1971)

Committee on Health Insurance (standing)

Jack L. Eidson, Chairman, Weatherford (1971)
Ernest A. Maxwell, Dallas (1970)
Mario E. Ramirez, Roma (1970)
John Q. Thompson, Temple (1971)
H. Carl Messerschmidt, Jr., Baytown (1972)
John H. Bohmfalk, San Antonio (1972)
Byron P. York, Jr., Houston (1971)
William D. Barnett, Dallas (1970)
Warren W. Binion, Fort Worth (1972)

Committee on Health Planning (special)

Floyd A. Norman, Chairman, Dallas
Perry W. Nadig, San Antonio
R. A. D. Morton, Jr., El Paso
Leonides G. Cigarroa, Laredo
A. J. Gill, Dallas
Joseph F. Peters, Lone Star
Joseph T. Painter, Houston
Samuel J. Skinner, Houston
Walter C. Watkins, Amarillo
Sam R. Barnes, Trinity
Sam W. Wilborn, Austin
Jack F. Hardwick, Fort Worth
John S. Vardiman, Beaumont
John A. Ferris, La Feria

Committee on Health Care Costs (special)

Russell L. Deter, Chairman, El Paso
A. W. Bronwell, Lubbock
David Wade, Austin
Hanes H. Brindley, Temple
John H. Richards, Fort Worth
James P. S. Hodges, Houston

Consultants:
Milford O. Rouse, Dallas
Doyle W. Ferguson, Dallas
Mr. Glendon E. Johnson, Houston
Mr. Bob English, Austin
Mr. Harry H. Miller, Baytown

Appointees to Hospitals-Insurance-Physicians Joint Advisory Committee

Charles D. Bussey, Dallas
H. Carl Messerschmidt, Jr., Baytown
John H. Bohmfalk, San Antonio

Committee on Liaison with Blue Shield of Texas (standing)

Dewey W. Johnston, Chairman, Fort Worth (1972)
Mylie E. Durham, Jr., Houston (1970)
Denton Kerr, Houston (1970)
Wayne V. Ramsey, Jr., Abilene (1971)
Alvin O. Severance, San Antonio (1971)
John T. Binion, Dallas (1970)
Douglas B. Black, Lamesa (1971)
John C. Kuppinger, Harlingen (1972)
James B. Ivers, Beaumont (1972)

Committee on Workmen's Compensation and Industrial Health (standing)

Edward F. Thomas, Chairman, Amarillo (1970)
Ralph Liles, Houston (1971)
Robert A. Wise, Houston (1970)
G. V. Launey, Dallas (1972)
William O. Hargrove, Fort Worth (1972)
Richard D. Smith, Lubbock (1971)
John R. Hall, Jr., Houston (1970)
Robert E. Haan, El Paso (1972)
Edward C. Held, San Antonio (1971)

Committee on Liaison with Texas Hospital Association (special)

Howard R. Dudgeon, Jr., Chairman, Waco
Mylie E. Durham, Jr., Houston
James A. Hallmark, Fort Worth
Harvey Renger, Hallettsville
E. A. Maxwell, Dallas
R. W. Kimbro, Cleburne
L. Rodney Rodgers, Houston

Committee on Usual, Customary and Reasonable Fees (special)

Elgin W. Ware, Jr., Chairman, Dallas
Tom B. Bond, Fort Worth
G. V. Brindley, Jr., Temple
Charles Max Cole, Dallas
Richard D. Cole, Lubbock
Milton V. Davis, Dallas
Guy K. Driggs, Dallas
E. Frank Dunton, Dallas
Sheridan S. Evans, McAllen
Everett C. Fox, Dallas
John W. Freese, Fort Worth
Robert F. Gossett, San Antonio
Jack F. Hardwick, Fort Worth
M. T. Jenkins, Dallas
J. L. Jinkins, Jr., Galveston
Dewey W. Johnston, Fort Worth
Sam N. Key, Jr., Austin
Robert W. Kimbro, Cleburne
Leroy D. Lockhart, La Marque
Porter K. Mason, Dallas
Joseph T. Painter, Houston
Joseph F. Peters, Jr., Lone Star
Harold T. Pruessner, Corpus Christi
George J. Race, Dallas
James H. Sammons, Baytown
Wilbert E. Scott, Amarillo
Tom L. Shields, Fort Worth
Jack L. Smith, Beaumont
William C. Smyth, Tyler
P. C. Talkington, Dallas
Jesse E. Thompson, Dallas
Courtney M. Townsend, Paris
Doyle W. Ferguson, Dallas (Liaison Member)

COUNCIL ON PUBLIC RELATIONS AND PUBLIC SERVICE

Orville E. Harper, Chairman, Abilene (1972)
Benjamin M. Primer, Sr., Austin (1971)
Billy B. Markette, San Antonio (1970)
Durwood E. Neal, Fort Worth (1971)
Sam A. Nixon, Floresville (1972)
John E. Martin, Houston (1970)
Robert K. Portman, Dallas (1970)

Committee on Aging (standing)

Frederick G. Dorsey, Chairman, Houston (1970)
S. C. Arnett, Jr., Lubbock (1972)
John M. Church, Fort Worth (1972)
Edward J. Lefeber, Galveston (1971)
Arnott DeLange, Dallas (1970)
A. Bryan Spires, Jr., Taylor (1972)
Elizabeth Gentry, Austin (1970)
Robert R. Rynearson, Temple (1971)
Charles W. Pemberton, Houston (1971)

Committee on Disaster Medical Care (standing)

Ben A. Merrick, Chairman, Dallas (1970)
Charles R. Queen, Edinburg (1972)

Harry E. Preble, Houston (1970)
T. June Melton, Midland (1971)
William S. Moore, San Antonio (1971)
Robert J. Turner, III, Fort Worth (1972)
James W. Harrison, Texarkana, Ark. (1972)

Committee on Medicine and Religion (standing)

Grant F. Begley, Chairman, Fort Worth (1971)
Edwin Goodall, Breckenridge (1970)
Charles H. Frank, Paris (1970)
R. L. Campbell, Corsicana (1972)
J. R. Maxfield, Jr., Dallas (1970)
Barry M. Green, Texarkana (1971)
Henry P. Hare, Jr., San Antonio (1972)
S. W. Thorn, Houston (1971)
Dolph L. Curb, Houston (1972)
Milford O. Rouse, Dallas (ex officio)
Travis Smith, Abilene (ex officio)
Howard O. Smith, Marlin (ex officio)

Committee on Transportation Safety (standing)

W. R. Hubler, Chairman, Corpus Christi (1972)
Charles H. Wilson, Wichita Falls (1972)
Bernard T. Fein, San Antonio (1970)
George J. Ehni, Houston (1970)
Landon A. Colquitt, Longview (1971)
Hylmar E. Karbach, Jr., New Braunfels (1971)
J. T. Lamar McNew, Bryan (1971)
Walter F. Hasskarl, Jr., Brenham (1970)
E. Jackson Giles, Corpus Christi (1972)

Committee on Public Health (standing)

L. S. Thompson, Jr., Chairman, Dallas (1971)
Lorence W. Feller, Fredericksburg (1971)
Ivan W. Kuhl, McAllen (1970)
Nina Mae Sisley, Corpus Christi (1970)
Charles M. Parker, Wichita Falls (1970)
Jerry R. Bailes, Texarkana (1972)
Frank Cohen, Fort Worth (1972)
J. E. Peavy, Austin (ex officio)

Committee on Rural Health (standing)

E. W. Schmidt, Chairman, Pecos (1971)
Dennis W. Short, Commerce (1972)
Arlys W. Bing, Houston (1971)
Joel H. Johnson, Brenham (1970)
Eugene R. Foster, Gorman (1972)
L. W. Snider, Garrison (1970)
Berry N. Squyres, Denver City (1971)
Louis W. Conradt, Terrell (1970)

Committee on School Health (standing)

Robert S. Ray, Chairman, Seguin (1970)
Percy E. Luecke, Jr., Dallas (1970)
Charles D. McMillan, Paris (1971)
Walter E. Reifslager, Austin (1972)
A. W. Pierce, Wichita Falls (1972)
Charles B. Lambeth, Odessa (1970)
J. Rogers Dupre, San Antonio (1971)
L. E. McGary, Jr., Corsicana (1971)
Austin E. Hill, Houston (1972)
Edwin L. Rippy, Dallas (ex officio)
Porter M. Bailes, Jr., Tyler (ex officio)

COUNCIL ON SCIENTIFIC ADVANCEMENT

N. C. Hightower, Chairman, Temple (1970)
E. E. Anthony, Jr., Fort Worth (1970)
Frederick C. Lowry, Austin (1972)
A. J. Gill, Dallas (1971)
Norman L. West, Hillsboro (1971)
Elbert DeCoursey, San Antonio (1972)
Arthur M. Jansa, Houston (1971)

Committee on Athletics (standing)

Harry W. Slade, Chairman, Waco (1972)
Louis J. Levy, Fort Worth (1972)
Cone Johnson, Dallas (1971)
W. D. Bailey, Jr., Jasper (1972)
Wallace I. Hess, Lubbock (1970)
Lamar P. Collie, Jr., San Antonio (1971)

Committee on Cancer (standing)

B. L. Aronoff, Chairman, Dallas (1971)
John F. Thomas, Austin (1971)
William S. Brumage, Austin (1970)
A. K. Morris, Baytown (1970)
R. A. Stevenson, Jr., Victoria (1972)
Robert D. Moreton, Houston (1970)
Harlan D. Root, San Antonio (1971)
Ted L. Rankin, Longview (1972)
Howard R. Stewart, Lubbock (1972)

Committee on Cardiovascular Diseases (standing)

John R. Derrick, Chairman, Galveston (1972)
Faber F. McMullen, Jr., Houston (1971)
J. Morris Horn, Dallas (1971)
Byron W. Wright, Dumas (1970)
Grover L. Bynum, Jr., Austin (1970)
Silas W. Grant, Hillsboro (1972)
William J. Block, San Antonio (1972)
Thomas W. Inmon, Temple (1970)
Ralph G. Greenlee, Midland (1971)
Wm. S. Brumage, Austin (ex officio)

Committee on Maternal Health (standing)

C. E. Gibbs, Chairman, San Antonio (1972)
Morris E. Malakoff, Laredo (1970)
J. S. Lancaster, Austin (1972)

Robert P. McDonald, Fort Worth (1970)
Warren T. Kable, Jr., Wichita Falls (1970)
James T. Downs, III, Dallas (1971)
Henry C. McGrede, Jr., Longview (1970)
Leslie R. Ansley, Lubbock (1971)
William E. Locke, San Antonio (1971)
James R. Morgan, El Paso (1970)
John W. Boldt, San Antonio (1971)
Joseph L. Spezia, Houston (1971)
R. E. Moon, San Angelo (1972)
James M. Adkins, Houston (1972)
Garland H. Lang, Midland (1971)
Robert Seymour, Galveston (1971)
Peter M. Marcuse, Houston (pathology consultant)
Charles H. Williams, Houston (anesthesiology consultant)

Ex Officio Members:
Peggy Joyce Whalley, Dallas
Carl F. Moore, Jr., Austin
Werner E. Spier, El Paso
Steve A. Marasovich, San Antonio
J. K. Avent, Tyler
Francis A. Giglio, Beaumont
Julian Wells, Dallas
Leonard A. Charpentier, Galveston

Committee on Mental Health (standing)

Charles H. Brown,* Chairman, Wichita Falls (1972)
George Constant, Victoria (1971)
Cyril J. Ruilmann, Beaumont (1970)
James H. Kreimeyer, Big Spring (1970)
Wade H. Lewis, San Antonio (1971)
Howard M. Burkett, Dallas (1972)
Harry K. Davis, Galveston (1971)
Thelma E. Frank, Corpus Christi (1972)
Frank P. Schuster, Jr., El Paso (1970)
Holland C. Mitchell, Waco (ex officio)
Jaime Quintanilla, Amarillo (ex officio)
Winston Cochran, Beaumont (ex officio)

Committee on Nuclear Medicine (standing)

Edward B. Best, Chairman, Temple (1972)
John A. Burdine, Jr., Vice Chairman, Houston (1972)
Ralph S. Clayton, El Paso (1970)
John E. Ballard, San Angelo (1970)
Robert W. McConnell, Dallas (1970)
Thomas P. Haynie, III, Houston (1971)
Robert N. Cooley, Galveston (1971)
Glenn A. Stokdyk, Fort Worth (1971)
Harold M. Brannan, San Antonio (1972)

Committee on Rehabilitation (standing)

Edward M. Krusen, Chairman, Dallas (1971)
James L. Mims, Jr., San Antonio (1972)
Hamilton Ford, Galveston (1972)
Ira Budwig, El Paso (1970)
Stanton J. Barron, Jr., Abilene (1970)
John A. Williamson, Jr., San Antonio (1972)
George A. Hurst, Tyler (1971)

Committee on Tuberculosis (standing)

H. M. Anderson, Chairman, San Angelo (1972)
Sam Topperman, Tyler (1970)
Albert G. Randall, Austin (1971)
John A. Wiggins, Jr., Fort Worth (1971)
Walter C. Brown, Corpus Christi (1970)
Ben F. Mitchel, Dallas (1971)
Martin L. Stephenson, Dallas (1970)
Joe A. Bybee, Beaumont (1972)
Katherine H. K. Hsu, Houston (1970)

Committee on Medical Care Needs of Children (special)

Melvin L. Thornton, Chairman, San Antonio
Charles J. Caruso, Houston
Wilbur E. Crenwelge, Fredericksburg
Carlos D. Godinez, McAllen
Sheldon W. Joseph, Houston
Joseph W. King, Dallas
Joseph S. Kugler, Dallas
Jack F. McKemie, Corpus Christi
John M. Pickett, Amarillo

SCIENTIFIC SECTION OFFICERS

Digestive Diseases
Henry Laurens, Jr., Chairman, Temple
John M. Eiband, Secretary, Houston

General Practice
Franklin L. Crawford, Chairman, Cedar Hill
J. T. Lamar McNew, Secretary, Bryan

Internal Medicine
Homer R. Goehrs, Chairman, Austin
Maurice E. Herring, Secretary, Dallas

Nervous and Mental Diseases
Robert L. Leon, Chairman, San Antonio
Jerry M. Lewis, Secretary, Dallas

Obstetrics and Gynecology
Benson L. Martin, Jr., Chairman, Kingsville
Daniel A. Chester, Secretary, McAllen

Ophthalmology
John C. Koch, Chairman, Lufkin
Edwin G. Grafton, Secretary, Dallas

Otolaryngology
Jesse D. Gomillion, Chairman, Midland
William L. Draper, Secretary, Houston

*Dr. Brown has resigned as chairman of the committee. Dr. Howard M. Burkett is now chairman.

Pathology

Merle W. Delmer, Chairman, San Antonio
Rolland C. Reynolds, Secretary, Dallas

Pediatrics

Arr Nell Boelsche, Chairman, Galveston
Charles B. Lambeth, Secretary, Odessa

Physical Medicine and Rehabilitation

John R. Shull, Chairman, Dallas
Robert M. Izard, Jr., Secretary, Gonzales

Public Health

Elizabeth Gentry, Chairman, Austin
Marjorie E. Sewell, Secretary, Dallas

Radiology

Hugo F. Elmendorf, Jr., Chairman, San Antonio
George E. Plum, Secretary, Dallas

Surgery

William L. Sammis, Chairman, San Antonio
LeRoy J. Kleinsasser, Secretary, Dallas

Texas Medical Association Annual Session April 30-May 3 Dallas 1970

38 guest speakers plus 90 special and 250 TMA-member speakers
13 section programs
20 curbstone consultations
7 continental breakfast round tables 2 general meetings and luncheons 175 scientific and technical exhibits 7 special symposiums complete film program 28 specialty society programs physicians' and wives art exhibition sports—golf, tennis and skeet entertainment—don't miss the fabulous "Saturday Night at the Fairmont" party

REGISTER IN ADVANCE! See your current issue of **TEXAS MEDICINE** for details

APRIL 1970

TEXAS MEDICINE

U. C. SAN FRANCISCO
EDICAL CENTER LIBRARY
MAY 14 1970

MULTIPLY HANDICAPPED ● UNDERACHIEVERS ● DEPRESSION
DALLAS ● HOUSE OF DELEGATES ● SEX EDUCATION

Torbett, Hutchings, Smith Memorial Hospital
And The Torbett Clinic

306 Coleman Street
Post Office Box 60

Marlin, Texas

Telephone: WE 6-3561

GENERAL SURGERY
Howard O. Smith, M.D., F.A.C.S.
D. R. Swetland, M.D., F.A.C.S.
Howard L. Smith, M.D., F.A.C.S.

INTERNAL MEDICINE
W. F. McKinley, Jr., M.D.
James S. Bussell, M.D.
C. G. Brown, M.D.

EYE, EAR, NOSE AND THROAT
S. W. Hughes, M.D.

ALLERGY
Walter S. Smith, M.D.*

OBSTETRICS AND PEDIATRICS
M. A. Davison, M.D., F.A.C.O.G.
W. L. Reese, M.D., F.A.C.O.G.

RADIOLOGY
J. M. Brown, M.D., F.A.C.R.

PATHOLOGY
W. W. Klatt, M.D.
Ronald E. Henderson, Jr., M.D.
Kent Smith, M.D.

UROLOGY
Howard O. Smith, M.D., F.A.C.S.

DENTISTRY
B. E. Latimer, D.D.S.

NEUROPSYCHIATRY
S. B. Morrison, M.D.

DERMATOLOGY
Maurice C. Barnes, M.D., D.A.B.D.

Administrator:
J. D. Norris, Jr.

Superintendent of Nurses:
Ruby Lowrance, R.N.

Howard O. Smith, M.D., FACS, Chairman of the Board of Trustees, of Torbett, Hutchings, Smith Memorial Hospital and the Torbett Clinic which opened January, 1963. The original hospital was founded by Dr. J. W. Torbett, Sr., in 1898.

The Torbett Clinic and Memorial Hospital continues to utilize the Marlin Hot Mineral Water and other forms of physical therapy as an adjunct in the treatment of arthritis and allied rheumatic conditions.

*Expired 4-24-69.

THE DALLAS MEDICAL & SURGICAL CLINIC AND HOSPITAL

4105 Live Oak Street

DALLAS, TEXAS

Telephone TA 3-4151

*Geo. M. Underwood, M.D., F.A.C.P., Diagnosis & Gastroenterology, D.A.B. Internal Medicine & Gastroenterology
P. E. Luecke, Sr., M.D., F.A.A.P., Pediatrics Diplomate American Board Pediatrics
*G. A. Davidson, B.S., M.D., Dermatology
*Wm. H. Potts, B.A., F.A.C.P., Internal Medicine
*Ozro T. Woods, M.D., Surgery, Emphasizing Tumors
Richard M. Smith, M.D., F.A.C.P., Diagnosis & Internal Medicine
J. Wilbur Bourland, Jr., M.D., Obstetrics & Gynecology
Harry M. Spence, M.D., D.A.B.U., F.A.C.S., Urology
Wells M. Wade, D.D.S., Dental Surgery
Halcuit Moore, M.D., F.A.A.P., Pediatrics Diplomate American Board Pediatrics
John B. Bourland, M.D., Gynecology & Obstetrics Diplomate American Board OB-GYN
Raymond W. Burford, M.D., D.A.B.R., Radiology
Henry G. Montgomery, M.D., F.A.C.S., D.A.B.S., Surgery
Edwin M. Cleveland, M.D., Internal Medicine
John B. Allen, M.D., Internal Medicine Diplomate American Board Internal Medicine
R. M. Burnside, M.D., D.A.B.O., Ophthalmology
Adam D. Green, M.D., Surgery
Morris E. Magers, M.D., Internal Medicine Diplomate American Board Internal Medicine
B. Celia Slaughter, M.D., F.A.A.P., Pediatrics Diplomate American Board Pediatrics
D. W. Shuster, M.D., D.A.B.O., Otolaryngology and Otologic Surgery
P. E. Luecke, Jr., M.D., Pediatrics, F.A.A.P., Diplomate American Board Pediatrics
Channing Woods, M.D., Internal Medicine
William W. Hoffman, M.D., D.A.B.U., F.A.C.S., Urology
James M. Copps, M.D., D.A.B.O., Ophthalmology
Joe B. Caldwell, M.D., D.A.B.R., Radiology
Terry D. Allen, M.D., D.A.B.U., Urology
J. Boyd Hollabaugh, D.D.S., General Dentistry
George P. Fosmire, M.D., F.A.C.S., D.A.B.S., General Surgery
Richard C. Stone, M.D., Internal Medicine and Gastroenterology
Daniel L. Maddox, D.D.S., General Dentistry
William N. New, M.D., Dermatology
Donald A. Sutherland, M.D., Internal Medicine (Hematology)
John R. Woodward, M.D., Obstetrics & Gynecology, Diplomate American Board OB-GYN
Masashi Kawasaki, M.D., D.A.B.O., Otolaryngology, Tumor and Reconstructive Surgery of the Head and Neck
Miss Billye J. Norris, R.N., Director of Nurses
C. H. Rosamond, Administrator
Arthur L. Cook, Business Manager

*Inactive status

TERRELL'S LABORATORIES

T. C. TERRELL, M.D., F.C.A.P., F.A.C.P., DIRECTOR
JOHN S. TERRELL, M.D., F.A.A.P., ASSISTANT DIRECTOR

FORT WORTH, TEXAS

211 Medical Arts Building

DEPARTMENT OF PATHOLOGY
T. C. Terrell, M.D., F.C.A.P., F.A.C.P.
May Owen, M.D., F.C.A.P., F.A.C.P.
Alexander A. Kosinski, M.D., F.C.A.P., F.A.C.P.
Joan Windmiller, M.D., F.A.A.P.

DEPARTMENT OF RADIOLOGY
H. W. Banker, M.D., D.A.B.R., M.A.C.R.
Ernest E. Holt, M.D., D.A.B.R., M.A.C.R.
James C. Moore, M.D., D.A.B.R., M.A.C.R.

DEPARTMENT OF CHEMISTRY
LaMonte A. Tucker, Ph.D.

DEPARTMENT OF BACTERIOLOGY & MYCOLOGY
Robert F. Devlin, Ph.D.

CONSULTING & ANALYTICAL SERVICES

PATHOLOGY, FORENSIC PATHOLOGY & VETERINARY PATHOLOGY: Histology, Cytology.
CLINICAL PATHOLOGY: Serology, Bacteriology & Mycology, Parasitology, Hematology.
INDUSTRIAL & CLINICAL CHEMISTRY: Radioassay, SMA-12 survey and other Automated Procedures. Hormone Chemistry, Chromatography, Electrophoresis, Immunochemistry.
TOXICOLOGY: Drugs, Water, Foods & Biological materials.
MANUFACTURING DEPARTMENT: Allergenic Extracts and Treatment Sets, Mounting Media, Specifically Prepared Reagents and Stains for Laboratory Use.

TERRELL MEDICAL GROUP

FORT WORTH, TEXAS

210 Medical Arts Building

INTERNAL MEDICINE Diagnosis, Allergy, Cardiology	T. C. Terrell, M.D., F.C.A.P., F.A.C.P. Elizabeth A. Taylor, M.D.
NEUROPSYCHIATRY Electroencephalography	Henry G. Gardiner, Jr., M.D.
PEDIATRICS Pediatric Hematology Adolescent Medicine & Pediatric Consultation	Joan Windmiller, M.D., F.A.A.P. John S. Terrell, M.D., F.A.A.P.
CLINICAL PSYCHOLOGY	Michael W. Wheeler, Ph.D.

Administrator: Arthur Fuston

TEXAS MEDICINE

VOLUME 66 NUMBER 4 APRIL 1970

SCIENTIFIC ARTICLES

56 Programs for Multiply Handicapped Retardates

Bill J. Doggett is the superintendent of the Statewide Reception Center and the Brownwood State Home and School for Girls, facilities of the Texas Youth Council. Formerly, he was superintendent of the Austin State School. He is a graduate of Howard Payne College in Brownwood, did postgraduate work at Baylor University, and received a master of education degree from The University of Texas, Austin, in 1964.

60 The High-Risk and Underachieving Child

Empress Y. Zedler is chairman of the Department of Special Education and director of the Clinic for Communication Disorders, Southwest Texas State University, San Marcos. Her extensive research encompasses many types of learning disabilities and methods of alleviating them. Dr. Zedler is a fellow of the American Speech and Hearing Association and holds a Certificate of Clinical Competence in Speech Pathology. She also is a member of the Texas and American Psychological Associations. She is a founding member of the Division for Children with Learning Disabilities in International Council for Exceptional Children.

64 Childhood Depression

Mark J. Blotcky is a junior at The University of Texas (Southwestern) Medical School, Dallas. His coauthor is Larry R. Kimsey, assistant professor of psychiatry.

70 Emotional Education; Proposal for Pilot Project

Harry K. Davis of Galveston is clinical assistant professor, Department of Neurology and Psychiatry, The University of Texas Medical Branch. He is a member of the TMA Committee on Mental Health and chairman of its Subcommittee on Mental Health Preventive Measures. Dr. Davis is a diplomate of the American Board of Psychiatry and Neurology (Psychiatry), a fellow of the American Psychiatric Association, and a member of numerous other professional organizations.

74 Nutritional Rickets Among Indigent Children in Houston

Buford L. Nichols, Jr, is assistant professor of pediatrics, Baylor College of Medicine, Houston. His coauthors are Corinne Montandon, public health nutritionist, Nutrition Clinic, and Elaine Potts, research dietitian, Children's Clinical Research Center, Texas Children's Hospital, Houston.

78 Successful Chemotherapy for Childhood Rhabdomyosarcoma

W. W. Sutow, a diplomate of the American Board of Pediatrics, specializes in pediatric oncology at The University of Texas M D Anderson Hospital and

DOGGETT

ZEDLER

BLOTCKY

DAVIS

NICHOLS

SUTOW

KING

GIBBS

FALLIS

Tumor Institute, Houston. His coauthor, M. P. Sullivan, also is with the Institute's Department of Pediatrics, and is associate professor of pediatrics at The University of Texas Graduate School of Biomedical Sciences.

82 Ulcer of Ileum in a Premature Infant

Walter B. King, Jr, FACS, of Waco, is a diplomate of the American Board of Surgery and a past president of the Texas Surgical Society and Singleton Surgical Society.

84 Pediatric Gynecology

Joe S. McIlhaney, Jr, is now in private practice of obstetrics and gynecology in Austin. A graduate of Baylor College of Medicine, he interned at Jefferson Davis Hospital in Houston and returned to Baylor for his residency. His coauthor, Alan L. Kaplan, is associate professor of obstetrics and gynecology, Baylor College of Medicine.

87 Labor, Delivery, and Perinatal Death

C. E. Gibbs is associate professor, Department of Obstetrics and Gynecology, The University of Texas Medical School at San Antonio, and chairman of the TMA Committee on Maternal Health. A retired US Air Force colonel, Dr. Gibbs did the research for this article at Wilford Hall USAF Hospital at Lackland Air Force Base. He is a diplomate of the American Board of Obstetrics and Gynecology and a member of other professional organizations.

91 Radiological Case of the Month

This presentation, sponsored by the Texas Radiological Society, was prepared by John Jamison and Melvyn H. Schreiber, Department of Radiology, The University of Texas Medical Branch, Galveston.

96 Clinicopathologic Conference

Participants in this CPC from The University of Texas (Southwestern) Medical School and Parkland Memorial Hospital are Bruce D. Fallis, professor of pathology at Southwestern and senior pathologist and chief of autopsy service, Parkland; Stuart Frank, fellow in internal medicine; George C. Curry, assistant professor of radiology; Marvin D. Siperstein, professor of internal medicine; Norman W. Carter and Lawrence S. Cohen, associate professors of internal medicine; Donald W. Seldin, professor and chairman, Department of Internal Medicine; and Edwin H. Eigenbrodt, associate professor of pathology and guest editor.

PUBLICATION INFORMATION

Texas Medicine is published monthly by the Texas Medical Association.

Editorial and Business Offices: 1801 N. Lamar Blvd., Austin, Texas 78701; Telephone: Area Code 512 477-6704.

Second Class Postage paid at Austin, Texas, with additional entry at Fort Worth, Texas, under Act of March 3, 1879.

Subscription communications should be sent to the Business Offices, $3 per year for members; $6 for nonmembers; $8 for foreign; $3 for medical students; single copy, $1.

Contributions, previously unpublished, are welcomed for review; suggestions for preparation are available from the Editorial Offices. News and other items should be sent to the Editorial Offices by the 10th of the month preceding the month of publication. All contributions are sent at the owner's risk.

Printing Offices: c/o Stafford-Lowdon Company, 1114 West Daggett, Fort Worth 76104.

EDITORIALS

17 What Is Sex Education?
Gerald Sanctuary

21 House of Delegates—1970 Issues
W. H. Hamrick

22 Professional Liability Insurance—Why Does It Cost So Much?
R. E. Read

29 Communications to Texas Medicine: First Aid for Paperstorm Victims—Us
Sam A. Nixon

33 We Are Rightfully Indignant
Charles Max Cole

DEPARTMENTS

4 Association and Late News

39 Highlights of Coming Meetings

45 Continuing Education Courses

111 News

112 Dallas: Southwestern Sophistication

117 TMA Annual Session Housing Information

121 Personals

123 Medicine in Literature

124 In the Time of Your Life . . . LIVE

126 Pamphlets

126 Recent Deaths

ON THE COVER

It's that time of year again, and many Texas physicians are preparing to make their annual pilgrimage to resolve the business affairs of the Texas Medical Association and to refresh their scientific knowledge. This year's medical mecca is Dallas, a city already recognized as the Southwestern center of commerce, culture, cuisine, and couture, among other things. Follow the arrow and head toward good ideas, good friends, and good fun in Big D April 30-May 3.

NEXT MONTH

Focal points for May are the heart and the hand—suitable choices for spring. Scientific articles will be on immunology of transplantation; heart rate response to exercise by double Master's test; prosthetic heart valves in pregnancy; intraluminal venous angioma; diagnosis and treatment of arteriovenous fistulas; what to do and what not to do in management of hand injuries; cineradiography in a community hospital; and a CPC.

ASSOCIATION & LATE NEWS

Combining pleasure with business is the aim of the Texas Medical Association's 1970 Annual Session. And Texas physicians will have ample opportunity to do just that as well as to meet with some of the world's foremost medical leaders and to renew friendships with their colleagues around the state when they converge in Dallas April 30-May 3.

Scientific sessions headquarters during the four-day meeting will be the Fairmont Hotel. Business sessions will take place at the Statler Hilton Hotel; and the Woman's Auxiliary will have headquarters at the Sheraton-Dallas Hotel. Other hotels to be utilized as housing for TMA members include the Hotel Adolphus and the Baker Hotel.

Business Sessions: The Association's official business matters will be discussed and resolved by members of the House of Delegates, the TMA policy-making body, during their yearly meetings April 30 and May 1 and at an extra session of the House to consider the Himler Report on Sunday, May 3. The following reference committees will consider current policy issues at 2 p.m. Thursday, April 30, prior to reporting to the House of Delegates on Friday, May 1: Board of Councilors, Board of Trustees, Constitution and By-Laws, Legislation, Medical Service and Insurance, Miscellaneous Business, Public Relations, Reports of Officers and Committees, and Scientific Work. Additional meetings of the reference committee to discuss the Himler Report will be scheduled at 9 a.m. Saturday prior to Sunday's extra session of the House.

General Meetings: Highlighting the general meetings sessions on Friday and Saturday, May 1 and 2, will be luncheon addresses by two outstanding guest speakers. Maj. Gen. J. B. Medaris (Ret.) of Winter Park, Fla., former commanding general, US Army Ordnance Missile Command, will speak to members of TMA on Friday; and Dr. Gerald D. Dorman of New York City, President of the American Medical Association, will address his audience on Saturday. Maj. Gen. Medaris' topic will be "From Here to Infinity."

Other luncheon features on Friday will include recognition of the Fifty Year Club, Council on Annual Session, and chairman of the Committee on General Arrangements; announcement of scientific exhibits awards and recognition of senior authors of exhibits; and announcement of winners of the annual art exhibit. TMA President-elect Dr. Walter Walthall of San Antonio will preside.

Other speakers and topics to be featured at the Friday general meeting are Dr. John Adriani of New Orleans, legal implications of the package insert; Dr. William G. Reese of Little Rock, Ark., psychiatric aspects of the leading causes of death; Dr. Stanley E. Gitlow of New York, treatment of the alcoholic in private practice; and Dr. John L. Lewis of New York, undiagnosed gynecologic cancer masquerading as a benign condition.

Additional Saturday general meeting speakers and their subjects will be Dr. William D. Davis, Jr., of New Orleans, specter of hepatitis in a general hospital and the community; Dr. Barrett Kennedy of New Orleans, the differential diagnosis and management of the common wart; and Dr. Alan F. Guttmacher of New York, population problem—medicine's responsibility.

Other luncheon events on Saturday will be the installation of Dr. Walter Walthall of San Antonio as TMA President for 1970-1971; recognition of the 1969-1970 officers, the Past Presidents Association, and presidents of allied health professions and of paramedical groups; and presentation of the Anson Jones Awards. Presiding will be Dr. Charles Max Cole of Dallas.

Guest Speakers: Also featured during the Annual Session will be additional out-of-state guest speakers plus 225 special and TMA-member speakers.

Some of the guest speakers will be Dr. Fred L. Allman, Jr., of Atlanta, Ga.; Dr. Stephen M. Ayres of New York; Dr. Merrill A. Bender of Buffalo, N.Y.; Dr. Kurt Benirschke of Hanover, N.H.; Dr. William J. Brown of Atlanta, Ga.; Dr. James L. Dennis of Oklahoma City, Okla.; Dr. Philip P. Ellis of Denver, Colo.; Dr. Donnell D. Etzwiler of Minneapolis, Minn.; Dr. Robert J. Freeark of Chicago; and Dr. Carl V. Granger of Boston, Mass.

Other guest speakers include Dr. Colin B. Holman of Rochester, Minn.; Dr. Jack Chandler Hughston of Columbus, Ga.; Dr. Thomas J. Kirby of Rochester, Minn.; Dr. Robert T. Manning of Lawrence, Kan.; Dr. Blaine E. McLaughlin of Grand Forks, N.D.; Dr. Ross L. McLean of Austin, formerly of Atlanta, Ga.; Dr. John A. Mohr of Oklahoma City; Dr. Delbert Oberteuffer (PhD) of Columbus, Ohio; Dr. Francis X. Paletta of St. Louis, Mo.; and Dr. George P. Rosemond of Philadelphia.

Additional speakers will be Dr. Anthony Ruppersberg, Jr., of Columbus, Ohio; Dr. Maynard I. Shapiro of Chicago; Dr. James L. Sheehy of Los Angeles; Dr. Peter V. Siegel of Washington, D.C.; Dr. Marvin Stein of Brooklyn, N.Y.; Dr. Gabriel F. Tucker, Jr., of Philadelphia; and Dr. Frank L. Weakley of Cleveland, Ohio.

Special Programs: TMA Committees and other medically related groups will sponsor special programs and semi-

nars during the Annual Session. Included will be a discussion on medical care of the elderly; a dinner presentation on the history of anesthesia in Texas; a conference on school health; and symposia on alcoholism, cardiovascular diseases, maternal deaths in Texas, and emergency room care. A special seminar on medical writing is also planned; and a new feature will be introduced for the first time at the Dallas meetings when the Council on Annual Session sponsors a Forum of Original Research on Friday, May 1, and Saturday, May 2. A special advance seminar on acute medicine and cardiopulmonary resuscitation is scheduled Thursday, April 30. Tuition for the seminar is $125.

Entertainment and Recreation: On the sports and entertainment agenda are golf and tennis tournaments, a skeet and trap shoot, physicians' and wives' art exhibition, class reunions, fraternity and alumni parties, and a fabulous cocktail party, dinner, and dance. Billed as "the affair of the year" for Texas physicians and their wives, "Saturday Night at the Fairmont" will be the grand social finale of the fun-filled 1970 Annual Session. The evening will get under way at 8 p.m. in the Regency Ballroom at the elegant new Fairmont Hotel.

Other Features: Participants in 20 informal Curbstone Consultations will be able to sip beer, coffee, or soft drinks while "talking shop" and exchanging ideas on a variety of medical subjects. These sessions are scheduled on Friday, May 1, from 5-6:30 p.m. and Saturday, May 2, from 4-5:30 p.m. at the Fairmont Hotel.

Satisfying hunger and intellectual curiosity at the same time will be those physicians who attend a choice of seven Continental Breakfast Round Tables Friday, May 1, also at the Fairmont. Beginning at 8:15 a.m., a breakfast of juice, coffee, and sweet rolls will be served and will be followed by an informal discussion period featuring a guest speaker.

Other scientific highlights will be 13 scientific section programs, 28 specialty society programs, 175 scientific and technical exhibits, and a film program.

TMA members will honor deceased physicians and deceased wives of physicians at a Memorial Service from 9-9:30 a.m. Sunday, May 3.

Further Information: The complete advance program of the Annual Session was published beginning on page P-1 of the March issue of *Texas Medicine*. Housing information appears on pp. 117-120 of this issue. The Fairmont Hotel is completely filled and can no longer honor new reservation requests.

House of Delegates Plans Doubleheader in Dallas

The Texas Medical Association's House of Delegates has scheduled an extra session during the 1970 Annual Session.

The extra session has been prompted by the report of the American Medical Association's Committee on Planning and Development (Himler report), which is potentially one of the most far-reaching of all studies. The committee has presented some 57 recommendations, most of which relate to long-term policy and organization and which encompass a wide diversity of assumptions, conclusions, and suggestions.

In view of the potential effects of the recommendations on the practice of medicine and on the AMA, the report is presently being studied by TMA councils and committees and by county medical societies. These reports and resolutions will be considered by reference committees at 9:30 a.m. Saturday, May 2. The House of Delegates will act on the reports of the reference committees at its final session starting at 9:30 a.m. Sunday, May 3.

Prior to the additional reference committee meeting and the extra House session, the first meeting of the House will take place at 10:30 a.m. Thursday, April 30, in the Grand Ballroom of the Statler Hilton Hotel. Reference committees of the House will meet at 2 p.m. Thursday. Colonel Frank Borman will address the delegates on the topic, "Space—Present and Future," at a breakfast meeting at 7:30 a.m. Friday, May 1. The breakfast will be sponsored by Blue Cross-Blue Shield of Texas. The second session of the House will be held at 7:30 p.m. Friday, and reference committees will present their reports at that time.

Texas MDs Ask Support In Defense of Criticism

Texas physicians have asked for the support of their Congressmen and Senators in defense of an honorable profession that has been unjustly maligned, criticized, and attacked in recent months for the financial failures of the Medicare and Medicaid programs.

In a letter sent to Senators John Tower and Ralph Yarborough and all 23 US Congressmen from Texas, Texas Medical Association President Dr. Charles Max Cole of Dallas said, "We look to our statesmen in Congress to set the record straight, to let it be known that they have faith in the medical profession, and to insist that the blame for present difficulties be placed where it rightfully belongs."

Dr. Cole's letter, sent on behalf of the 10,500 members of the Association, states that the faults of the Medicare and Medicaid programs were built into them by their designers and that

UNIT VALUES FOR TMA MEMBERS RETIREMENT PLAN AND TRUST
(As a service to participants in the TMA Members Retirement Plan and to physicians interested in enrolling in the program, comparative values for investment media are published regularly in *Texas Medicine*. Figures shown are the latest available at press deadline and are for comparison purposes only. Most daily newspapers list up-to-the-minute values on mutual funds.)

Investment Media	Original Price 9-30-68	Net Asset Value Per Share 1-31-70	Net Asset Value Per Share 1-31-70*
Mercantile National Bank Stock Fund	$10.25	$ 9.44	$ 9.44
Loomis-Sayles Capital Development Fund	14.20	10.71	11.03
T. Rowe Price Growth Stock Fund	25.93	24.45	25.42
Loomis-Sayles Mutual Fund	16.82	13.79	14.20
Stein Roe & Farnham Balanced Fund	23.34	18.86	19.42
Mercantile Bank Fixed Income Fund	10.00	9.09	9.09

*Adjusted to include dividends and distributions since 9-30-68.

it is grossly unfair to expose the medical profession to criticism by implying widespread abuse of the programs, when such abuse, if it exists, involves only a miniscule portion of the profession. "The vast majority of physicians are honorably discharging their responsibilities both to their patients and to these programs," Dr. Cole told the Texas Senators and Congressmen. "We are discouraged and disheartened at the publicity that results from release of such information as the report of the Senate Finance Committee, implying as it does widespread abuses by physicians. If these attacks on our profession continue, the ill people of this country will be the greatest losers," the Dallas surgeon said.

Commenting on the recently released staff report of the Finance Committee, Dr. Cole said, "We resent that physicians are being singled out as being responsible for the financial problems of Medicare and Medicaid. While criticizing physicians and other providers of services for the financial problems, the staff report obviously has failed to emphasize that payments to physicians represent only a relatively small percentage of the cost of these programs. In Texas, for example, payments to doctors of medicine represent only about 11% of the cost of the Medicaid program."

Although recommendations are now being advanced for fee schedules to be imposed upon physicians, the Finance Committee staff report failed to tell the American public that the federal government is paying less than usual and customary fees to a great number of physicians, Dr. Cole observed. Fees were "frozen" more than a year ago by the Department of Health, Education, and Welfare. Dr. Cole stated that these reductions in payments have been imposed during a period of inflation when costs of maintaining a practice have been increasing at the rate of 8% a year. "Corresponding wage freezes have not been imposed by the federal government on other individuals, business, and industry," Dr. Cole said.

In discussing the implications of widespread fraud in the Medicare and Medicaid programs, Dr. Cole said that TMA knows from extensive study and inquiry that fraud is not rampant in the programs. While noting that only an extremely small number of questionable claims for payment have arisen in Texas, he reemphasized TMA's position that, if cases of abuse are found, the Association stands ready to initiate appropriate disciplinary action.

Taking note of the overall status of the Medicare and Medicaid programs, Dr. Cole said, "The simple fact is that the federal government has promised more care than it can deliver and more than the taxpayer may be willing to pay for. We feel that it is inappropriate and morally wrong for government to promise medical care, to ask providers of services to subsidize it by reducing fees and reimbursement payments, and then to criticize them for the soaring costs of the programs."

TMA President Defends Physicians in Broadcast

Texas Medical Association President Dr. Charles Max Cole of Dallas has recorded a 90-second "Guest Commentary" on Medicare and Medicaid for KBAT Radio in San Antonio. His message was broadcast six times on March 20 and six times on March 21. KBAT news director is Joe Simpson.

Dr. Cole's statement explained TMA's position in defense of the medical profession concerning recent attacks on physicians for the financial failures of the Medicare and Medicaid programs. It followed the content of the letter recently sent by the Association to Texas Senators and Congressmen asking for their support in setting the record straight.

The master tape of the broadcast is on file in Dallas, and copies will be sent to county medical societies which can secure radio broadcast time for its use. Requests for copies may be addressed to Jon R. Hornaday, Director of Public Relations, TMA, 1801 N. Lamar Blvd., Austin 78701.

Health Assistants Finish Training; All Find Jobs

Twenty graduates of the first class in the Health Assistants Program in Laredo received their diplomas in ceremonies on Feb. 27 and have now been employed as health assistants.

Sponsored by Project HOPE through the Laredo-Webb Counties Health Department, Mercy Hospital, and Laredo Junior College, the three- to five-year program provides a new category of trained health personnel who will play a significant role in the extension of additional health care services to the community. Following the intensive four-month course, including health training, basic education, and cultural information, the graduating students are prepared to work under nursing supervision in any health care environment.

States Must Now Report Medicaid Payments to IRS

Recent regulations issued by the US Department of Health, Education, and Welfare require states to report to the Internal Revenue Service amounts paid to providers of Medicaid services, according to an article in the March 9 issue of American Medical *News*.

IRS forms giving amounts paid to physicians, dentists, pharmacists, opticians, nursing homes, hospitals, and other individuals and institutions that provide service to Medicaid patients will be filed by states each year. States will also be required to identify each individual provider of service by Social Security number and to identify partnerships and corporations by an employer identification number. Procedures for verifying with recipients whether or not services billed by providers were actually received must also be established by states; but such verification may be made by spot checking, HEW said.

Published in the *Federal Register* on Feb. 28, the interim regulations are effective immediately.

Premedical Group Honors Physician at Convention

Former president of the University of Colorado and executive director of the Association of American Medical Colleges for many years, Dr. Ward Darley, will receive the Alpha Epsilon Delta Distinguished Service Award for his contributions to medical and premedical education.

The international premedical honorary fraternity will honor Dr. Darley at an awards luncheon during its 18th national convention April 23-25 at the University of Denver. Business sessions are also scheduled during the convention, and Alpha Epsilon Delta will join the University of Colorado School of Medicine in sponsoring a special Pre-Med Day Conference at the school's medical center.

Texas chapters of the society, which will also make ten $250 cash awards to students entering medical school next fall, are located at The University of Texas at Austin, Texas Tech University, Baylor University, and the University of Houston.

This is the question we are asking of employers, in our April advertising in three national publications:

Newsweek, April 13; Time, April 27, and Wall Street Journal, April 7. Plus a long list of business and professional magazines in Texas. (And in most of these, it's in full color.)

The answer to our question is, of course, that with BLUE CROSS® and BLUE SHIELD,®' all that time-consuming claims administration is done for him — by experts. Hospital and doctor working with Blue Cross and Blue Shield.

It's easier and easier to see why —

*Dartnell Institute of Business Research

"Everybody's swingin' to the Blues!"

BLUE CROSS® and BLUE SHIELD®'
Hospital and Health Care Coverage (GROUP HOSPITAL SERVICE, INC.)
Medical and Surgical Benefits (GROUP LIFE & HEALTH INSURANCE COMPANY)
OF TEXAS

MAIN AT NORTH CENTRAL EXPRESSWAY ■ DALLAS, TEXAS 75222

® American Hospital Association
®'National Association of Blue Shield Plans

angina can strike any time... any place

help protect your angina patients with ISORDIL® SUBLINGUAL (ISOSORBIDE DINITRATE)

Prescribe ISORDIL SUBLINGUAL (5-mg. tablets) for treatment of acute attacks or for prophylaxis when increased physical or emotional stress place an additional burden on your angina pectoris patients. ISDRDIL SUBLINGUAL acts almost as fast as nitroglycerin, yet lasts hours longer. Reliable because it's stable.

ISORDIL® (isosorbide dinitrate) dilates coronary arteries and significantly reduces the number, duration and severity of angina attacks. Exercise tolerance is also increased in some patients.

Available In four additional dosage formulations to provide flexible management of your angina pectoris patients.

Prescribe ISORDIL® 10 mg. (scored, oral tablets) or ISORDIL® TEMBIDS® (40-mg. sustained action tablets) for basic prophylactic treatment of angina pectoris.

Prescribe ISDRDIL® ORAL 5 mg. (scored, oral tablets) to facilitate small adjustments in dosage.

Prescribe ISORDIL® with PHENDBARBITAL when anxiety or emotional disturbances are important factors in the clinical picture. Each tablet contains 10 mg. isosorbide dinitrate and 15 mg. (¼ gr.) phenobarbital, U.S.P., *(Warning: Phenobarbital may be habit forming).*

INDICATIONS: *Sublingual*—for prevention and treatment of angina pectoris. *Oral*—for relief of angina pectoris (pain of coronary artery disease); the oral dosage forms are not intended to abort the acute anginal episode, but are widely regarded as useful in the prophylactic treatment of angina pectoris.

CONTRAINDICATION: Idiosyncrasy to this drug.

WARNING: Data supporting the use of nitrites during the early days of the acute phase of myocardial infarction (the period during which clinical and laboratory findings are unstable) are insufficient to establish safety.

PRECAUTIONS: Intraocular pressure is increased; therefore, caution is required in administering to patients with glaucoma. Tolerance to this drug and cross-tolerance to other nitrites and nitrates may occur. In patients with functional or organic gastrointestinal hypermotility or malabsorption syndrome, it is suggested that either the ISORDIL ORAL 5 mg. or ISORDIL 10 mg. oral tablet or ISORDIL SUBLINGUAL be the preferred therapy. The reason for this is that a few patients have reported passing partially dissolved ISORDIL TEMBIDS in their stools. This phenomenon is believed to be on the basis of physiologic variability and to reflect rapid gastrointestinal transit of the sustained action tablet. ***ISORDIL TEMBIDS should not be chewed.***

ADVERSE REACTIONS: Cutaneous vasodilation with flushing. Headache is common and may be severe and persistent. Transient episodes of dizziness and weakness as well as other signs of cerebral ischemia associated with postural hypotension may occasionally develop. This drug can act as a physiological antagonist to norepinephrine, acetylcholine, histamine, and many other agents. An occasional individual exhibits marked sensitivity to the hypotensive effects of nitrite, and severe responses (nausea, vomiting, weakness, restlessness, pallor, perspiration and collapse) can occur even with the usual therapeutic dose. Alcohol may enhance this effect. Drug rash and/or exfoliative dermatitis may occasionally occur.

Consult direction circular before prescribing.

May we send you reprints, detailed information and/or professional samples?

TEMBIDS®—Trademark for Sustained Action Tablets

IVES LABORATORIES INC.
685 Third Avenue, New York, N.Y. 10017

Ives®

Painful night leg cramps...

unwelcome bedfellow for any patient– including those with arthritis, diabetes or PVD

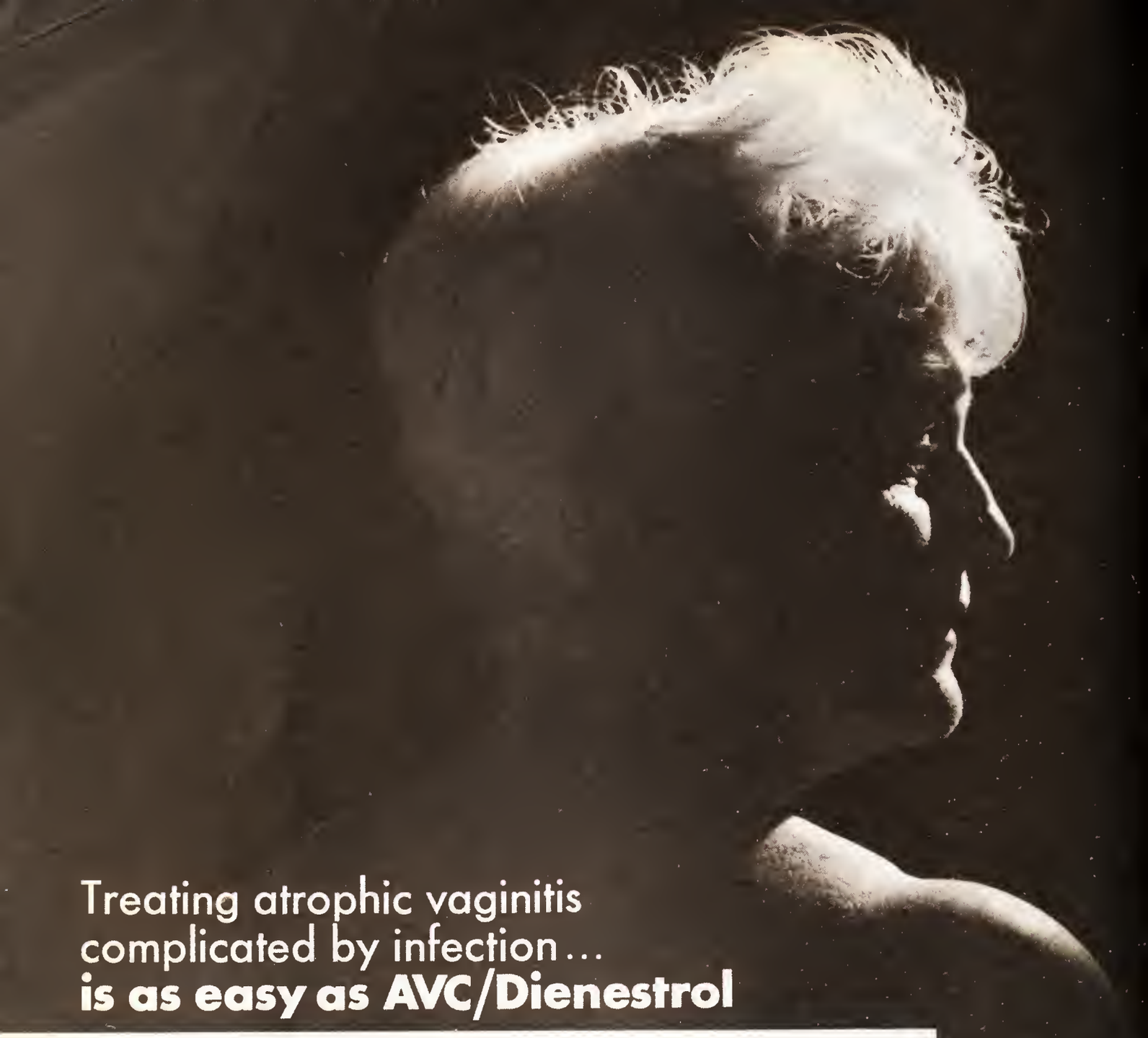
One thing patients can sleep without, particularly patients with chronic disease conditions such as arthritis, diabetes or PVD, is painful night leg cramps. Although seldom the presenting complaint, night leg cramps can tie your patients up in painful knots. Now, just one tablet of QUINAMM at bedtime can usually bring an end to shattered sleep and needless suffering. Your patients will sleep restfully—gratefully—with QUINAMM, specific therapy to prevent painful night leg cramps.

Prescribing Information—Composition: Each white, beveled, compressed tablet contains: Quinine sulfate, 260 mg., Aminophylline, 195 mg. **Indications:** For the prevention and treatment of nocturnal and recumbency leg muscle cramps, including those associated with arthritis, diabetes, varicose veins, thrombophlebitis, arteriosclerosis and static foot deformities. **Contraindications:** QUINAMM is contraindicated in pregnancy because of its quinine content. **Precautions/Adverse Reactions:** Aminophylline may produce intestinal cramps in some instances, and quinine may produce symptoms of cinchonism, such as tinnitus, dizziness, and gastrointestinal disturbance. Discontinue use if ringing in the ears, deafness, skin rash, or visual disturbances occur. **Dosage:** One tablet upon retiring. Where necessary, dosage may be increased to one tablet following the evening meal and one tablet upon retiring. **Supplied:** Bottles of 100 and 500 tablets.

THE NATIONAL DRUG COMPANY
DIVISION OF RICHARDSON-MERRELL INC.
PHILADELPHIA, PENNSYLVANIA 19144

Quinamm™
(quinine sulfate 260 mg., aminophylline 195 mg.)

Specific therapy for night leg cramps



Treating atrophic vaginitis complicated by infection... is as easy as AVC/Dienestrol

Dienestrol helps restore estrogen-deficient vaginal mucosa.
It is the *particular* ingredient in AVC/Dienestrol that improves cell maturation counts[1,2] — helps stimulate the restoration of normal vaginal epithelium to resist infection.

Two recent studies reconfirm AVC/Dienestrol efficacy.[1,2] AVC/Dienestrol is proven effective against monilial, trichomonal, nonspecific bacterial vaginitis, and mixed infections.[1,2] AVC/Dienestrol combats infection, helps restore tissue resistance to reinfection.

So even in complex cases, the treatment can remain the same. Comprehensive. Effective. Easy as AVC/D.

Contraindications: Known sensitivity to sulfonamides; diagnosis or familial history of carcinoma of the genital tract or breasts; precarcinomatous lesions of the vagina or vulva; palpable uterine fibromyoma; mammary fibroadenoma; depressed liver function.

Precautions/Adverse Reactions: The usual precautions for topical and systemic sulfonamides should be observed because of the possibility of absorption. Burning, increased local discomfort, skin rash, urticaria or other manifestations of sulfonamide toxicity or sensitivity are reasons to discontinue treatment. The use of AVC/Dienestrol does not preclude the necessity for careful diagnostic measures to eliminate the possibility of neoplasia of the vulva or vagina. Manifestations of excessive estrogenic stimulation through dienestrol absorption may occur. These include uterine bleeding, breast tenderness, exacerbation of menstrual irregularity and provocation of serious bleeding in women sterilized because of endometriosis. Endometrial withdrawal bleeding may occur if use is suddenly discontinued.

Dosage: One applicatorful or one suppository intravaginally once or twice daily.

Supplied: 'AVC/Dienestrol Cream'—Four ounce tube *with* applicator. 'AVC' and 'AVC/Dienestrol Suppositories'—Box of 12 *with* applicator.

References: (1) Solerno, L. J.; Ortiz, G., and Turkel, V.: Vaginitis: A Diagnostic and Therapeutic Approach, Scientific Exhibit, presented at the 115th Annual A.M.A. Convention, Chicago, Illinois, June 1966. (2) Nugent, F. B., and Myers, J. E.: Pennsylvania Med. 69:44, 1966.

THE NATIONAL DRUG COMPANY
DIVISION OF RICHARDSON-MERRELL INC
PHILADELPHIA, PENNSYLVANIA 19144

AVC/Dienestrol

Cream (dienestrol .01%, sulfonilamide 15.0%, aminacrine hydrochloride 0.2%, allantoin 2.0%)
Suppositories (dienestrol 0.70 mg., sulfonilamide 1.05 Gm., aminacrine hydrochloride 0.014 Gm., allantoin 0.14 Gm.)

TRADEMARK. A V C AV-920A 7/69

Remember how great milk of magnesia tasted?

Almost as good as castor oil.
But now you can spare the taste buds and spoil the patient with a modern Dulcolax tablet or suppository.

And Dulcolax works so predictably that the time of bowel movement can often be predicted. Tablets taken at night usually produce a bowel movement the following morning. Suppositories generally work in 15 minutes to an hour.

For preoperative preparation, a combination of tablets at night and a suppository the next morning usually cleans the bowel thoroughly.

Dulcolax suppositories may be particularly helpful when straining should be avoided, as in postoperative care. Keep in mind, however, that the drug is contraindicated in the acute surgical abdomen.

Dulcolax®...it's predictable
bisacodyl

license from Boehringer Ingelheim G.m.b.H

Geigy Pharmaceuticals, Division of Geigy Chemical Corporation, Ardsley, New York 10502

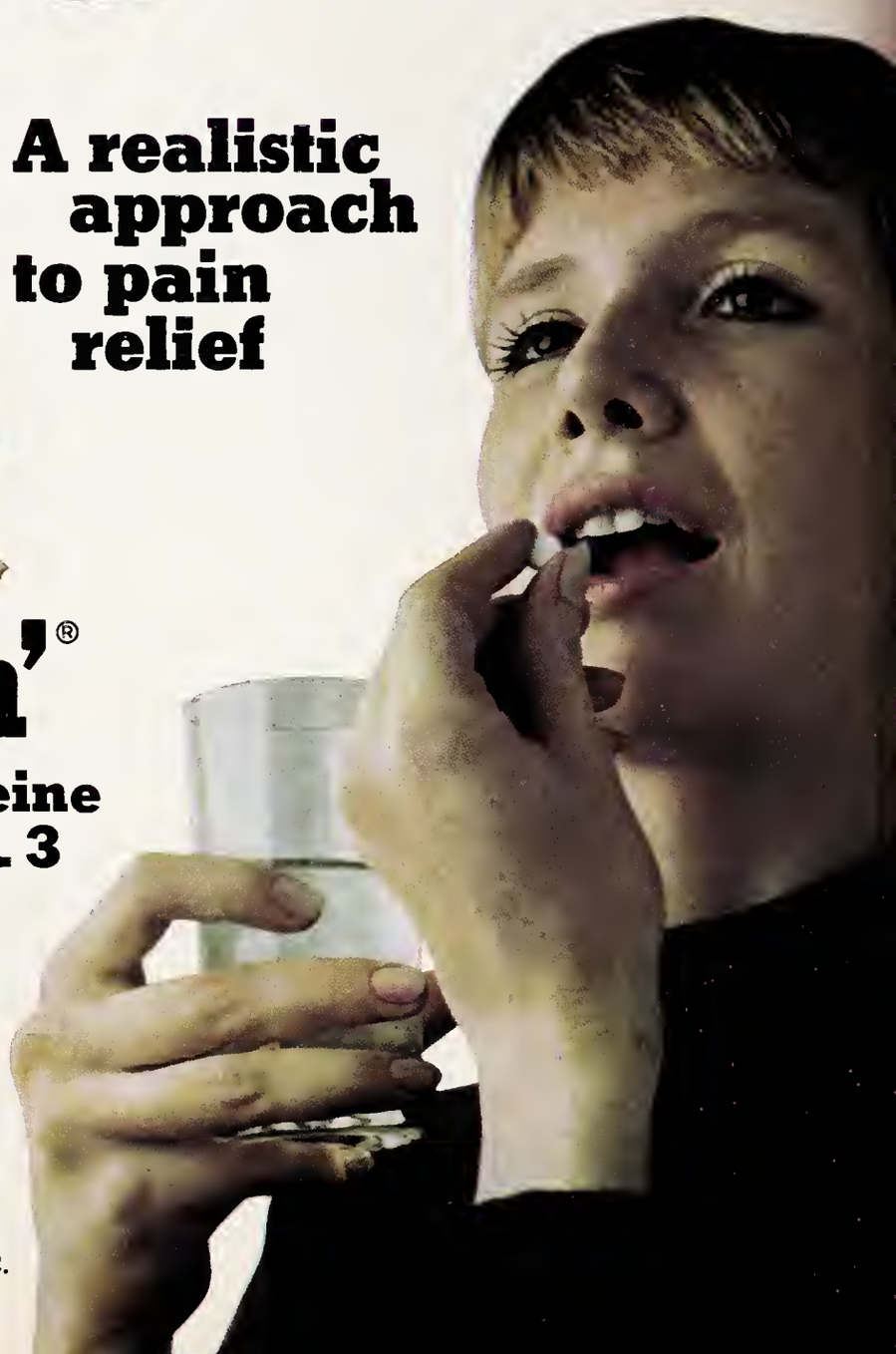
DU-7015

A once-popular treatment for back pains was to have the seventh son of a seventh son stand or walk on the patient's back.

The pain of earache was allegedly relieve by holding a hot roasted onion to the ear.

For headache, a sovereign remedy was to wear a snakeskin round one's head.

A realistic approach to pain relief



'Empirin'®

Compound with Codeine Phosphate gr. 1/2 No. 3

Each tablet contains:
Codeine Phosphate gr. 1/2 (Warning—May be habit forming), Phenacetin gr. 2 1/2, Aspirin gr. 3 1/2, Caffeine gr. 1/2.

keeps the promise of pain relief

'B.W. & Co.' narcotic products are Class "B", and as such are available on oral prescription, where State law permits.

BURROUGHS WELLCOME & CO. (U.S.A.) INC.
Tuckahoe, N.Y.

IN ASTHMA
IN EMPHYSEMA

optional therapy

THE mudranes®

All Mudranes are bronchodilator-mucolytic in action, and are indicated for symptomatic relief of bronchial asthma, emphysema, bronchiectasis and chronic bronchitis. **MUDRANE tablets** contain 195 mg. potassium iodide; 130 mg. aminophylline; 21 mg. phenobarbital (Warning: may be habit-forming); 16 mg. ephedrine HCl. **Dosage** is one tablet with full glass of water, 3 or 4 times a day. **Precautions** are those for aminophylline-phenobarbital-ephedrine combinations. **Iodide side-effects:** May cause nausea. Very long use may cause goiter. Discontinue if symptoms of iodism develop. **Iodide contraindications:** Tuberculosis; pregnancy (to protect the fetus against possible depression of thyroid activity). **MUDRANE-2 tablets** contain 195 mg. potassium iodide; 130 mg. aminophylline. **Dosage** is one tablet with full glass of water, 3 or 4 times a day. **Precautions** are those for aminophylline. **Iodide side-effects and contraindications are listed above. MUDRANE GG tablets** contain 100 mg. glyceryl guaiacolate; 130 mg. aminophylline; 21 mg. phenobarbital (Warning: may be habit-forming); 16 mg. ephedrine HCl. **Dosage** is one tablet with full glass of water, 3 or 4 times a day. **Precautions** are those for aminophylline-phenobarbital-ephedrine combinations. **MUDRANE GG-2 tablets** contain 100 mg. glyceryl guaiacolate; 130 mg. aminophylline. **Dosage** is one tablet with full glass of water, 3 or 4 times a day. **Precautions:** Those for aminophylline. **MUDRANE GG Elixir.** Each teaspoonful (5 cc) contains 26 mg. glyceryl guaiacolate; 20 mg. theophylline; 5.4 mg. phenobarbital (Warning: may be habit-forming); 4 mg. ephedrine HCl. **Dosage:** Children, 1 cc for each 10 lbs. of body weight; one teaspoonful (5 cc) for a 50 lb. child. Dose may be repeated 3 or 4 times a day. Adult, one tablespoonful, 4 times daily. All doses should be followed with ½ to full glass of water. **Precautions:** See those listed above for Mudrane GG tablets.

MUDRANE—original formula
First choice

MUDRANE-2
When ephedrine is too exciting or is contraindicated

MUDRANE GG
During pregnancy or when K.I. is contraindicated or not tolerated

MUDRANE GG-2
A counterpart for Mudrane-2

MUDRANE GG ELIXIR
For pediatric use or where liquids are preferred

Clinical specimens available to physicians.

WILLIAM P. POYTHRESS & COMPANY, INC., RICHMOND, VIRGINIA 23217

Manufacturers of Ethical Pharmaceuticals

CAUTION:

OVEREATING MAY BE HAZARDOUS TO YOUR HEALTH.

According to the Framingham Heart Study, the obese face:

86% greater risk of angina pectoris,
82% greater risk of diabetes,
71% greater risk of coronary heart disease.*

Obesity may also aggravate osteoarthritis, flat feet, intertriginous dermatitis, varicose veins, and ventral or diaphragmatic hernias.[1-3]

If you are considering weight reduction, consider

Preludin®

phenmetrazine hydrochloride

Endurets®

prolonged-action tablets

Often effective

Controlled studies in a general patient population have shown that when Preludin is used with diet, the rate of weight loss exceeds that obtained by placebo and diet.

Long acting

Slow, even release of the active principle usually suppresses appetite continuously for about 12 hours.

Once-a-day dosage

One Endurets tablet after breakfast. It helps reduce weight and costs, conveniently.

For contraindications, warning, precautions, and adverse reactions, please see the full prescribing information.
It is summarized on this page.

Where there's no will there's a therapeutic way.

*Among persons 20% or more overweight as compared with median weight for persons of like height and sex.

1. Kannel, W.B., *et al.*: *Circulation* 35:734, 1967.
2. Thomas, H.E., Jr., *et al.*: *Med. Times* 95:1099, 1967.
3. Albrink, M.J., in: Beeson, P.B. & McDermott, W. (eds.): *Cecil-Loeb Textbook of Medicine*, ed. 12, Phila.: W.B. Saunders Co., 1967.

Preludin®
phenmetrazine hydrochloride

Preludin is indicated only as an anorexigenic agent in the treatment of obesity. It may be used in simple obesity and in obesity complicated by diabetes, moderate hypertension (see Precautions), or pregnancy (see Warning).

Contraindications: Severe coronary artery disease, hyperthyroidism, severe hypertension, nervous instability, and agitated prepsychotic states. Do not use with other CNS stimulants, including MAO inhibitors.

Warning: Do not use during the first trimester of pregnancy unless potential benefits outweigh possible risks. There have been clinical reports of congenital malformation, but causal relationship has not been proved. Animal teratogenic studies have been inconclusive.

Precautions: Use with caution in moderate hypertension and cardiac decompensation. Cases involving abuse of or dependence on phenmetrazine hydrochloride have been reported. In general, these cases were characterized by excessive consumption of the drug for its central stimulant effect, and have resulted in a psychotic illness manifested by restlessness, mood or behavior changes, hallucinations or delusions. Do not exceed recommended dosage.

Adverse Reactions: Dryness or unpleasant taste in the mouth, urticaria, overstimulation, insomnia, urinary frequency or nocturia, dizziness, nausea, or headache.

Dosage: One 25 mg. tablet b.i.d. or t.i.d. Or one 75 mg. Endurets tablet a day, taken by mid-morning.

Availability: Pink, square, scored tablets of 25 mg. for b.i.d. or t.i.d. administration, in bottles of 100 and 1000.

Pink, round Endurets® prolonged-action tablets of 75 mg. for once-a-day administration, in bottles of 100 and 1000.

(B)R3-46-560-B

For complete details, please see full prescribing information.

Under license from
Boehringer Ingelheim G.m.b.H.

Geigy Pharmaceuticals
Division of
Geigy Chemical Corporation
Ardsley, New York 10502

PR-7169

Each 5 cc. contain erythromycin estolate equivalent to 250 mg. erythromycin base.
When mixed as directed, each 5 cc. will contain erythromycin estolate equivalent to 125 mg. erythromycin base.
When mixed as directed, each cc. will contain erythromycin estolate equivalent to 100 mg. erythromycin base.
Each 5 cc. contain erythromycin estolate equivalent to 125 mg. erythromycin base.
Each tablet contains erythromycin estolate equivalent to 125 mg. erythromycin base.
Each Pulvule® contains erythromycin estolate equivalent to 125 mg. erythromycin base.
Each Pulvule contains erythromycin estolate equivalent to 250 mg. erythromycin base.
The many forms of Ilosone®
Erythromycin Estolate
Lilly
Additional information available upon request.
Eli Lilly and Company
Indianapolis, Indiana 46206
900761

TEXAS MEDICINE

VOLUME 66 NUMBER 4 APRIL 1970

Devoted to the interests of the medical profession and public health in Texas

BOARD OF PUBLICATION
Charles P. Hardwicke, MD, Austin
Chairman
James A. Hallmark, MD, Fort Worth
John M. Smith, Jr., MD, San Antonio
Vice Chairman
R. Harvey Bell, MD, Palestine
N. L. Barker, MD, Paris
C. W. Yates, MD, Rosenberg
Don G. Harrel, MD, Dallas

TMA OFFICERS
Charles Max Cole, MD, Dallas
President
C. Lincoln Williston, Austin
Executive Secretary

EDITORIAL AND BUSINESS OFFICES
1801 North Lamar Blvd., Austin
Telephone: 477-6704
Marilyn Baker, Managing Editor
Rae Valgert, Assistant Managing Editor
Nancy Arthurs, Assistant Editor
Sharon Walker, Editorial Assistant
Judy Harris, Editorial Secretary
E. Maxwell Jones, Business Manager
Jon R. Hornaday, Advertising Director
Anne Sheinutt, Advertising Assistant

PRINTING OFFICES
c/o Stafford-Lowdon Company
1114 West Daggett, Fort Worth 76104

Subscriptions: $3 per year for members; $6 for nonmembers; $8 for foreign; $3 for medical students.
Single copy: $1.

ght 1970 by The Texas Medical Association.
ned and issued monthly by the Association.

WHAT IS SEX EDUCATION?

The object of sex education is to encourage and to enable society to develop an increasingly sane attitude towards human sexuality. Man's sexuality, I think, is not solely the way he expresses himself as a reproductive or genital animal; it is the whole of the way in which we react, as a man or as a woman, to the people, events, and things around us. We also express our sexuality physically with the person we love, but I want to emphasize the broad context of sexuality rather than its physical expression alone.

How do boys and girls learn what it is to be a man or a woman? They look at their own parents and other adults they know. They also learn from what they read and what they see on the TV. Most children, by the time they get into school, have seen 3,000 or more hours of TV programs. What do they see? Seldom a consistently realistic picture of adult men and women.

As they grow older, they see movies ranging from the gently titillating to the grossly pornographic. The effect of the latter on the young would be hard to measure, but it is part of their sexual education.

Young people are also subjected to the advertising campaigns which aim to persuade us that we will be more desirable if we buy the products. Sexual success is constantly emphasized in the advertisements, and there is little or no emphasis on the quality of personal relationships.

In fact, younger people are getting sex education all the time simply by living, relating to people, and seeing what happens around them. But for many of them this is not enough. True, children who grow up in happy families with parents who answer their questions have a good chance of developing realistic ideas. But what of children whose only models are the dropouts of our prosperous society?

I find that many of my clients with marital problems are themselves the products of broken homes. They have not learned much of what it is like to be an adult in a continuing and close relationship with someone else. Their sex education, too, is inadequate; they are unsure of their maleness or femaleness.

This is especially true of children who grow up under the influence of only one parent, usually the mother. If mother has a bitter view of the opposite sex, she may pass it on to her children. This will greatly influence their idea of themselves and the way their own personal relationships develop.

We are far from surrounded by sexual sanity today. The mass availability of pornography, the depressingly high rates of sexual offenses, venereal disease, and unwanted pregnancies, are to me symptoms of a society that is sexually sick, to say the least.

I am not so naive as to think that we can wave some magic wand and create a society which has no sexual hang-ups. But I do suggest that it is our responsibility, as professional people, to make some start to bridge this yawning gulf between what we would like to see in terms of sexual behavior and what actually stares us in the face. I used the word responsibility advisedly. If the helping professions take no action in this matter of sex education, who will?

If responsible members of a community can discuss the situation together, possibly with the help of some of the more mature young people themselves, and decide what is best and most appropriate for their own community, is this not better than leaving sex education to other influences such as the mass media and the behavior of disturbed minorities?

It is fairly easy to frighten people by citing statistics on illegal abortions and venereal disease. But after all, we have cited these for many years, and the problem remains. Can we look instead at what people, especially young people, are doing? I cannot give significant figures for America, because studies of the sexual behavior of the young here have been confined to particular groups such as college students, but a broader study done in Britain[1] with 1,873 boys and girls selected at random from different parts of England showed that, by the age of 19, some 34% of the boys and 17% of the girls had had sexual intercourse.

Other findings included the following: (1) Two-thirds of the boys and a quarter of the girls had learned nothing about sex from their parents. Those who were most likely to have a sex problem were least likely to go to their parents for help. (2) Nearly half the children felt that they should have been told more about sex at school. Most of them relied on their peers for information about sex, and consequently were often ignorant and ill-informed. (3) Promiscuity exists, but is not a prominent feature of teen-age behavior. I think it is likely that teen-age attitudes and behavior in Britain are about the same as in this country. In some ways I find these figures reassuring, and in others worrying. Although alarmists say that the great majority of young people are promiscuous, the study shows that this is not true. On the other hand, it is clear that much of the information they do get is inaccurate, and therefore potentially dangerous.

I do not equate sex education with sex instruction. I think it is a grave error to tell boys and girls how people behave during intercourse, and how a child is conceived, without entering into a full discussion of relationships and moral responsibilities.

It is not easy to give moral education to the younger generation today. The more we tell them how they ought to behave the less they are willing to listen. I remember asking one group of boys, "What am I here for?" Someone answered, "You've come to tell us not to!" I explained that I had not come to give a lecture, but to join in a discussion, and soon they began to ask me questions and to give real thought to the meaning of relationships, provided I treated them as young adults and not as children.

For the past 20 years we have been using sub-professionals in Britain to do this type of education work in schools and youth

clubs, and with groups of engaged couples. We call them "education counselors." They work for Marriage Guidance Councils on a part-time and unpaid basis, although many of them have professional and academic qualifications.

Education counselors are carefully selected and trained. Candidates spend a full day having personality tests, private interviews with a psychiatrist and other selectors, and being observed in discussion groups. The 30% who are accepted then embark on a two-year training course, after which they remain under the supervision of professional tutors for as long as they continue their counseling work.

It is not only school children who need sex education; we all need it, in different ways. Many young doctors receive little sex education at their medical schools.[2] They master the basic facts of human reproductivity, but often have little opportunity to consider human sexual response. Surely the medical profession more than any other should receive the fullest sex education, for physicians must diagnose and treat physical and psychological sexual problems.[3]

Divorce lawyers, social workers, ministers, and of course parents, need to be educated in human sexuality because they will then be more able to help their clients, their parishioners and their children effectively. In considering the question, "What is sex education?" I want to give due consideration to the view that sex education is unnecessary or unwise, or both. Many people are sincerely convinced that to give sex education in our schools is to encourage promiscuity—to "put ideas into their heads." It is also argued that if we give young people some information about sexuality, and in particular about sexual intercourse, they will go out and experiment. There is also the argument that to discuss sex openly is liable to make the young anxious at an age when they have no need to be so. In short, opponents of sex education say that we are trying to do too much too soon, and that the time to learn about sex is after marriage, not before.

These arguments do have merit, and I believe they would be convincing if we lived in some other type of society, or in a different age. I do agree strongly that to teach solely the facts of human reproduction is dangerous. But our society throws sex at us all, irrespective of our age or maturity. In the press, on radio, and on television young children, teen-agers, and adults are exposed continually to a barrage of sexual messages. To combat this attack, and "attack" is the right word, I believe that we do need responsible and effective sex education. This does not mean merely reproductive education, it means education for the sane use of our sexuality, for the realization of what it means to be a man or a woman, and to be in close and loving relationships with one another.

A frequent argument is that sex education is the parents' task, and that it is not right for society to interfere. I do think that the ideal is for each child to learn about sexuality in a secure home where the parents have a good relationship with one another and with the child. But what of those who do not have such a home? Many parents are not only too embarrassed to discuss sexuality with their children, but simply do not know the correct words to use when describing physical actions and parts of the body.

Parents who were brought up to believe that anything connected with sex is dirty find it impossible to discuss sex with anyone, least of all their children. Such a parent may punish his child for using a slang sexual word whether he knows its

meaning or not, but the damage is done, unless at some stage we can introduce the concept that sexuality is a normal part of the personality.

Who can do this, and when? If the mother or father cannot help the child then other adults will have to do so. This is recognized in so simple a society as that of Kenya, where boys and girls learn about the way young men and women feel and behave from their grandparents. When the sun goes down, the huts are left in darkness; while parents may go out to visit friends, the children stay with their grandparents, asking them questions and learning from them. It is unfortunate that in our highly mobile society, children are often separated from their grandparents. All three generations, I think, lose by this, and I would like to see more grandmothers and grandfathers involved in the education of their grandchildren, with whom they so often have a strong affectional bond. It is easy to see grandparents as old-fashioned, but they can often explain to a child why mother or father will not allow them to behave the way they want, and can also interpret to the middle generation the feelings of the youngest.

But if there are no relatives willing and able to take on this job, the task likely will fall on the school. This is easy to say; it is hard to put into practice. Teachers who are unwilling to discuss sexuality with young people should not be forced to do so; equally, some who are all too eager should be restrained, for it will help no one if they pass on their own personal anxieties and problems. Yet many are willing and able to undertake it, but must be given adequate training and the right setting because sex education and sex instruction are not the same thing.

A document published in 1964 by the Church of England contained the following: "Sex education is not a 'subject'; it cannot be 'taught', it should not appear on a school time-table nor be confined to a single embarrassed talk by mother or father . . . Sex education is the totality of influences which help boys and girls to understand the part sex plays in life and to recognize its physical, spiritual and moral dimensions. It should include reliable knowledge of human reproduction and of the physical and emotional developments in each sex; it should prepare both boys and girls for marriage, family and homemaking; it should help young people with their own present personal problems; it should look outwards to the wider community which has responsibilities for, and makes demands on, individuals."[4]

The type of sex education appropriate for one age group is not necessarily suitable for another. I hesitate to set rigid guidelines, but obviously fourth and fifth grade children are not ready to discuss adult emotions and passions, and college students need more than simple facts about reproduction.

We need to train teachers in the elements of sex education so that they may respond to their students' questions. This extends far beyond the classes on biology, because the relationships between men and women can be studied and illustrated in literature, history, religion, politics, philosophy, and elsewhere.

There are not only the expected differences between age groups, but also between different groups of the same age, even of the same social class. Therefore, teachers must be flexible and sensitive enough to discover each group's needs and lead the discussions accordingly.

To sum up: All of us receive sex education of one kind or another, at home,

at school, and in society. We are fortunate if this education prepares us well for marriage and family life; many receive a distorted view of what it is to be a man or a woman. We have a responsibility to see that this sex education, most especially of the young, will equip us to develop satisfactory social and personal relationships with one another.

Gerald Sanctuary, New York City,
Executive Director for International Services,
Sex Education and Information Council of the United States.

REFERENCES

1. Schofield, M: The Sexual Behaviour of Young People, New Orleans, Pelican Books, 1968.

2. Lief, H I: Sex Education of Medical Students and Doctors, Pacific Med & Surg 73:52 (Feb) 1965.

3. Marriage, the Family and Human Sexuality in Medical Education, Report by Special Institute held at the Behavioral Sciences Center of the Bowman Gray School of Medicine, Wake Forest College, Winston-Salem, NC, 1966.

4. Sex Education in Schools, Church Information Office, London, England, 1964.

HOUSE OF DELEGATES—1970 ISSUES

Shortly after the turn of the century, the American Medical Association dispatched several representatives to Texas for extended speaking engagements at district and county society meetings. The purpose was to develop closer liaison with a constituent state association whose original charter was granted only 11 years after that of AMA; and to explain the advantages of reorganization along the lines of the parent body.

As a direct development from those liaison meetings, the then State Medical Association of Texas formed a House of Delegates whose duty it was to receive and act on reports of officers and committees, set Association policy, and to elect officers, then as now, on the last day of the annual session; the President presided at House meetings up to 1948, when the Speaker's position was instituted.

The reference committee system of preliminary and exhaustive hearings on all business later to be acted on by the House evolved more or less in its present form.

The 1969 annual session experienced a record volume of business requiring a 155-page journal to record its transactions; and reference committee hearings saved many hours in handling this large volume.

The 103rd annual session in Dallas has perhaps a little less routine business to transact, but with the work of 11 boards and councils, more than 40 committees, and several elected officers to be considered in annual reports, the reference committees will require a full afternoon of hearings on Thursday, and deliberations by the House will take a four-hour session Friday night.

The items to come to the House this year include peer review which was studied and reported on by several committees and councils, and hearings on this increasingly important problem will be held by the Board of Councilors sitting as a reference committee.

The Reference Committee on Constitution and By-Laws will consider the Board of Trustees' recommendation for an increase in dues of $15 per year maximum on a sliding scale as required. This committee will also report on a proposal to grant ex-officio membership in the House to the chief academic officer (a TMA member) of each medical school in the state.

The AMA Delegates report on the success of TMA resolutions presented at the annual convention and clinical meeting of the AMA, but of much greater importance is the Delegates' report on an AMA committee report that was referred directly by the AMA House of Delegates to constituent state associations for thorough study and recommendations. This may presage a move

by AMA to seek more grass roots reactions to our mounting problems.

The so-called Himler report and the accompanying minority (Budd) report have been forwarded to several councils and committees of TMA, to county society officers, and to all delegates in the hope that resolutions can be forwarded in time for publication in a supplement to the Handbook for Delegates.

Such resolutions will be referred more or less arbitrarily to the various reference committees which will hold hearings in extra sessions Saturday morning. Any member of the Association, whether a delegate or not, may speak at the reference committee hearings.

Quoting Dr. John M. Budd, author of the minority report, "There is merit in much of the report's commentary, and in many of its analyses and recommendations," but in his dissent, Dr. Budd enumerates many concepts with which he cannot agree.

Texas can arm its AMA delegation with a series of well-considered resolutions if all concerned members study the report carefully and come prepared to exercise calm judgment.

W. H. Hamrick, MD, Houston,
Speaker, TMA House of Delegates.

PROFESSIONAL LIABILITY INSURANCE—WHY DOES IT COST SO MUCH?

It is not easy for a physician to accept the need for the recent tremendous increases in professional liability insurance premiums when he has never had a claim against him. How can the insurance companies justify such fantastic rates for doctors who have practiced for many years without having a single claim?

The answer given by insurance companies, and verified by statistics they have presented, is that the losses (money spent directly on claims and awards and attorney's fees) often have increased even faster than our premiums. The Insurance Information Institute reviewed the loss experience for physicians, surgeons, and dentists for the five-year period ending Dec 31, 1966. The survey shows that $1.51 was paid out in claims and expenses for every one dollar received in premiums. The AMA Law Division estimates that, despite the large rate increases, insurance companies will still be forced to pay about $3 million more than they collected in premiums to resolve claims based on 1968 medical services.

Factors which have contributed to this rise in both the number and severity of claims include technical advances which encourage the public to expect nothing less than perfect medical results. Legal grounds for complaints have been extended to include areas that were formerly out of legal bounds. Jury awards generally are higher than ever. Inflation has contributed to the problem well above normal advances. There has been a growing tendency to equate any less-than-perfect result with negligence. More attorneys have become expert at presenting plaintiff's claims. We are told that physicians have begun to be reluctant to testify on behalf of their colleagues, irrespective of the merits of the case (on the other hand, there seems to be no shortage of physicians willing to testify against their colleagues). When the public reads of doctors whose incomes have soared from $50,000 to $400,000 since the coming of Medicaid, is it any wonder that they tend to be generous in awarding large amounts of money to injured patients? The

Continued on page 29

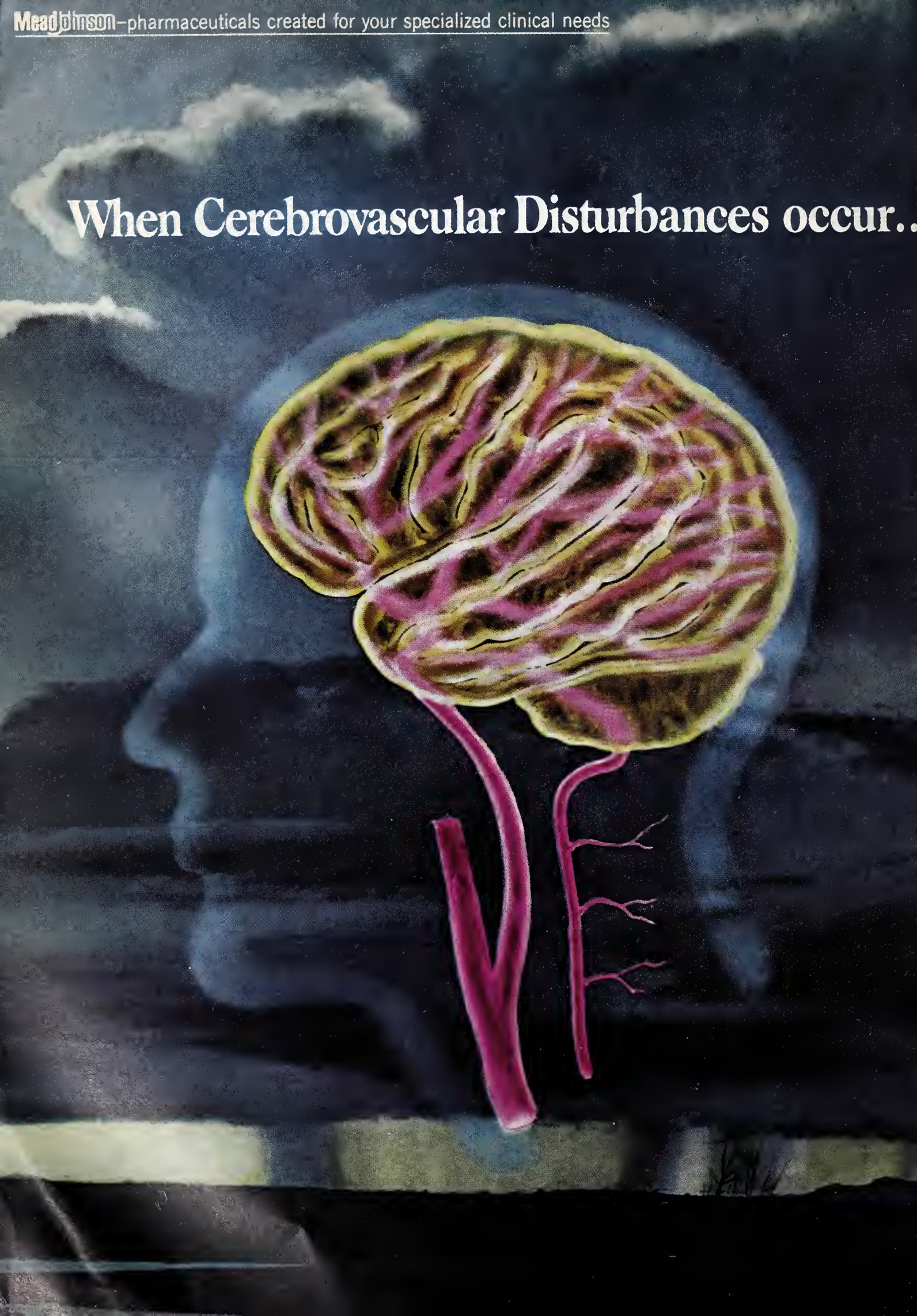
Texas Medical Association Annual Session April 30-May 3 Dallas 1970

38 guest speakers plus 90 special and 250 TMA-member speakers
13 section programs
20 curbstone consultations
7 continental breakfast round tables 2 general meetings and luncheons 175 scientific and technical exhibits 7 special symposiums complete film program 28 specialty society programs physicians' and wives art exhibition sports—golf, tennis and skeet entertainment—don't miss the fabulous "Saturday Night at the Fairmont" party

REGISTER IN ADVANCE! See your current issue of **TEXAS MEDICINE** for details

Mead Johnson—pharmaceuticals created for your specialized clinical needs

When Cerebrovascular Disturbances occur..



...with episodes of vertigo, headache, confusion, sensory loss, slurred speech, consider

VASODĪLAN®

(ISOXSUPRINE HCl)

to help relieve symptoms by preventing vasospasm and increasing cerebral blood flow

Naw 20 mg. strength now available: Vasodilan 20 mg. tablets for greater dosaga simplicity and convenience. Recommended *initial* dose: one 20 mg. tablet q.i.d.

Although not all clinicians agree on the value of vasodilators in vascular disease,[1] several investigators[2-5] have reported favorably on the effects of isoxsuprine on cerebral blood flow. Effects have been demonstrated both by objective measurement[2,5] and observation of clinical improvement.[2-4]

Indications: Cerebrovascular insufficiency, arteriosclerosis obliterans, diabetic vascular diseases, thromboangiitis obliterans (Buerger's disease), Raynaud's disease, postphlebitic conditions, acroparesthesia, frostbite syndrome and ulcers of the extremities (arteriosclerotic, diabetic, thrombotic). **Composition:** VASODĪLAN tablets, isoxsuprine hydrochloride 10 mg. and 20 mg. **Dosage:** Oral—10 to 20 mg. t.i.d. or q.i.d. **Contraindications and Cautions:** There are no known contraindications to recommended oral dosage. Do not give immediately postpartum or in the presence of arterial bleeding. **Side Effects:** Occasional palpitation and dizziness can usually be controlled by dosage reduction. As intramuscular administration of 10 mg. or more may cause brief hypotension and tachycardia, single intramuscular doses exceeding this amount are not recommended. Complete details available in product brochure from Mead Johnson Laboratories. **References:** (1) Fazekas, J. F.; Alman, R. W.; Ticktin, H. E.; Ehrmantraut, W. R., and Savarese, C. J.: Angiology *15*:No. 2 (Feb.) 1964. (2) Horton, G. E., and Johnson, P. C., Jr.: Angiology *15*:70-74 (Feb.) 1964. (3) Clarkson, I. S., and LePere, D. M.: Angiology *11*:190-192 (June) 1960. (4) Dhrymiotis, A. D., and Whittier, J. R.: Curr. Ther. Res. *4*:124-128 (April) 1962. (5) Whittier, J. R.: Angiology *15*:82-87 (Feb.) 1964.

Mead Johnson LABORATORIES

© 1970 MEAD JOHNSON & COMPANY • EVANSVILLE, INDIANA 47721 75970

Smiles speak louder than words

for the good taste of Soyalac

Milk-free, hypo-allergenic Soyalac has a pleasing taste that is eagerly accepted by most infants. It's similar to mother's milk in composition and assimilation, much like cow's milk in consistency and completely free of fibre. Extensive clinical data support Soyalac's value in promoting growth and development. Soyalac is also excellent for growing children and adults.

Available in
Concentrated Liquid or Powdered

Free Booklet and Samples

A request on your professional letterhead or prescription form will bring to you complete information and a supply of samples.

Soyalac

a product of

LOMA LINDA FOODS

MEDICAL PRODUCTS DIVISION

RIVERSIDE, CALIFORNIA

Mount Vernon, Ohio, U.S.A.

when relief
means so much
in keeping
your G.U.
patient comfortable

URISED®

CONAL PHARMACEUTICALS INC

Clinically effective for G.U. Therapy[1-5]

There are not many drug combinations in use today which can claim to have served the medical profession for more than 50 years. Such a record reflects the continued confidence of physicians in URISED. This is not a dramatic "wonder drug"—but a *useful* one.

It fills a need in urologic and general practice—a need for a mild but reliable agent with a very low order of toxicity. It can be used alone to treat mild and uncomplicated urinary infections. It can be used as "interim therapy" while awaiting the results of urine culture. It can be used as an adjunct (to relieve pain and spasm) with almost any other form of antibacterial therapy.

The characteristic blue/green urine tells the patient that something is happening. The patient generally tells *you* that symptomatic relief follows the first dose.

REFERENCES: (1) Sands, R.X.: New York St. J. Med. 61:2598-2602, 1961; (2) Renner, M.J., et al.: Hosp. Topics 39:71-73, 1961; (3) Haas, Jr., J., and Kay, L. L.: Southwest Med. 42:30-32,1961; (4) Marshall, W.: Clin. Med. 7:499-502, 1960; (5) Strauss B.: Clin. Med. 4:307-310, 1957.

URISED®

Each Blue-Coated Tablet contains Active:

Atropine Sulfate	0.03 mg.	Methylene Blue . .	5.4 mg.
Hyoscyamine . .	0.03 mg.	Phenyl Salicylate	18.1 mg.
Methenamine . .	40.8 mg.	Benzoic Acid . . .	4.5 mg.

PRECAUTIONS: Administer with caution to persons with atropine idiosyncrasy or cardiac disease.

SIDE EFFECTS: Neither irritation nor untoward reactions have been reported; however, if pronounced dryness of the mouth, flushing, or difficulty in initiating micturition occur, decrease dosage. If rapid pulse, dizziness or blurring of vision occur, discontinue use immediately. Acute urinary retention may be precipitated in prostatic hypertrophy.

CONTRAINDICATIONS: Glaucoma, urinary bladder neck or pyloric obstruction, duodenal obstruction and cardiospasm. Hypersensitivity to any of the ingredients.

DOSAGE: Adults—Two tablets, orally, four times per day followed by liberal fluid intake. Acute cases—initially two tablets every hour for three doses followed by the recommended daily administration. Children—One-half the adult dose.

(*Stocked Nationally Through All Service Wholesale Druggists*)

CONAL
PHARMACEUTICALS, INC
CHICAGO, ILLINOIS 60640

MANUFACTURERS OF URICEUTICAL® SPECIALTIES

ANESTACON® • CYSTOSPAZ® • MANDACON™ • URISED®
URISEDAMINE® • ŪTRASUL® Tablets and Suspension

Printed in U.S.A.

MAR. 196

trend toward compensation without regard to fault has prompted imaginative and expensive litigation. Claims are sometimes based on services and medical standards of many years ago, but are evaluated on legal, medical, and social standards of today. Each of these items has contributed to our profession's losses. In turn, the insurance companies must have increased premium income to offset this loss experience.

Insurance of any type is based on the law of large numbers. Because of the relatively small number of doctors in one county, so our committee has been informed, the experience of practitioners over wide areas of the state must be grouped together in order to give credibility to the figures and to maintain a sound actuarial basis. The same principle often holds true for specialties having so few members within the state that a realistic insurance picture must be based on the nationwide experience of that specialty. This does not necessarily mean that the Texas doctor pays for losses incurred in other areas. However, his premium is influenced by those losses inasmuch as the premium being collected today is calculated to be adequate to pay for claims which will be made sometime in the future, based on medical services rendered today. Also, verdicts, jury awards, and tactics quickly become common knowledge and do affect the conduct and valuation of claims elsewhere.

"Preferred risk" plans may function quite well with other types of insurance, but are unworkable in the field of professional liability insurance. The reason for this is that no one knows, at a given time, who are preferred risks and who are not. In other words, physicians who show a clear record today may have already rendered services which will one day result in a claim. We understand that claims sometimes are not asserted until 20 years after the date of service.

Insurance companies state that the majority of claims are caused by the physician's failure to communicate—not only with the patient, but with his aides and his colleagues—and his failure to keep adequate records. The source of each claim is a patient dissatisfied with some aspect of his relationship with his physician. To that degree, we of the profession do have the ability to control the situation, reduce losses and, thereby, reduce the insurance premiums.

We must seek to correct the causes of the problem which exists. Premiums are an effect, not a cause. We must seek to reduce the losses incurred by the profession, bolster our legal defenses, and cooperate with our insurers. These actions would be of as great a service to the public as to the profession.

R. E. Read, MD, Lufkin, Chairman,
TMA Committee on Professional Insurance.

communications to TEXAS MEDICINE

First Aid for Paperstorm Victims—Us

The new year started much like the old year ended: A bog of paper here, there, and everywhere, and 99% of it should have been completed and in the mail last week. There are several bright spots in this lowering cloud of paper work and it is high time that the officers, committees, and staff of the Texas Medical Association should be commended for the amount of relief which has been given to busy physicians in this regard. TMA activities (along with those of other state medical associations) resulted in a revision of the Armed Forces form for payment for physicians' services to military dependents; the patient now is responsible for completing part of the form to document the eligibility for benefits. The Medicaid program, from its inception, has really loaded the physician's office with paper

and forms. However, again partly through the efforts of TMA, there has been a slight decrease in pressure in that the physician is no longer required to complete one of the forms for Medicaid recipients.

These pitifully small shafts of sunlight through the clouds do not mean that the paperstorm has abated. Why so much of this material? Whence come all of these blanks to fill in, and blankety-blank reports to submit as soon as possible? Several of the most important contributors to the paper work storm come to mind easily: third party payers, medicolegal requirements, and modern technology.

The increasing use of the third party payer has become ever more important in the practice of medicine, particularly in its economic aspects. If certain forms aren't completed and remitted within a certain period, the physician may not receive his due recompense. This problem should be easily solved by use of the Individual Responsibility Program as endorsed by the Texas Medical Association's House of Delegates. However, many people are either unable or unwilling to understand and fulfill their separate contracts with the attending physician and the insurance carrier. Probably the reason for many assignments being taken is that the physician grows tired of repeatedly explaining to an argumentative person the principles and benefits of IRP, thereby succumbing to the "the hell with it" syndrome and shouldering that portion of the paper work burden on himself and his staff.

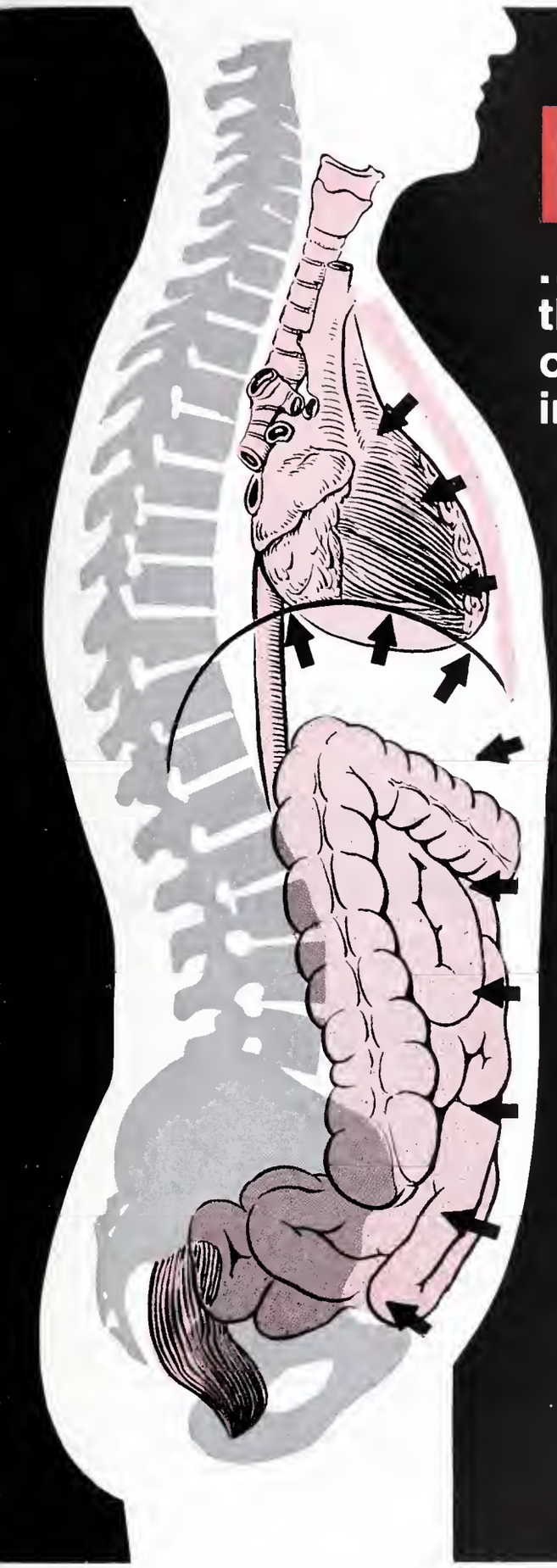
The rise in professional liability insurance rates, due to the increased number of malpractice cases filed (nuisance or otherwise) and the increasing amounts awarded to the plaintiffs, is an inescapable part of our lives. This does have a saving point though, since it is tied up with the scientific aspect and tends to encourage us to practice better medicine; organize our thoughts, findings, and opinions; dictate them concisely and completely; provide for adequate transcription; and have a utilizable filing and retrieval system. If all this can be properly developed it should be a rare piece of paper which requires more than the physician's signature. Coincident with this, the capability of reproducing office records is an important time-saver; a number of excellent machines are on the market for this purpose.

A third stream which contributes to the "Rio de Papel" is fed by the currently fashionable surveys, correspondence, and reports not related to individual patients, organizational activities, and others. These must be coped with on a catch-as-catch-can basis. Many can be ignored, but we cannot slough off those responsibilities that we have taken on ourselves in our medical organizations and community affairs.

At the annual session of the American Medical Association in New York City in July 1969, the House of Delegates approved a Texas resolution which had previously been passed by the TMA House of Delegates. This resolution discussed the increasing population with the public's desire for greater amounts of medical care, and the concomitant establishment of many new programs providing federal financing of medical services. All of these have placed greater demands upon physicians for professional service, sharply increased the volume of paper work related to the practice of medicine, and thereby diminished the time available to physicians for rendering medical care to people who seek it. The resolution calls for the AMA and its constituent state associations to undertake new discussions with governmental agencies, insurance companies, and hospitals, with the objective of achieving substantial reductions in the amount of paper work (would you believe one-half?) thus enabling physicians to devote the maximum time and effort possible to care of patients; the reduction of the time devoted to paper work should reduce the cost of health care.

And how did this present AMA policy come about? It originated in the Bee-Live Oak-McMullen County Medical Society—from one lone physician in the wilderness who finally got paper work up to his larynx, which he activated in admirable fashion, and cried out for help, even as you and I.

Sam A. Nixon, MD, Floresville.



DOXIDAN®

...to reduce the hemodynamic "bind" of constipation in congestive heart failure

Constipation in the chronic heart failure patient carries with it the ever-present threat of acute cardiac decompensation while straining at stool. In the already weakened, distended heart, a sudden influx of blood on termination of the Valsalva maneuver is considered to be the mechanism of some of the deaths occurring in these cardiac patients during straining efforts.*

Doxidan is a gentle laxative designed to free your patient from the hemodynamic consequences of straining at stool. With a fecal softening agent to keep the stool soft and easy to evacuate, and with just enough peristaltic stimulation to urge the sluggish bowel, Doxidan reduces the hemodynamic "bind" of constipation.

Composition: Each capsule contains 50 mg. danthron N.F. and 60 mg. dioctyl calcium sulfosuccinate.

Dosage: Adults and children over 12—one or two capsules daily. Children 6 to 12—one capsule daily. Give at bedtime for two or three days or until bowel movements are normal.

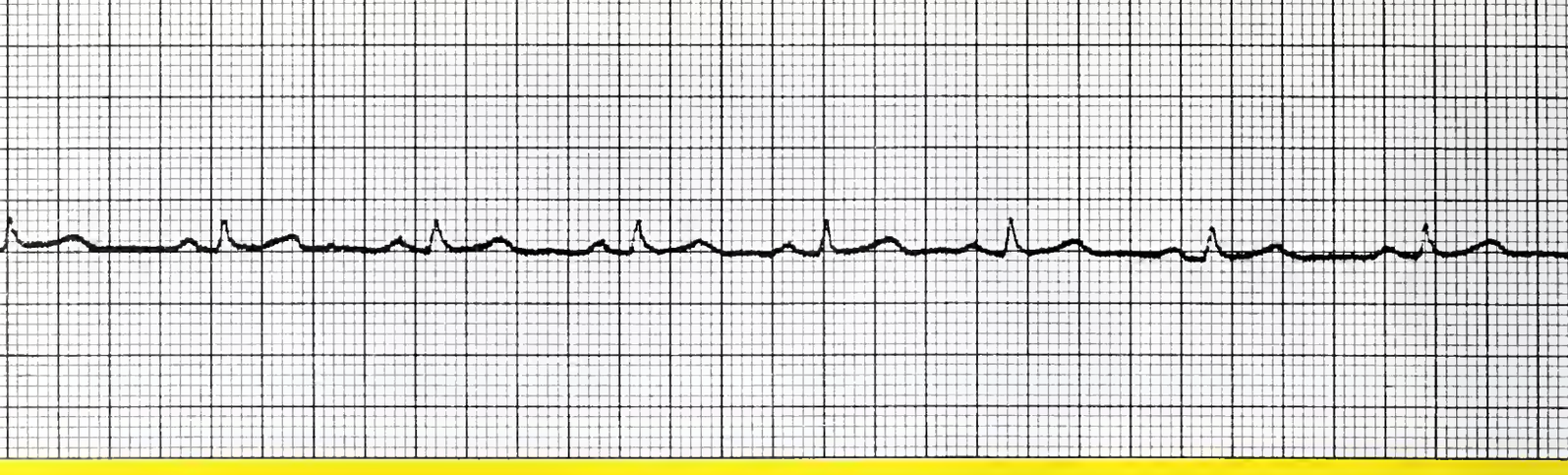
Supplied: Bottles of 30, 100 (FSN 6505-074-3169) and 1000 (FSN 6505-890-1247).

*Best, C. H. and Taylor, N. B.: *The Physiological Basis of Medical Practice,* 7th edition, Williams and Wilkins, Baltimore, 1961, p. 480.

DOXIDAN®

HOECHST
PHARMACEUTICAL CO.
Div. American Hoechst Corp.
Cincinnati, Ohio 45229 U.S.A.

C-124



When disease is ruled out and psychic tension is implicated

Valium® (diazepam) helps relax the patient and relieve his somatic symptoms

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Tension and anxiety states; somatic complaints which are concomitants of emotional factors; psychoneurotic states manifested by tension, anxiety, apprehension, fatigue, depressive symptoms or agitation; acute agitation, tremor, delirium tremens and hallucinosis due to acute alcohol withdrawal; adjunctively in skeletal muscle spasm due to reflex spasm to local pathology, spasticity caused by upper motor neuron disorders, athetosis, stiff-man syndrome, convulsive disorders (not for sole therapy).

Contraindicated: Known hypersensitivity to the drug. Children under 6 months of age. Acute narrow angle glaucoma.

Warnings: Not of value in psychotic patients. Caution against hazardous occupations requiring complete mental alertness. When used adjunctively in convulsive disorders, possibility of increase in frequency and/or severity of grand mal seizures may require increased dosage of standard anticonvulsant medication; abrupt withdrawal may be associated with temporary increase in frequency and/or severity of seizures. Advise against simultaneous ingestion of alcohol and other CNS depressants. Withdrawal symptoms have occurred following abrupt discontinuance. Keep addiction-prone individuals under careful surveillance because of their predisposition to habituation and dependence. In pregnancy, lactation or women of childbearing age, weigh potential benefit against possible hazard.

Precautions: If combined with other psychotropics or anticonvulsants, consider carefully pharmacology of agents employed. Usual precautions indicated in patients severely depressed, or with latent depression, or with suicidal tendencies. Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.

Side Effects: Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances, stimulation, have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice; periodic blood counts and liver function tests advisable during long-term therapy.

ROCHE

Roche
LABORATORIES
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

WE ARE RIGHTFULLY INDIGNANT

On March 7, 1970, the following letter was sent to each of our Senators and Congressmen:

"The physicians in the Texas Medical Association urgently seek your influence in defense of an honorable profession that has been unjustly maligned, criticized, and attacked in recent months for the financial failures of the Medicare and Medicaid programs.

"The faults of these programs were built into them by their designers and it is grossly unfair to expose the medical profession to criticism by implying widespread abuse of the programs, when such abuse, if it exists, involves only a miniscule portion of our profession. The vast majority of physicians are honorably discharging their responsibilities both to their patients and to these programs. We are discouraged and disheartened at the publicity that results from release of such information as the report of the Senate Finance Committee, implying as it does widespread abuse by physicians. If these attacks on our profession continue, the ill people of this country will be the greatest losers.

"We look to our statesmen in Congress to set the record straight, to let it be known they have faith in the medical profession, and to insist that the blame for present difficulties be placed where it rightfully belongs. We earnestly solicit your continued strong support."

Many state medical societies reacted similarly to the stepped-up attacks on the medical profession following the release of the Senate Finance Committee's staff report on the problems besetting Medicare and Medicaid. News releases have been circulated and radio tapes provided.

It is clear that both these programs have inherent defects in them that should be corrected at the Congressional level. Congress has promised more medical care than it can deliver and more than the taxpayer may be willing to pay for. It is not asking too much of this elected body that it recognize the moral wrong in promising such care, asking the providers of services to subsidize it (as they did when fees were frozen more than a year ago), and then blaming these same providers for the soaring costs.

Max Cole, M.D.

Charles Max Cole, MD, President, Texas Medical Association.

High

...the high blood levels you want

Low

...the low cost she wants

Tetrex bidCAPS controls susceptible bacteria on an easy b.i.d. schedule at a cost lower than all other "convenience dosage" tetracyclines.

PRESCRIBING INFORMATION. For complete information consult Official Package Circular. Tet. Comb. 1-7/17/67. *Indications:* Infections of respiratory, gastrointestinal and genitourinary tracts and skin and soft tissues due to tetracycline-sensitive organisms. *Contraindications:* The drug is contraindicated in individuals hypersensitive to tetracycline. *Warnings:* Photodynamic reactions have been produced by tetracyclines. Natural and artificial sunlight should be avoided during therapy. Stop treatment if skin discomfort occurs. With renal impairment, systemic accumulation and hepatotoxicity may occur. In this situation, lower doses should be used. Tooth staining and enamel hypoplasia may be induced during tooth development (last trimeter of pregnancy, neonatal period and childhood). *Precautions:* Mycotic or bacterial superinfection may occur. Infants may develop increased intracranial pressure with bulging fontanels. In gonorrheal therapy, serologic tests for syphilis should be conducted initially and monthly for 4 months. *Adverse Reactions:* Glossitis, stomatitis, nausea, diarrhea, flatulence, proctitis, vaginitis, dermatitis, and allergic reactions may occur. *Usual Adult Dose:* 1 Gm./day in 2 or 4 divided doses. Continue therapy for 10 days in Group A Beta-hemolytic streptococcal infections. Administer one hour before or 2 hours after meals. *Supplied:* Capsules—250 mg. in bottles of 16 and 100. bidCAPS—500 mg. in bottles of 16 and 50.

A.H.F.S. Category 8:12

Tetrex® bidCAPS

(TETRACYCLINE PHOSPHATE COMPLEX)

BRISTOL LABORATORIES
Division of Bristol-Myers Co.
Syracuse, New York 13201

"All Interns are Alike"

It stands to reason. They all go through the same training; they all have to pass the same tests; they all have to measure up to the same standards; they all are underpaid, too. Therefore, all interns are alike.

That's utter nonsense, of course. But it's no more nonsensical than what some people say about aspirin. Namely: since all aspirin is at least supposed to come up to certain required standards, then all aspirin tablets must be alike.

Bayer's standards are far more demanding. In fact, there are at least *nine specific differences* involving purity, potency and speed of tablet disintegration. These Bayer® standards result in significant product benefits including gentleness to the stomach, and product stability that enables Bayer tablets to *stay* strong and gentle until they are taken.

So next time you hear someone say that all aspirin tablets are alike, you can say, with confidence, that it just isn't so.

You might also say that all interns aren't alike, either.

Can one prescription do the work of two?

Yes, Kolantyl®.

Kolantyl Gel/Wafers contain antacids, and Bentyl® (dicyclomine hydrochloride) too.

Merrell

The Wm. S. Merrell Company
Division of Richardson-Merrell Inc.
Cincinnati, Ohio 45215

9-1243

(0715)

f you can hang on for a few more minutes, Doctor, 'm sure I'll sneeze again."

d sneeze. And sneeze some more. But with Novahis-e® LP, most patients get prompt and long-lasting ief from the symptoms of allergies and colds. These ntinuous-release tablets have a vasoconstrictor-anti-stamine formulation that begins working in minutes, en continues to provide relief for hours. Even when sal congestion is due to repeated allergic episodes, o Novahistine LP tablets, morning and evening, let most patients breathe freely all day and all night. Use with caution in individuals with severe hypertension, diabetes mellitus, hyperthyroidism or urinary retention. Caution ambulatory patients that drowsiness may result.

Novahistine® LP decongestant

(Each tablet contains 25 mg. of phenylephrine hydrochloride and 4 mg. of chlorpheniramine maleate.)

DOW **THE DOW CHEMICAL COMPANY** Rx Pharmaceuticals Indianapolis

Owner Breaks Arm When Yacht Runs Aground

Schuyler, Oct. 31. Harry Waters of Covesville incurred a fractured arm tially capsized. The fire depart had to rescue Waters by small Damage to the yacht is estimat

Hasn't the skipper had enough excitement for one day?

For the patient who has been through an accident, the worry and anxiety following the mishap may actually heighten the perception of pain. This is why there's a classic ¼ grain *sedative* dose of phenobarbital in Phenaphen with Codeine—to take the nervous "edge" off, so the rest of the formula can control the pain more effectively.

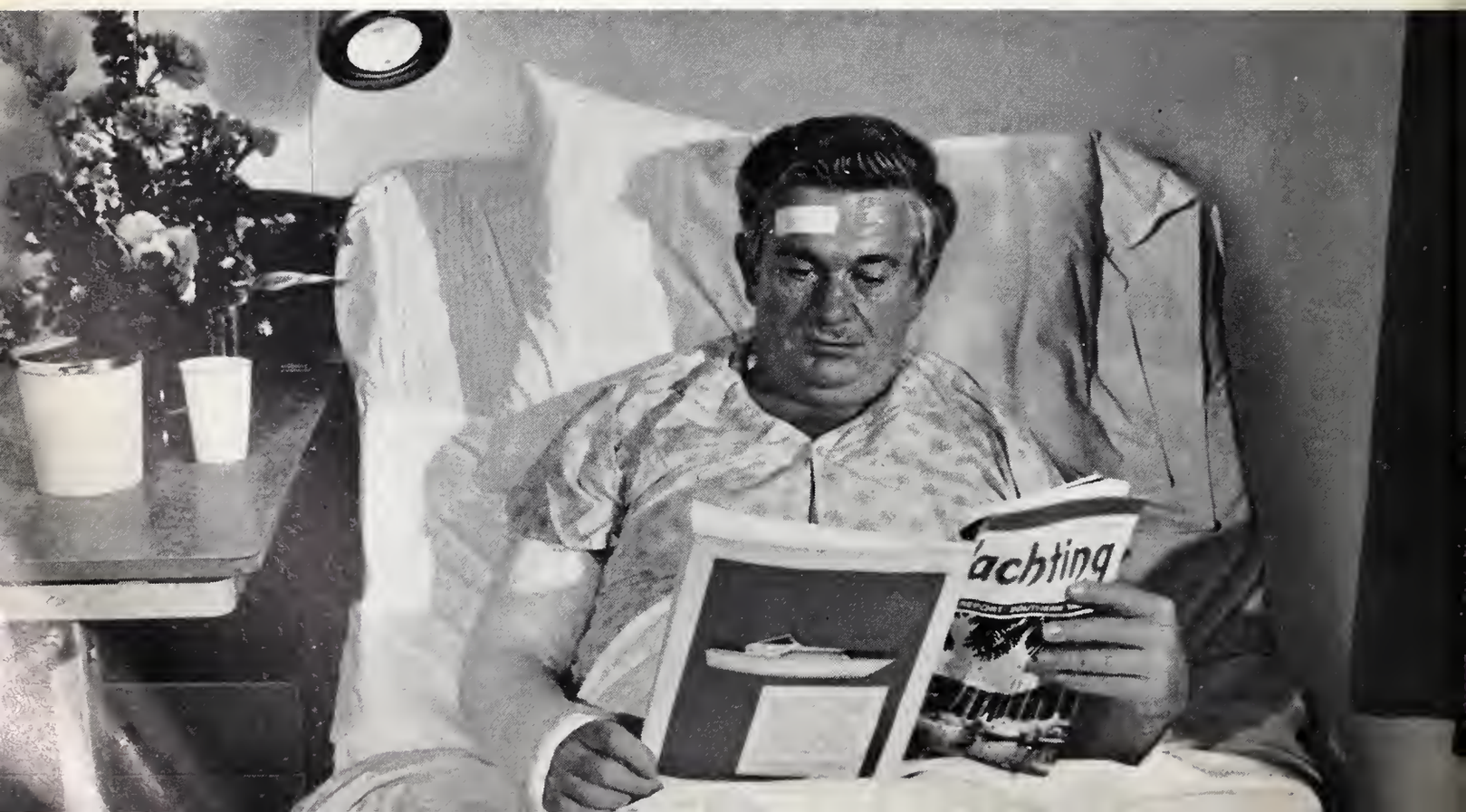
A.H. Robins Company, Richmond, Va. 23220 A·H·ROBINS

Phenaphen® with Codeine

Phenaphen with Codeine Nos. 2, 3, or 4 contains: Phenobarbital (¼ gr.), 16.2 mg. (warning: may be habit forming); Aspirin (2½ gr.), 162.0 mg.; Phenacetin (3 gr.), 194.0 mg.; Hyoscyamine sulfate, 0.031 mg.; Codeine Phosphate, ¼ gr. (No. 2), ½ gr. (No. 3), or 1 gr. (No. 4) (warning: may be habit forming).

The compound analgesic that calms instead of caffeinates

Indications: Phenaphen with Codeine provides relief in severer grades of pain, on low codeine dosage, with minimal possibility of side effects. Its use frequently makes unnecessary the use of addicting narcotics. **Contraindications:** Hypersensitivity to any of the components. **Precautions:** As with all phenacetin-containing products excessive or prolonged use should be avoided. **Side effects:** Side effects are uncommon, although nausea, constipation and drowsiness may occur. **Dosage:** Phenaphen No. 2 and No. 3—1 or 2 capsules every 3 to 4 hours as needed; Phenaphen No. 4—1 capsule every 3 to 4 hours as needed. For further details see product literature.



TEXAS MEDICAL ASSOCIATION

Texas physicians may look forward to enjoying a variety of entertainment features as well as numerous scientific and business sessions when they convene in Dallas April 30-May 3 for the 103rd Annual Session of the Texas Medical Association. Included on the program for the state's largest medical meeting will be 13 scientific section meetings, two general meetings and luncheons, Continental Breakfast Round Tables, Curbstone Consultations, a variety of special programs, scientific and technical exhibits, an orientation program, and related organization programs. On the lighter side will be golf and tennis tournaments, skeet and trap shoot, art exhibit, fraternity and alumni parties, class reunions, and a gala cocktail party, dinner, and dance "Saturday Night at the Fairmont." Headquarters will be at the Fairmont Hotel for scientific sessions, at the Statler Hilton Hotel for business meetings, and at the Sheraton-Dallas Hotel for the Woman's Auxiliary. Housing information is on pp. 117-120 of this issue, and further program information appears on pp. 4-5.

Contact: C. Lincoln Williston, 1801 N. Lamar Blvd., Austin 78701, executive secretary.

INTERNATIONAL CANCER CONGRESS

Houston will host a worldwide aggregation of physicians and researchers who are affiliates of the International Union Against Cancer May 22-29 when the organization convenes for its 10th International Cancer Congress. Held only once every four years in a major city of the world, the congress is expected to draw nearly half of its visitors from foreign countries to discuss significant advances made in the fight against cancer. In addition to the extensive scientific program planned, a wide range of entertainment events have been scheduled in Houston; and post-conference excursions to Mexico and South America will be available. Headquarters for the congress will be in the Convention and Exhibit Center in downtown Houston. The official languages of the congress will be French and English, and some presentations will also be translated into Spanish.

Contact: Dr. Murray M. Copeland, Office of the Secretariat, Tenth International Cancer Congress, P. O. Box 20465, Astrodome Station, Houston 77025, secretary-general.

TEXAS HOSPITAL ASSOCIATION

"Partnerships for Patient Care" will be the theme of the 41st Annual Convention of the Texas Hospital Association May 16-20 in Houston. Program features include the American College of Hospital Administrators Examination, annual banquet and dance, past president luncheon, and president's country and western program. Some of the topics to be discussed are hospital electronics safety, new standards for hospital accreditation, hospital organization and its changes, new hospital design, and innovations in hospital construction. Featured speakers will include Robert M. Cunningham, managing editor, *Modern Hospital*, Chicago; Fred Higginbotham, president, Atlanta Blue Cross-Blue Shield Program; James T. Richards, NASA; Dr. Paul Stanley (PhD), Purdue University; Gordon Friesen, Gordon Friesen, International, Washington, D.C.; Dr. John D. Porterfield, AMA-AHA Joint Commission on Accreditation of Hospitals; Dr. A. L. Swanson, American College of Hospital Administrators; Jack Hahn, president-elect, American Hospital Association; George Mann, Texas A&M University; and David Hitt, chairman, AHA Council on Finance, and associate administrator, Baylor University Medical Center.

Contact: O. Ray Hurst, 6225 US Hwy. 290 E, P. O. Box 4553, Austin 78751, executive vice-president and secretary.

HIGHLIGHTS OF COMING MEETINGS

CURRENT MEETINGS IN TEXAS

AMERICAN PHYSICAL THERAPY ASSOCIATION, INC., TEXAS CHAPTER, COASTAL BEND DISTRICT, will sponsor its annual convention April 24-26 at the Holiday Inn-Emerald Beach Hotel in Corpus Christi. Among speakers' topics will be superstition and witchcraft, posterior tibial syndrome, and Parkinson's disease. A buffet cruise aboard the *Showboat* and a symposia dinner are planned. Contact: Mrs. Hilda F. McKethan, 4162 Monaco Dr., Corpus Christi 78411, chairman.

SCOTT AND WHITE MEMORIAL HOSPITAL's Annual Pediatrics Postgraduate Conference will take place May 23 at that hospital in Temple; it will be co-sponsored by the Scott, Sherwood and Brindley Foundation. Guest speakers will be Dr. Manuel R. Gomez, chairman, department of pediatric neurology, Mayo Clinic, Rochester, Minn.; and Dr. Robert C. Franks, associate professor of pediatrics and director of the section of pediatric endocrinology, The University of Texas Medical School at San Antonio. Contact: Education Office, Scott and White Memorial Hospital, Temple 76501.

TEXAS DENTAL ASSOCIATION will convene for its annual session April 26-29 at the Sheraton-Fort Worth Hotel in Fort Worth. Scientific lectures will cover emergencies in the dental office, fixed prosthodontics, pedodontia, clinical application of biological principles for the edentulous patient, periodontia, endodontia, operative dentistry, occlusion, and gold foil dentistry. Guest speaker for the general assembly will be Dr. Harry M. Klenda (DDS), president, American Dental Association. Contact: Dr. Crawford A. McMurray (DDS), 3707 Gaston Ave., Dallas 75246, secretary-treasurer.

TEXAS STATE DEPARTMENT OF HEALTH will sponsor the 20th Annual Southwestern Conference on Diseases in Nature Transmissible to Man May 7-8 in Austin. Designed for physicians, veterinarians, epidemiologists, public health officers, nurses, microbiologists, public health engineers, sanitarians, laboratory workers, and those in allied fields, this conference affords an opportunity for workers in such a variety of fields to discuss the aspects of disease in our environment that can afflict man. Ample opportunity is provided for informal interdisciplinary discussion. A barbeque at the Zilker Park clubhouse is planned. Contact: Dr. J. V. Irons (ScD), Director of Laboratories, Texas State Department of Health, 1100 W. 49th St., Austin 78756.

THE UNIVERSITY OF TEXAS MEDICAL BRANCH AT GALVESTON will host physicians and scholars from all over the United States and Canada at the Flagship Hotel in Galveston on April 21-22 for a symposium entitled "Humanism in Medicine: As Portrayed by the Life of Sir William Osler." The program will include addresses by three former pupils of Osler, Drs. Wilder G. Penfield, Emile F. Holman, and Wilburt C. Davison; presentations by other humanist scholars and Oslerians; and a panel discussion about the future of humanism in medicine. Immediately following the symposium will be the 1970 SAMA-UTMB National Student Research Forum, scheduled to take place April 23-25 on the campus of the UT Medical Branch. Designed to include presentations of papers on research in the areas of the basic and clinical sciences, the forum will include general sessions and addresses by guest speakers as well as a panel discussion on the subject, "A Moral and Scientific Study of Human Experimentation." A barbeque and mixer and an awards banquet will provide entertainment. Registration is $10. Contact: Myles B. Knape, The University of Texas Medical Branch, Galveston 77550, director of information.

THE UNIVERSITY OF TEXAS NURSING SCHOOL (System-wide) will present a conference on dynamics of the interviewing process May 18-20 at the Terrace Motor Hotel in Austin. Topics will include listening, blocks to communication, dynamics of group process, dimensions of counseling, and human potential and human promise. Participants will be able to present actual problem situations from their own jobs and to observe demonstrations of various approaches to different problems, participate in small group discussions which focus on interpersonal relations, practice the development of trusting relationships and improving ways of coping with problem situations, observe demonstrations of a number of role-playing situations illustrating different problems and approaches, and engage in interviewing practice sessions as a participant and as an observer. Registration fee is $25. Contact: Miss Dorothy Blume, Director, Continuing Education, The University of Texas Nursing School, Austin 78712.

CURRENT REGIONAL MEETINGS

ARIZONA MEDICAL ASSOCIATION will hold its annual meeting April 21-25 in Scottsdale, Ariz.; and the scientific program will be presented by the faculty of The University of Texas Southwestern Medical School at Dallas. Program chairman will be Dr. John S. Chapman, assistant dean for postgraduate education at Southwestern. UTSMS faculty members from various medical specialties will give lectures and arrange panel discussions. Contact: Director of Medical Information, University of Texas Southwestern Medical School, 5323 Harry Hines Blvd., Dallas 75235.

CALIFORNIA HEART ASSOCIATION's 1970 Scientific Sessions will be held May 15 at the Hotel Del Coronado in Coronado, Calif. Guest speakers will discuss the patient with premature coronary disease; problems in ECG diagnosis of myocardial infarction; cardiomyopathy: clinical aspects; problems in organization of mobile coronary care units; the selection of patients for direct coronary artery surgery; angiographic evaluation of direct coronary artery surgery; is myocardial infarction the result of coronary thrombosis?; and cardiomyopathy: the spectrum of pathology. Registration fee is $10. Contact: California Heart Association, 1370 Mission St., San Francisco, Calif. 94103.

NEW MEXICO REGIONAL MEDICAL PROGRAM will sponsor a two-day symposium on stroke May 22-23 at the Holiday Inn East in Albuquerque, N.M. The clinically oriented program will feature the following guest speakers: Dr. John S. Meyer, Baylor College of Medicine, Houston; Dr. Michael DeBakey, Baylor College of Medicine, Houston; Dr. Clark Millikan, Mayo Clinic, Rochester, Minn.; Dr. Fletcher McDowell, Cornell University; Dr. James Toole, Bowman-Gray School of Medicine; and Dr. Lawrence McHenry, Philadelphia General Hospital. Contact: Mrs. Elizabeth M. Barnett, Coordinator, Continuing Education, New Mexico Regional Medical Program, The University of New Mexico School of Medicine, Albuquerque, N.M. 87106.

CURRENT NATIONAL MEETINGS

AEROSPACE MEDICAL ASSOCIATION will sponsor its 41st annual scientific meeting April 27-30 at the Chase-Park Plaza Hotel in St. Louis. Dr. Charles A. Berry, director of medical research and operations at the NASA Manned Spacecraft Center in Houston and 39th president of the association, will preside at opening ceremonies. In addition to scientific sessions on a variety of subjects, the program will include the annual Louis H. Bauer Lecture; the Armstrong Memorial Lecture; an undersea medical symposium; a report on Apollo lunar missions; special symposia for flight nurses and for Air Force Medical Reserves; and panels on management of gastrointestinal disease in professional pilots, early detection of coronary heart disease in pilots, practical aerospace ophthalmology, aeromedical aspects of airport operations, the periodic health exam: boon or boondoggle?, and disposition of the pilot with a history of loss of consciousness. Special luncheons, activities for wives, and an honors night reception and banquet are also planned. Registration fee is $10 for members and $15 for nonmembers. Contact: Aerospace Medical Association, Washington National Airport. Washington, D.C. 20001.

AMERICAN ACADEMY OF FACIAL PLASTIC AND RECONSTRUCTIVE SURGERY will convene April 24-26 at the Hollywood Beach Hotel in Hollywood Beach, Fla., for its annual scientific meeting. Program chairman for the meeting is Dr. William K. Wright of Houston. Lectures, discussions, and panel sessions are scheduled, as is the Benjamin Shuster Memorial Competition for Resident Physicians, for which outstanding research in plastic surgery by residents is submitted. Cocktail parties and a dinner dance will entertain participants. Registration fee is $30 for members and $45 for nonmembers. Contact: Dr. William K. Wright, 540 Hermann Prof. Bldg., Houston 77025.

AMERICAN ACADEMY OF NEUROLOGY's 22nd annual meeting will be held April 27-May 2 at the Americana Hotel in Bal Harbour, Fla. General sessions are scheduled Thursday, Friday afternoon, and Saturday, April 30-May 2; and the academy's sections on child neurology, neurochemistry, neuroanatomy, and neuroepidemiology will conduct sessions Friday morning. Special courses will be offered on Monday, April 27, through Wednesday, April 29, from which physicians may choose to attend one per day. Courses available on Monday will cover neuropathology, functional neuroanatomy, neurophysiology, electroencephalography, and neurochemistry; on Tuesday, neuropharmacology, neuroradiology I, neuromuscular disorders, pathophysiology of demyelinating diseases, and child neurology; and on Wednesday, practical clinical neurology, Parkinsonism, scientific basis of neurology, neuroradiology II, neuro-ophthalmology, and topics in neurochemistry. An Early Bird Party is planned for Wednesday evening; and a reception for residents, a dinner-dance, and special events prepared for the Woman's Auxiliary will round out the meeting's social activities. Members will not be charged a

registration fee, and fee for nonmembers is $5. Contact: American Academy of Neurology, 4005 W. 65th St., Minneapolis, Minn. 55435.

AMERICAN ACADEMY OF ORTHOPAEDIC SURGEONS will sponsor a five-day training course for hospital emergency room nurses May 24-28 in San Diego, Calif. The course of lectures and audiovisual demonstrations will cover all phases of medical care rendered in the emergency room to ill and injured persons. Lecturers will discuss in depth the increasing responsibilities of emergency room nurses. Topics will include cardiopulmonary resuscitation, techniques of intravenous fluids and blood administration, treatment of the unconscious patient, handling psychiatric disturbances, and the legal and religious aspects of emergency care. Contact: Dr. Howell E. Wiggins, 2850 Sixth Ave., San Diego, Calif. 92103, course director.

AMERICAN COLLEGE OF RADIOLOGY will hold its Ninth Annual Seminar on Cancer of the Breast May 14-16 at the Brown Palace Hotel in Denver. Surgeons, radiologists, pathologists, teachers, residents, and technologists who are interested in diagnosis and management of early breast cancer may attend the seminar, cosponsored by the Cancer Control Program of the US Public Health Service. Included on the program will be a presentation on the team approach in breast cancer and a discussion of ways of determining the high-risk group of women who are most likely to have breast cancer. Other panels will discuss methods of screening for breast cancer and potential modalities for screening; treatment of early breast cancer; early mammographic cancer, including calcification and specimen radiology; problems in early diagnosis and management of breast cancer; and nipple discharge and its relation to breast diseases. Contact: Dr. Wendell P. Stampfli, Director of Radiology, St. Luke's Hospital, Denver, Chrm.

AMERICAN MEDICAL ASSOCIATION will host its Third National Voluntary Health Conference May 7-8 at the Statler-Hilton Hotel in Washington, D.C. Sponsored by the AMA's Board of Trustees and Council on Voluntary Health Agencies, the meeting will emphasize "Health Team Relationships: Professional Associations, Governmental Agencies, Voluntary Organizations." National leaders will explore the roles, responsibilities, and relationships among these groups in the provision of health care, broadly interpreted to include research, health education, and health services. Contact: Dr. D. A. Dukelow, Department of Health Education, AMA, 535 N. Dearborn St., Chicago 60610, conference coordinator.

AMERICAN SOCIETY OF ASSOCIATION EXECUTIVES' Second Annual Publications Conference will take place April 27-29 at the Continental Plaza Hotel in Chicago. Speakers from business, government, and association management will provide timely information geared to association communication in the 1970's. Conference participants are also eligible for entry in the "most improved publication" competition. Contact: James P. Low, 2011 Eye St., NW, Washington, D.C. 20006, executive vice-president.

FIRST INTERNATIONAL CONGRESS ON GROUP MEDICINE will offer a worldwide forum for the discussion of methods for provision of comprehensive health services under the theme of "New Horizons in Health Care." To be held April 26-30 in Winnipeg, Manitoba, Canada, the congress will include sessions on socioeconomic philosophy of health care, group medicine and health care, group practice in many lands, organization and administration of group practice, research and education in group practice, university- and community-based group medicine, allied health professions and group medicine, and economics of health care delivery in group practice. Visits to private clinics in Winnipeg are planned for April 29; and a varied social program has been arranged, which includes ladies' activities and pre- and post-congress tours. Contact: Congress Secretariate, First International Congress on Group Medicine, 425 St. Mary Ave., Winnipeg 1, Manitoba, Canada.

INTERNATIONAL ACADEMY OF PROCTOLOGY announces its 22nd Annual Congress and Teaching Seminar May 13-22 in Palma, Mallorca, Spain. Academy business sessions will take place Monday, May 18; and the scientific sessions are scheduled each morning, Monday through Friday, May 17-22. Wet clinics will be held in Barcelona May 15-16 on closed circuit television. A gala banquet and convocation will close the annual meeting on Thursday evening, May 22. Physicians from all parts of the world will present papers during the educational program, and the sessions are open to all physicians who desire to attend. Contact: Executive Office, 147-41 Sanford Ave., Flushing, N.Y. 11355.

INTERNATIONAL COLLEGE OF SURGEONS' 17th Biennial International Congress will attract participants from around the world to Paris, France, April 20-24. Scientific presentation and workshops on cardiac surgery, gynecology, orthopedics, thoracic surgery, ophthalmology, radiology, urology, oncology, and gastrointestinal surgery are scheduled. These scientific sessions will be continued in Istanbul, Budapest, Prague, Moscow, Leningrad, and Helsinki following the Paris meeting. Postcongress tours will also be available to various other European, African, and Asian countries. Entertainment during the congress includes a visit to the Institute Pasteur, several cocktail parties, a Lido party, an evening of ballet at the opera, an excursion by boat on the Seine, and a gala evening at the Conciergerie. Contact: Dr. Aldo Parentela, 1516 Lake Shore Dr., Chicago 60610, international executive secretary.

INTERNATIONAL SYMPOSIUM ON VECTORCARDIOGRAPHY will be sponsored May 15-17 at the Hotel Americana in New York City by the Long Island Jewish Medical Center. The three-day symposium is expected to attract an audience of more than 500 physicians from both hemispheres and will be divided into six half-day sessions at which 12 to 15 original papers will be presented. Topics will be angiographic and pathological correlations, surface mapping and conduction defects, computer applications, pediatric problems, lead systems and multipole generators, and miscellaneous subjects. There will also be three luncheon panels devoted to interpretation of unusual vectorcardiograms. Contact: Silvia Bakst, Long Island Jewish Medical Center, New Hyde Park, N.Y. 11040.

STUDENT AMERICAN MEDICAL ASSOCIATION's 1970 National Convention will get under way May 5-9 at the Bellevue Stratford Hotel in Philadelphia, Pa. Dr. Gerald D. Dorman, President of the American Medical Association, will speak at the AMA Luncheon; and Dr. Edward J. Kowalewski, president of the American Academy of General Practice, will address the AAGP Luncheon. In addition to scientific and professional exhibits and sessions of the House of Delegates and related committee meetings, symposia on "The Physician: Public Servant or Private Practitioner?" and "Professionalism" are scheduled. A reception and the SAMA Ball will provide entertainment. Contact: R. F. Staudacher, 2635 Flossmoor Rd., Flossmoor, Ill. 60422, executive director.

MORE HIGHLIGHTS OF COMING MEETINGS

■ Denotes Texas meetings.

ALSO IN APRIL

AMERICAN PEDIATRIC SOCIETY, Atlantic City, N.J., April 29-May 2, 1970. Dr. Charles D. Cook, 333 Cedar St., New Haven, Conn. 06510, Exec. Sec.

■ EIGHTH DISTRICT MEDICAL SOCIETY, Lake Jackson, Tex., April, 1970. Dr. Clinton E. Woodson, 2100 N. Fulton St., Wharton, Tex. 77488, Sec.

■ SOUTHWESTERN SURGICAL CONGRESS, Dallas, April 20-23, 1970. Dr. Jack A. Barney, 301 Pastenr Bldg., Oklahoma City 73103, Sec.-Treas.

■ TEXAS ASSOCIATION OF PUBLIC HEALTH PHYSICIANS, Dallas, April 30, 1970. Dr. Hardy D. Loe, Jr., 1115 N. MacGregor, Houston 77025, Sec.

■ TEXAS INDUSTRIAL MEDICAL ASSOCIATION, Dallas, April, 1970. Dr. Carolyn K. Veatch, 4837 Merrimac, Corpus Christi 78415, Sec.

■ TEXAS PHYSICAL MEDICINE AND REHABILITATION SOCIETY, Dallas, April 30-May 3, 1970. Dr. James W. Caldwell, 3500 Gaston Ave., Dallas 75210, Sec.

■ TEXAS PROCTOLOGIC SOCIETY, Dallas, April, 1970. Dr. James M. Hampton, 448 Hermann Prof. Bldg., Houston 77025, Sec.-Treas.

ALSO IN MAY

■ AMERICAN ACADEMY OF PEDIATRICS, TEXAS CHAPTER, Dallas, May 1, 1970. Dr. William S. Conkling, 500 E. Washington, Navasota 77868, Sec.

AMERICAN ACADEMY OF PSYCHOANALYSIS, San Francisco, May 8-10, 1970. Dr. Sidney S. Goldensohn, 40 Gramercy Park N, New York 10010, Sec.

AMERICAN ASSOCIATION OF PLASTIC SURGEONS, Colorado Springs, Colo., May 10-13, 1970. Dr. Robert L. Harding, 2201 N. Second St., Harrisburg, Pa. 17110, Sec.

AMERICAN CANCER SOCIETY, Ninth Annual Seminar on Cancer of the Breast, Denver, May 14-16, 1970. Dr. Wendell P. Stampfli, Director of Radiology, St. Luke's Hospital, Denver, Chrm.

■ AMERICAN COLLEGE OF SURGEONS, NORTH TEXAS CHAPTER, May 16, 1970. Dr. Ernest Poulos, 6140 Sherry Lane, Dallas 75225, Sec.-Treas.

AMERICAN PSYCHIATRIC ASSOCIATION, San Francisco, May 11-15, 1970. Dr. Walter E. Barton, 1700 18th St. NW, Washington, D.C. 20009, Exec. Officer.

■ AMERICAN PSYCHIATRIC ASSOCIATION, TEXAS DISTRICT BRANCH, Dallas, May, 1970. Mrs. Iris Wenzel, 1801 N. Lamar Blvd., Austin 78701, Exec. Sec.

AMERICAN THORACIC SOCIETY, Cleveland, May 24, 1970. Robert G. Weymueller, 1790 Broadway, New York 10019, Exec. Officer.

AMERICAN UROLOGICAL ASSOCIATION, Philadelphia, May 11-14, 1970. Richard J. Hannigan, 1120 N. Charles St., Baltimore, Exec. Officer.

■ CONFERENCE OF CITY AND COUNTY HEALTH OFFICERS, Dallas, May, 1970. Dr. J. E. Peavy, 1100 W. 49th St., Austin 78756, Texas State Commissioner of Health.

MEDICAL LIBRARY ASSOCIATION, New Orleans, May 17-22, 1970. Mrs. Helen Brown Schmid, 919 N. Mich. Ave., Chicago 60611, Exec. Officer.

NATIONAL TUBERCULOSIS AND RESPIRATORY DISEASE ASSOCIATION, Cleveland, Ohio, May 24, 1970. Dr. James E. Perkins, NTRDA, 1740 Broadway, New York 10019, Exec. Officer.

■ NATIONAL LEAGUE FOR NURSING, Dallas, May 10-14, 1970. Mrs. Margaret E. Walsh, 10 Columbus Circle, New York 10019, Sec.

■ ST. LUKE'S EPISCOPAL SYMPOSIUM, Honston, May 14-16, 1970. Dr. Donald T. Lazarz, 1817 Dryden, Houston 77025, Pres.

■ TEXAS AIR-MEDICS ASSOCIATION, Dallas, May 2, 1970. Dr. C. F. Miller, Box 1338, Waco 76703, Sec.

■ TEXAS DERMATOLOGICAL SOCIETY, Dallas, May 2-3, 1970. Dr. Coleman G. Jacobson, 3707 Gaston, Dallas, 75246, Sec.

■ TEXAS MEDICAL ASSISTANTS ASSOCIATION, Baytown, May 21-24, 1970. Faye Gibson, 5401 41st St., Lubbock, Sec.

■ TEXAS OPHTHALMOLOGICAL ASSOCIATION, Dallas, May 1, 1970. Dr. John C. Kuppinger, 1515 Ed Carey Dr., Harlingen 78550, Sec.

■ TEXAS ORTHOPAEDIC ASSOCIATION, Dallas, May 2, 1970. Dr. John J. Hinchey, 1A Medical Prof. Bldg., San Antonio 78212, Exec. Officer.

■ TEXAS OTOLARYNGOLOGICAL ASSOCIATION, Dallas, May, 1970. Dr. James L. Baldwin, 712 N. Washington, Dallas 75246, Sec.

■ TEXAS SOCIETY OF ATHLETIC TEAM PHYSICIANS, Dallas, May 1, 1970. Dr. John B. Gunn, 2618 Welborn St., Dallas 75219.

■ TEXAS SOCIETY OF PATHOLOGISTS, Dallas, May 3, 1970. Mrs. Iris Wenzel, 1801 N. Lamar Blvd., Austin 78701, Exec. Sec.

■ TEXAS SOCIETY OF PLASTIC SURGEONS, Dallas, May 2, 1970. Dr. E. Frank Dunton, 3434 Swiss Ave., Snite 104, Dallas 75204, Sec.

JUNE

AMERICAN DIABETES ASSOCIATION, Annual, St. Louis, June 7-14, 1970. J. Richard Connelly, 18 E. 48th St., New York 10017, Exec. Dir.

AMERICAN MEDICAL ASSOCIATION, Annual Meeting, Chicago, June 21-25, 1970. AMA, 535 N. Dearborn St., Chicago 60610.

AMERICAN MEDICAL SOCIETY ON ALCOHOLISM, Chicago, June 23-24, 1970. Dr. Frank A. Seixas, National Council on Alcoholism, 2 Park Ave., New York 10016, Sec.

AMERICAN PHYSICAL THERAPY ASSOCIATION, Washington, D.C., June 28-July 3, 1970. Royce P. Noland, 1740 Broadway, New York 10019, Exec. Officer.

AMERICAN RHEUMATISM ASSOCIATION SECTION OF THE ARTHRITIS FOUNDATION, Detroit, Mich., June 18-19, 1970. Margaret M. Walsh, 1212 Ave. of the Americas, New York, Exec. Sec.

AMERICAN THERAPEUTIC SOCIETY, Chicago, June 18-21, 1970. Dr. Richard T. Smith, 1718 Gallagher Rd., R.D. 4, Norristown, Pa. 19401, Exec. Sec.

■ TEXAS ACADEMY OF GENERAL PRACTICE, Fort Worth, June 7-10, 1970. Donald C. Jackson, 1905 Lamar, Austin, Exec. Officer.

■ TEXAS COMMISSION ON ALCOHOLISM, Institute of Alcohol Studies, Austin, June 7-11, 1970. C. W. Coffey, 809 Sam Houston State Office Bldg., Austin 78701, Asst. Exec. Dir.

■ TEXAS STATE BOARD OF MEDICAL EXAMINERS, Fort Worth, June 15-17, 1970. Dr. M. H. Crabb, 1612 Summit Ave., Suite 303, Fort Worth, 76102, Sec.

■ THE UNIVERSITY OF TEXAS NURSING SCHOOL, Dynamics of the Interviewing Process, Amarillo, June 1-3, 1970; Galveston, June 8-10, 1970. Dorothy Blume, Continuing Education, The University of Texas Nursing School, Austin 78712, Dir.

JULY

■ POSTGRADUATE MEDICAL ASSEMBLY OF SOUTH TEXAS, Houston, July 27-29, 1970. Mrs. Betty Dahme, 209 Jesse H. Jones Library Building, Houston 77025, Exec. Sec.

ROCKY MOUNTAIN CANCER CONFERENCE, Denver, July 17-18, 1970. F. C. Schmidt, 1764 Gilpin St., Denver 80218, Exec. Officer.

SOCIETY OF NUCLEAR MEDICINE, Washington, D.C., July 6-12, 1970. Margaret Gloss, 211 E. 43rd St., New York 10017, Exec. Officer.

■ TEXAS PHARMACEUTICAL ASSOCIATION, Dallas, July 26-29, 1970. Luther R. Parker, 404 Austin Savings Bldg., Austin, Exec. Officer.

■ THE UNIVERSITY OF TEXAS NURSING SCHOOL, The Changing Role in Mental Health Nursing—A New Dimension: Family Systems and Therapy, San Antonio, July 9-10, 1970. Dorothy Blume, Continuing Education, The University of Texas Nursing School, Austin 78712, Dir.

AUGUST

AMERICAN ACADEMY OF PHYSICAL MEDICINE AND REHABILITATION, New York City, Aug. 16-18, 1970. Creston C. Herold, 30 N. Mich. Ave., Chicago 60602, Exec. Dir.

AMERICAN COLLEGE OF CHEST PHYSICIANS, 11th International Congress, Lausanne, Switzerland, Aug. 3-7, 1970. Alfred Soffer, 112 E. Chestnut St., Chicago, Exec. Dir.

AMERICAN CONGRESS OF REHABILITATION MEDICINE, New York, Aug. 16-21, 1970. Creston C. Herold, 30 N. Michigan Ave., Chicago 60602, Exec. Dir.

THE UNIVERSITY OF WISCONSIN, Ninth National Conference on Therapies for Advanced Cancers, Madison, Wis., Aug. 20-22, 1970. Dr. Robert J. Samp, Assistant Professor of Surgery and Clinical Oncology, University Hospitals, Madison, Wis. 53706, Program Coordinator.

WORLD MEDICAL ASSOCIATION, Oslo, Norway, Aug. 16-22, 1970. Dr. A. Z. Romualdez, 10 Columbus Circle, New York 10019, Sec.

SEPTEMBER

AMERICAN ACADEMY OF GENERAL PRACTICE, San Francisco, Sept. 25-Oct. 1, 1970. Mac F. Cahal, Volker Blvd. at Brookside, Kansas City, Mo., Exec. Dir.

AMERICAN ASSOCIATION OF MEDICAL CLINICS, San Francisco, Sept. 20-23, 1970. Dr. Edward M. Wurzel, 421 King St., Alexandria, Va. 22314, Exec. Dir.

AMERICAN ELECTROENCEPHALOGRAPHIC SOCIETY, Washington, D.C., Sept. 17-19, 1970. Dr. Philip T. White, Marquette University School of Medicine, 8700 W. Wisconsin Ave., Milwaukee, Wis. 53226, Sec.

AMERICAN FRACTURE ASSOCIATION, New York City, Sept. 26-30, 1970. Dr. H. W. Wellmerling, 610 Griesheim Bldg., Bloomington, Ill. 61701, Sec.-Gen.

■ AMERICAN HEART ASSOCIATION, TEXAS AFFILIATE, INC., Dallas, Sept. 15-20, 1970. Dudley H. Hafner, Box 9928, 8600 Hwy. 183 N, Austin 78757, Exec. Officer.

■ AMERICAN HOSPITAL ASSOCIATION, Houston, Sept. 14-17, 1970. James E. Hague, 840 N. Lake Shore Drive, Chicago, Sec.

AMERICAN HUMANE ASSOCIATION, St. Louis, Sept. 27-30, 1970. Rutherford T. Phillips, P. O. Box 1266, Denver, Colo. 80201, Exec. Dir.

AMERICAN MEDICAL WRITERS ASSOCIATION, New York, Sept. 24-27, 1970. W. Wayne Curtis, 420 Lexington Ave., New York 10017, Exec. Officer.

AMERICAN ROENTGEN RAY SOCIETY, Miami Beach, Fla., Sept. 30, 1970. Dr. William B. Seaman, 20 N. Wacker Dr., Chicago 60606, Exec. Officer.

ASSOCIATION OF LIFE INSURANCE MEDICAL DIRECTORS OF AMERICA, Boston, Sept. 28-30, 1970. Dr. Arthur E. Brown, c/o ALIMDA, P.O. Box 594, Newark, N.J.

■ TEXAS MEDICAL ASSOCIATION, Austin, Sept. 18-20, 1970. C. Lincoln Williston, 1801 N. Lamar Blvd., Austin 78701, Exec. Sec.

■ TEXAS PEDIATRIC SOCIETY, Fort Worth, Sept. 24-26, 1970. Dr. Pat A. Cato, 1015 E. 32nd St., Austin 78705, Sec.

MAY WE BE OF SERVICE . . .

Texas Central Credit Union, serving our members since 1937, now offers credit union membership to you, members of the Texas Medical Association, and your employees.

In addition to fast service on loans of all types, we offer credit life insurance to insurable risks on all loans up to $10,000.00 at no charge above our already low rates.

Two types of savings plans are available:

Our regular share accounts with life insurance benefits to insurable risks.

Our new deposit account plan paying:

5½% on 90 day deposits
5¾% on 180 day deposits
6% on 365 day deposits

We invite you to call or write our office for a membership packet and complete details.

If you plan to attend the TMA Convention in May in Dallas, please come by our booth and talk with a representative.

TEXAS CENTRAL CREDIT UNION
4617 N. Central Expressway
Dallas, Texas 75205

Dallas—528-4330
Toll-free WATS line
800-492-6456

Serving Texas Physicians for Over Forty Years

Precision-engineered, functionally-built equipment

SMR keeps you and your patients' comfort and satisfaction in mind . . . a room that reflects professional good taste.

SMR has manufactured medical and Dental equipment for over forty years on a direct to user basis.

STAINLESS STEEL POLISH
SMR Stainless Steel Polish cleans, and preserves with superior results —ends fingerprints, watermarks and surface stains. 22 oz. economy $2.75 F.O.B. Plant

NEW CATALOG NOW AVAILABLE

SURGICAL MECHANICAL RESEARCH, INC.
Post Office Box 1185 • (714) 646-4405
960 W. 16th St., Newport Beach, Calif. 92663

Established Over 40 Years

Factory Direct Sales

See us at Booth No. 100 TMA April 30-May 3, 1970

CONTINUING EDUCATION COURSES

Infectious Diseases: The American College of Physicians will present a course on the clinical aspects of infectious diseases May 20-22 at the University of Washington School of Medicine at Seattle. The purpose of this course is to present recent advances in diagnosis and therapy of infectious diseases; and practical aspects will be emphasized, although basic mechanisms will be included where applicable. The rapid changes in details of antibiotic therapy and the increasing incidence of gram-negative infections will receive attention, as will prevention and treatment of infections in patients with lowered host defenses. Audience participation in the discussion and question periods will be encouraged.

Fee for college members, residents, and research fellows is $60 and for nonmembers is $100. Requests for more information, applications, and registration may be sent to Dr. Edward C. Rosenow, Jr., Executive Director, American College of Physicians, 4200 Pine St., Philadelphia 19104.

Respiratory Care: A three-day symposium on the management and care of respiratory insufficiency will be held April 15-17 in Denver. Sponsored by the University of Colorado School of Medicine, the course is designed to review modern methods of respiratory care for patients both acutely and chronically ill. Emphasis will be directed toward patients with chronic airway obstruction and is oriented toward both intensive and rehabilitative care. Aspects of management of respiratory insufficiency, including postoperative states, trauma, poisonings, and neurological emergencies will also be considered. The course is primarily intended for chest physicians, internists, anesthesiologists, thoracic surgeons, and pediatricians who are involved in respiratory care, including intensive as well as clinic and home care.

Tuition is $75, including a non-refundable registration fee of $10. All those who attend will be required to register in advance by writing to The Office of Postgraduate Medical Education, The University of Colorado School of Medicine, 4200 E. Ninth Ave., Denver 80220.

Fractures and Trauma: A 3½-day postgraduate course May 13-16 will cover fractures and other trauma and will be acceptable for 24½ elective hours credit by the American Academy of General Practice. To be held at the John B. Murphy Auditorium, 50 E. Erie St., Chicago, the course will be sponsored by the Chicago Committee on Trauma of the American College of Surgeons. Material will be presented via panel discussions and will be organized according to body regions, including orthopedic, general surgical, neurosurgical, urologic, and plastic surgical subjects. A session on burn problems and a Complications Conference also are scheduled.

Write to Dr. James P. Ahstrom, Jr., Program Chairman, American College of Surgeons, 55 E. Erie St., Chicago 60611, for registration information. Fee for the course is $100, but residents and interns may be admitted free upon presentation of a proper letter of authorization.

Endocrinology: The American College of Physicians, in conjunction with the University of California School of Medicine at San Francisco, will present a course on recent advances in endocrinology and selected metabolic diseases April 22-25 in San Francisco. The course will emphasize the application of carefully chosen current basic knowledge to the diagnosis of selected endocrine and metabolic diseases and will outline the latest and most effective types of therapy. The most pertinent and direct diagnostic tests followed by a thorough discussion of differential diagnosis for each hormone will be offered.

Fee for members, residents, and research fellows is $60 and for nonmembers is $100. All registration, requests for information, and applications may be sent to Dr. Edward C. Rosenow, Executive Director, American College of Physicians, 4200 Pine St., Philadelphia 10194.

Emergency Aid: The American Academy of Orthopaedic Surgeons will sponsor the fifth annual course on emergency aid and transportation of sick and injured persons April 23-25 at the Fontainebleau Motor Hotel in New Orleans. Lectures, demonstrations, and discussions will cover anatomy and physiology, surveying the injured, life-threatening emergencies, care and complications of injuries, environmental hazards, medical emergencies, the disturbed and unruly patient, emergency childbirth, rescue and extrication, and transportation and communication. Attending the three-day course will be ambulance attendants, policemen, firemen, nurses, members of volunteer rescue squads, and others who work with those requiring emergency attention.

Directing the course will be Dr. Raoul P. Rodriguez, Jr., assistant professor, division of orthopedic surgery, Tulane University School of Medicine. For further information contact him at 1430 Tulane Ave., New Orleans 70112.

Laboratory Workshops: A series of laboratory workshops for the benefit of public health, hospital, clinical, and other medical laboratories is under way. A course on introductory immunofluorescence again will be offered May 25-27; it was first offered in February. Scheduled for May 27-29 is a course on public health and medical parasitology which will give the laboratory worker an opportunity to learn first hand how to recognize the common intestinal protozoan parasites. From June 1-5 will be a course on public health and medical bacteriology, dealing with specific tests used in the identification of several microorganisms of public health importance. Daily starting and closing times for each workshop will be 9 a.m. and 5 p.m.

There is no registration fee for the workshops, and admittance is by prior registration only. Application may be sent to Dr. J. V. Irons (ScD), Director of Laboratories, Texas State Department of Health, 1100 W. 49th St., Austin 78756.

Various Subjects: The American College of Physicians will sponsor a series of postgraduate courses on the following subjects: medical intensive care, May 6-8, Vancouver, B.C., Can.; and heart disease—clinical and pathological correlation, May 27-29, Washington D.C. Lectures, demonstrations, panel discussions, and question and answer periods will be included.

Tuition is $60 for members and $100 for nonmembers for each of the courses. Write to Dr. Edward C. Rosenow, Jr., Executive Director, American College of Physicians, 4200 Pine St., Philadelphia 19104, for additional information and registration forms.

—The lowest priced tetracycline—nystatin combination available—

Vasomist

(ANTIHISTAMINIC)

VASOCONSTRICTOR, NASAL DECONGESTANT AND LOCAL ANTIHISTAMINIC

Active Ingredients:
Phenylephrine Hcl 0.25%
Phenylpropanolamine Hcl ... 0.50%
Chlorobutanol 0.15%
Tripelennamine Hel 0.50%
In Isotonic Solution

Vasomist

(PLAIN)

VASOCONSTRICTOR AND NASAL DECONGESTANT

Active Ingredients:
Phenylephrine Hcl 0.25%
Phenylpropanolamine Hcl ...0.50%
Chlorobutanol 0.15%
In Isotonic Solution

USE: Temporary relief of nasal congestion due to colds and hay fever.

DIRECTIONS: Adults and Children: Instill two or three drops into each nostril, using no more than needed to provide relief. Repeat every three to four hours as needed but not oftener.

AVAILABILITY

In plastic squeeze bottles containing ¾ fluid oz. and in dropper bottles containing 1 fluid oz.

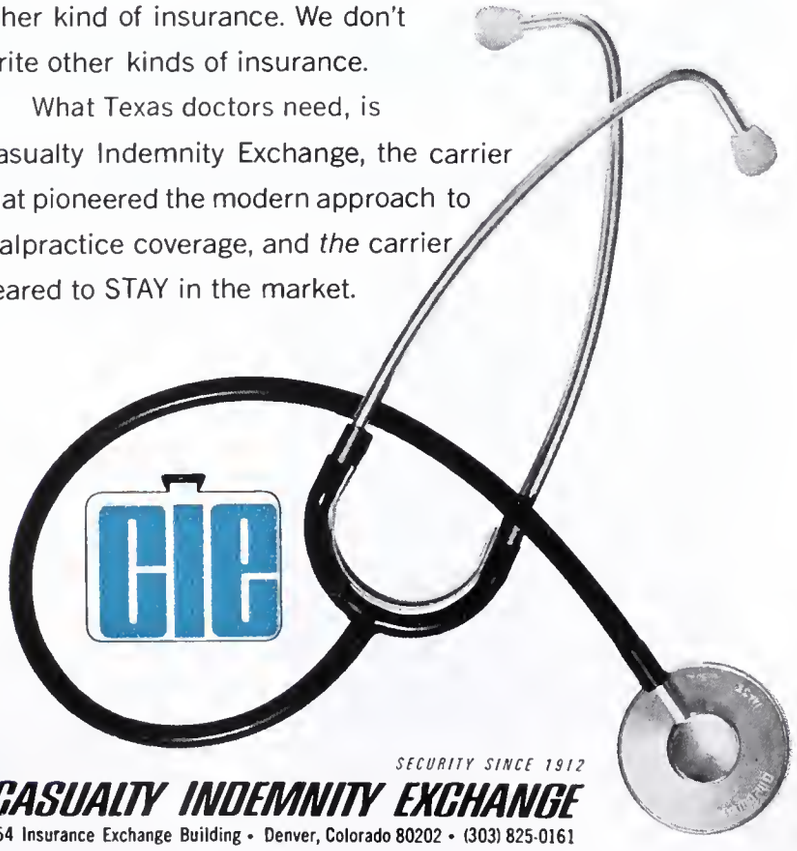
HUMCO LABORATORY
TEXARKANA, ARK.-TEX.

HUMCO LABORATORY
TEXARKANA, ARK.-TEX.
Our Integrity is Your Guarantee

What Texas doctors need, is a Malpractice Liability Carrier that won't fade when trouble comes.

This means the up-to-date carrier. The one that's replete with innovations and new developments in this clouded, sensitive area of liability protection. And the one that doesn't talk malpractice coverage just to get a foot in the door for every other kind of insurance. We don't write other kinds of insurance.

What Texas doctors need, is Casualty Indemnity Exchange, the carrier that pioneered the modern approach to malpractice coverage, and *the* carrier geared to STAY in the market.



Contact your local agent or
RUSSELL GRACE INSURANCE
2304 W. 7th St.
Ft. Worth, Texas 76107
(817) 332-9269
In Dallas, Call
(214) 264-4300

SECURITY SINCE 1912
CASUALTY INDEMNITY EXCHANGE
754 Insurance Exchange Building • Denver, Colorado 80202 • (303) 825-0161

The girth control pill

Tepanil® Ten-tab®

(continuous release form)

(diethylpropion hydrochloride)

works on the appetite not on the 'nerves'

When girth gets out of control, TEPANIL can provide sound support for the weight control program you recommend. TEPANIL reduces the appetite—patients enjoy food but eat less. Weight loss is significant—gradual—yet there is a relatively low incidence of CNS stimulation.

Contraindications: Concurrently with MAO inhibitors, in patients hypersensitive to this drug; in emotionally unstable patients susceptible to drug abuse.

Warning: Although generally safer than the amphetamines, use with great caution in patients with severe hypertension or severe cardiovascular disease. Do not use during first trimester of pregnancy unless potential benefits outweigh potential risks.

Adverse Reactions: Rarely severe enough to require discontinuation of therapy, unpleasant symptoms with diethylpropion hydrochloride have been reported to occur in relatively low incidence. As is characteristic of sympathomimetic agents, it may occasionally cause *CNS effects* such as insomnia, nervousness, dizziness, anxiety, and jitteriness. In contrast, CNS depression has been reported. In a few epileptics an increase in convulsive episodes has been reported. Sympathomimetic *cardiovascular effects* reported include ones such as tachycardia, precordial pain, arrhythmia, palpitation, and increased blood pressure. One published report described T-wave changes in the ECG of a healthy young male after ingestion of diethylpropion hydrochloride; this was an isolated experience, which has not been reported by others. *Allergic phenomena* reported include such conditions as rash, urticaria, ecchymosis, and erythema. *Gastrointestinal effects* such as diarrhea, constipation, nausea, vomiting, and abdominal discomfort have been reported. Specific reports on the hematopoietic system include two each of bone marrow depression, agranulocytosis, and leukopenia. A variety of miscellaneous adverse reactions have been reported by physicians. These include complaints such as dry mouth, headache, dyspnea, menstrual upset, hair loss, muscle pain, decreased libido, dysuria, and polyuria.

Convenience of two dosage forms: TEPANIL Ten-tab tablets: One 75 mg. tablet daily, swallowed whole, in midmorning (10 a.m.); TEPANIL: One 25 mg. tablet three times daily, one hour before meals. If desired, an additional tablet may be given in midevening to overcome night hunger. Use in children under 12 years of age is not recommended.

T-006A / 1/70 / U.S. PATENT NO. 3,001,910

THE NATIONAL DRUG COMPANY
DIVISION OF RICHARDSON-MERRELL INC
PHILADELPHIA, PENNSYLVANIA 19144

The new Brown Schools

. . . a plan of construction and improvement . . . in living facilities and services . . . to provide the finest care and treatment for the retarded and the disturbed.

This new dormitory . . . one of 22 new buildings now underway . . . is part of that plan. All will open in 1970 to provide a comfortable, safe, and supportive environment to complement the work of an experienced professional staff.

The **NEW** Brown Schools program encompasses each of the six separate residential centers and treatment programs. For further information on the expanding facilities and services of the **NEW** Brown Schools, write for a catalogue today.

Registrar, Dept. K-1
P.O. Box 4008
Austin, Texas 78751

THE BROWN SCHOOLS

Paul L. White, M.D.
Medical &
Psychiatric Director

Jackson R. Day, M.D.
Staff Psychiatrist

T. Charles
McCormick, M.D.
Staff Psychiatrist

Six Separate Residence Campuses
Austin and San Marcos, Texas
Established 1940

DISTAL EARLY WARNING:

SLOW OR UNUSUAL NAIL GROWTH

Discolored, thickened and deformed toenails or ridged fingernails which are not firmly attached to the nailbed may indicate peripheral vascular disease. So too, other distal early warning signs such as color changes, shiny skin and lack of hair may suggest an impaired peripheral circulation.

Early diagnosis can mean more viable smooth musculature capable of responding to vasospasmolytic therapy with Cyclospasmol.

Cyclospasmol

- lowers peripheral resistance in limb vessels... improves distal run-off, facilitates development of collateral circulation.
- is a musculotropic without significant adrenergic or cardiostimulant effects.
- is unrelated to epinephrine, papaverine or nicotinic acid.

A program of progressive walking exercise, cessation of smoking, foot care, proper diet and Cyclospasmol can be of long-term value to many patients with early occlusive disease.

Before arteriosclerosis obliterans becomes painfully evident

Cyclospasmol® (cyclandelate)

For long-term enhancement of peripheral circulation

See facing page for Brief Summary

Cyclospasmol (cyclandelate)

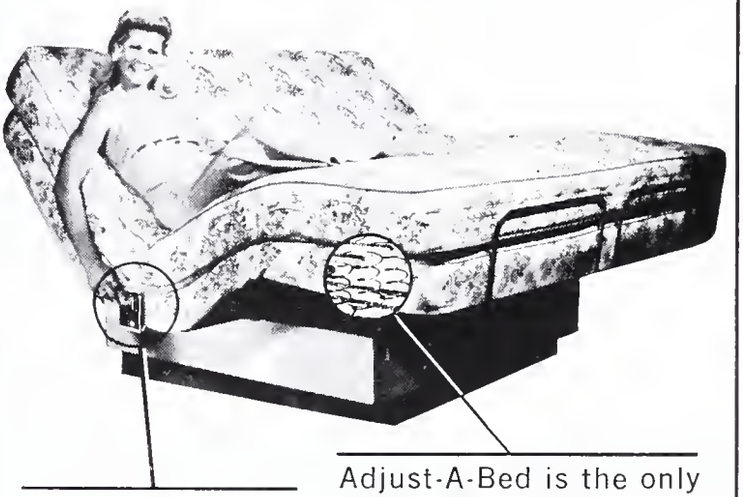
ACTIONS: Cyclospasmol (cyclandelate) is an orally effective peripheral spasmolytic and vasodilator that acts directly on the vascular smooth musculature to produce a gradual and progressive relaxation that enhances the peripheral and cerebral blood flow. **INDICATIONS:** For adjunctive therapy in occlusive and vasospastic diseases of the vascular system associated with an impaired circulation, such as: intermittent claudication; arteriosclerosis obliterans; thrombophlebitis (to control associated vasospasm and muscular ischemia); nocturnal leg cramps; local frostbite; Raynaud's phenomenon; as an aid to encourage healing of diabetic and trophic ulcers of the legs; and for selected cases of ischemic cerebral vascular disease. A faster response may be expected in conditions in which vasospasm is predominant in the pathological process. The drug is not intended to substitute for an adequate medical or surgical program in the treatment of peripheral or cerebral vascular disease. It is imperative that the patient continue to follow established therapy, e.g., foot care, discontinuance of smoking, etc., while taking Cyclospasmol. Since cerebrovascular disease is diagnosed most frequently only after destruction of nerve tissue, it cannot be expected that signs and symptoms arising from an interruption of neuronal function can be completely reversed by correcting the exciting cause. Nevertheless, restoration of blood flow towards more normal levels with cyclandelate may often produce marked relief from such signs and symptoms as head noises, ringing in the ears, a feeling of weakness, unsteady gait, mental confusion, temporary fluctuations in hearing acuity, poor memory and slurred speech. More important, the drug may provide prophylaxis against further circulatory embarrassment, particularly if the diminished circulation is associated with spasm of the vascular wall. **CONTRAINDICATIONS:** Cyclospasmol is contraindicated in cases of known hypersensitivity to the drug. **WARNINGS: 1.** Cyclandelate should be used with extreme caution in patients with severe obliterative coronary artery or cerebral vascular disease, since there is a possibility that these diseased areas may be compromised by vasodilatory effects of the drug elsewhere. **2. USE IN PREGNANCY:** The safety of cyclandelate for use during pregnancy or lactation has not been established; therefore, it should not be used in pregnant women or in women of childbearing age unless, in the judgment of the physician, its use is deemed absolutely essential to the welfare of the patient. **3.** Although no prolongation of bleeding time has been demonstrated in humans in therapeutic dosages, it has been demonstrated in animals at very large doses. Therefore, the hazard of a prolonged bleeding time should be carefully considered when administering cyclandelate to a patient with active bleeding or a bleeding tendency. **PRECAUTIONS:** Since Cyclospasmol is a vasodilator, it should be used with caution in patients having glaucoma. Consult direction circular before prescribing. **ADVERSE REACTIONS:** Gastrointestinal distress (pyrosis, pain and eructation) may occur with Cyclospasmol. These symptoms occur infrequently and are usually mild. Relief can often be obtained by taking the medication with meals or by the concomitant use of antacids. Mild flush, headache, feeling of weakness or tachycardia may occur, especially during the first weeks of administration. **SUPPLIED:** 200 mg. blue capsules in bottles of 100 and 500; 100 mg. orange tablets in bottles of 100 and 500.

May we send you reprints, detailed literature or professional samples?

IVES LABORATORIES INC.
685 Third Avenue, New York, N.Y. 10017

Ives®

Comfort At A Touch!



Dual side controls with no cords for greater convenience.

Adjust-A-Bed is the only adjustable bed with coil box springs! This is the only way fine beds have been made for the last forty years.

ADJUST-A-BED

- Aids Back Pain Relief
- Rest Your Heart
- Eases Breathing
- Relieves Swollen Tired Legs, Feet
- Excellent for Recuperation
- Lessens TV, Reading Eyestrain
- Tends to Relieve Arthritis Pain

Sizes: Twin through King or any custom size.
Any Firmness: Soft, Medium, Firm, Extra-Firm, Orthomatic.

PERFECT POSITIONING BUT NEVER A SICKROOM LOOK!

Medically approved support while:

Ask about free beds under Medicare and Veteran's Plans!

For 24-hour nationwide service, call **602-955-7600**

SEE OUR DISPLAY
at the Texas Medical Convention. Ask about a special Convention Discount or write for a brochure.

ORTHO COMFORT STORES
Town & Country Shopping Center
2051 East Camelback Road Phoenix, Arizona 85016

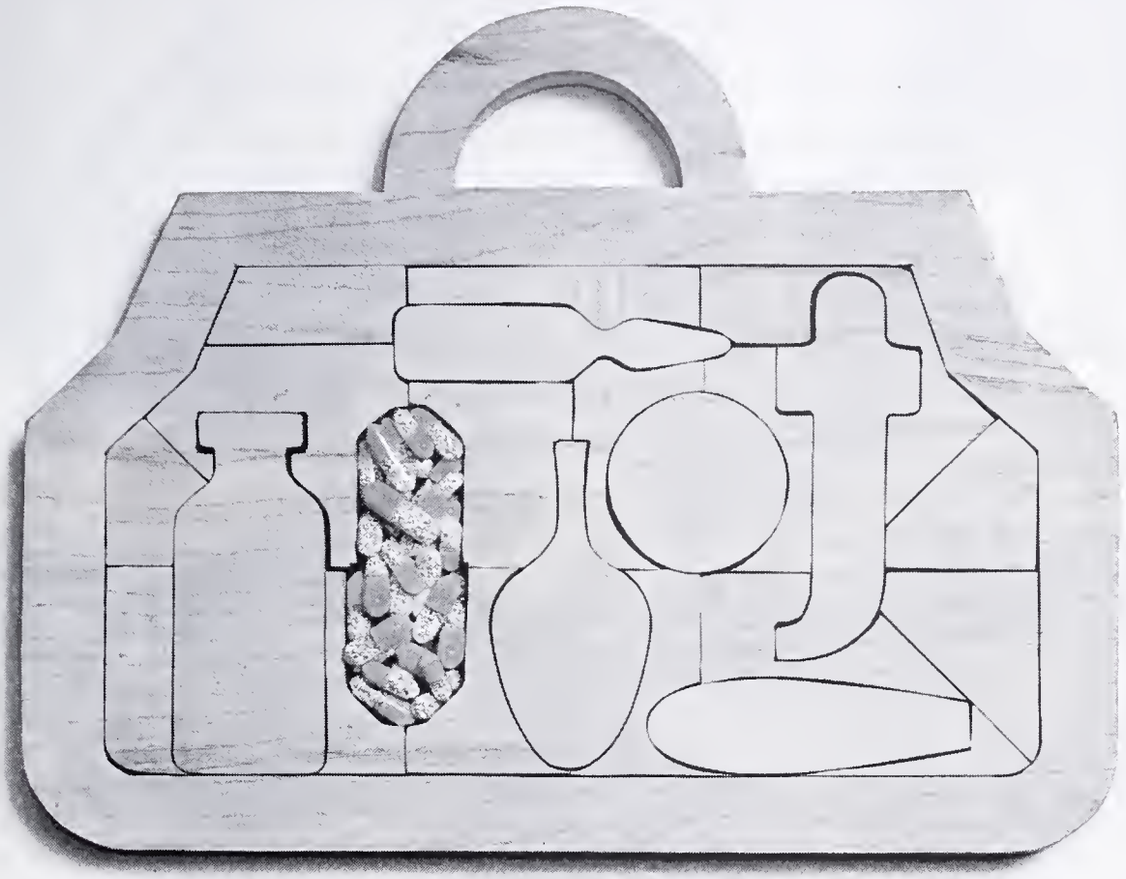
THE HIGHEST OF STANDARDS!

FRANCIS HOSPITELS INCORPORATED

FRANCIS CONVALESCENT CENTERS
DIVISION OF FRANCIS HOSPITELS, INC.

FRANCIS HOSPITELS, INC., 7129 Highway 290 East, Austin, 512 454-2725

FRANCIS HOSPITELS—WACO: Francis Hospitel, 2501 Maple Avenue, Ph. 752-0311 **FRANCIS CONVALESCENT CENTERS**—AUSTIN: Retirement Inc., 6909 Burnet Road, Ph. 452-5719; FORT WORTH: Francis Convalescent Center, 1000 6th Avenue, Ph. 335-1903; CORPUS CHRISTI: Francis Convalescent Center, 3050 Sunnybrook, Ph. 853-9981; LONGVIEW: Highland Pines, 1100 N. 4th Street, Ph. 753-7661; SAN ANTONIO: San Pedro Manor, 616 West Russell, Ph. 732-5181 **FRANCIS MANAGEMENT**—PORT ARTHUR: The Golden Triangle Convalescent Center, 3900 Highway 365, Ph. 727-1651.



One of seven dosage forms

Thorazine®

brand of chlorpromazine HCl

Spansule®

brand of sustained release capsules

Available in 30 mg., 75 mg., 150 mg., 200 mg. and 300 mg. strengths.

Smith Kline & French Laboratories
Philadelphia, Pa. 19101

for the debilitated geriatric patient

Berocca®

TABLETS
high potency B-complex and C
for nutritional support

AVAILABLE ONLY ON Rx

contains water-soluble vitamins only

b.i.d. dosage

good patient acceptance

no odor, and virtually no aftertaste

Each Berocca Tablet contains:

Thiamine mononitrate	15 mg
Riboflavin	15 mg
Pyridoxine HCl	5 mg
Niacinamide	100 mg
Calcium pantothenate	20 mg
Cyanocobalamin	5 mcg
Folic acid	0.5 mg
Ascorbic acid	500 mg

Usual dosage is one tablet b.i.d.

Indications: Nutritional supplementation in conditions in which water-soluble vitamins are required prophylactically or therapeutically.

Warning: Not intended for treatment of pernicious anemia or other primary or secondary anemias. Neurologic involvement may develop or progress, despite temporary remission of anemia, in patients with pernicious anemia who receive more than 0.1 mg of folic acid per day and who are inadequately treated with vitamin B_{12}.

Dosage: 1 or 2 tablets daily, as indicated by clinical need.

Available: In bottles of 100.

ROCHE

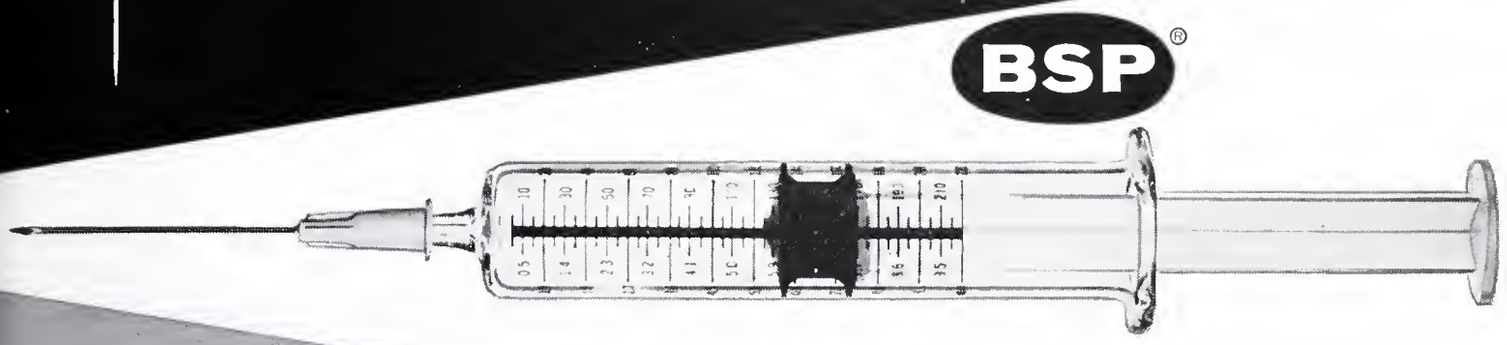
Roche
LABORATORIES

Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

BSP® DISPOSABLE UNIT

HW&D BRAND OF SODIUM SULFOBROMOPHTHALEIN INJECTION, USP

(50 mg. per ml.)



BROMSULPHALEIN® IN A STERILE, DISPOSABLE, ECONOMICAL UNIT

The Bromsulphalein test is a convenient, sensitive, reliable test of liver function.

The precalibrated syringe contained in the BSP Disposable Unit makes weight calculations unnecessary, providing proper dosage regardless of patient-weight. Each unit contains complete directions for use, precautions and contraindications.

The all-inclusive BSP Disposable Unit provides economic unit dispensing.

Complete literature available on request.

HYNSON, WESTCOTT & DUNNING, INC.

Baltimore, Maryland 21201

(BSP04)

Programs for MULTIPLY HANDICAPPED RETARDATES

BILL J. DOGGETT

I DERIVE GREAT PLEASURE, but little financial reward, as a weekend and holiday rancher. Recently one of my fine Black Angus springer heifers was unable to give natural birth. The veterinarian performed a cesarean section, presented me with an enormous bill, and with his best "cow-side manner" said, "The problem is far removed from any vital organs, the cesarean section is no sweat, and with care the hiplock will soon resolve itself." However, the paralysis remained; my cow went to the soap factory, and I had nothing but a cancelled check and a possible tax deduction. True, the cow recovered from the immediate effects of birth trauma, but what good is a paralyzed cow?

The point is that if we view symptoms in isolation, we establish isolated rather than comprehensive programs that treat the total handicapped individual. With all the vast resources of knowledge that we have at our command, we as professionals (physicians, psychiatrists, psychologists, social workers, administrators, etc) still tend to treat only that part of the disability that relates to our profession and, in so doing, isolate ourselves from all other sources of professional help. The end result is that in far too many instances we are giving our students programs that amount to no more than a cancelled check. For them, it isn't even useful for an income tax write-off.

In overcoming this syndrome I suggest that we define what we mean by the multiple-handicapped retardate and how this definition relates to the culture in which it exists. My suggested definition is: that individual with a moderate-to-severe physical or emotional problem, superimposed upon some degree of mental retardation

Multiply handicapped mentally retarded individuals need more help than any one profession can give. Much progress has been made in Texas' state schools, but the problem still is enormous. Efficient and productive use of all resources is necessary for a multidisciplinary approach.

which results in a learning, behavioral, or social problem. These, then, are individuals with diverse backgrounds and needs but with a common problem. They cannot maintain themselves independently. Some have come from vocational training programs where they were judged unemployable. Some have special education backgrounds, but have been judged unfit for training. Tragically, some have been lost all their lives and have never had even a temporary slot in which to fit.

Consequently, we then have a biological mass of protoplasm who suffers from a "physio-psycho-socio-cultural" problem. This multiple-handicapped retardate suffers from handicaps within himself as well as those imposed externally by society and culture. For example, (1) He is unable, or has limited ability, to compete. (2) This inability to compete is socially visible. The person who has dentures is not considered handicapped; on the other hand, the amputee is because his problem is a visible one. (3) The handicap which is easily visible and makes the individual different from the masses makes him somehow less desirable.

Other Implications: Having defined the person about whom we are talking and his impact—or lack of impact—on his culture, what is his effect and what additional implications are superimposed on this already inadequate individual?

1. He begins developing a concept that he is going to fail—that he is a loser. We live in a highly complex, competitive culture. From earliest infancy we are placed in competitive situations, and the handicapped individual is less likely to compete successfully; this is what we mean when we say handicapped. This leads to frequent failures, often occurring early in life. All too often, the result is that the person develops an attitude of failure avoidance—he approaches a problem not with the idea of "How can I succeed?" but of "How can I avoid failure?" The two are entirely different.

2. Because of all these adverse circumstances, the handicapped person becomes involved in a series of vicious cycles involving interpersonal relationships which may be shown by a number of examples. Since most of us are parents, let us consider parents and poor intellectual performance by the multiple-handicapped child. Typically, the parents demand that the child improve his performance and "come up to snuff." This increased pressure makes the child more anxious and tense, which causes further decrease in performance. In the parent, this leads to disappointment, further intensification of pressure, and ultimately a tendency toward rejection. The child feels this and reacts with resentment by aggression or withdrawal. Thus a vicious, self-perpetuating cycle is established.

3. A handicapped individual has a tendency toward low self-esteem. Our self-concept is determined largely by reflected self-appraisals; we think of ourselves much in terms of how other people see us. Whether we like it or not, society reacts to the handicapped individual in terms of his handicap, decreased performance, his decreased desirability. The end result has to be a poor self-image and diminished self-confidence.

4. The final implication of a handicap to a handicapped person might be termed existen-

tial conflicts; all of us face these, but for the handicapped they are more intense.

Disappointment in Others: We are all disappointed in other people at some time or another. During earliest infancy we thought that parents were the source of all good, all knowledge, and all power. Sooner or later, we became aware that parents are just like the rest of us and can be deceitful, demanding, dogmatic, etc. To the handicapped individual, this is even worse because the parent cannot make things right. They cannot make his peers love him! To make matters worse, parents tend to demand too much by setting unrealistic goals, or to be overprotective and maintain the child in the role of an infant rather than letting him strive for adulthood.

Disappointment in Ourselves: We are never quite as big or quite as intelligent as we once hoped we would be. Few of us ever become President, bowl a perfect game, or become millionaires. All of these were things that we were supposed to have been or done had we taken literally the remarks made by our parents, our neighbors, and our friends when we were growing up. The handicapped person has these same feelings, except more so. He has concrete evidence that he is not successful and not as adequate as his colleagues are. Preferred existential conflict surrounds the search for a meaning in life. Human beings probably are the only organisms that have a basic fundamental need to find meaning in life and purpose in living. The handicapped are less likely to feel that they are living meaningfully. We spend a great deal of time and energy setting up sheltered programs, "made work" programs, and—pardon the expression—"rinky-dink" programs to give these poor individuals meaning to life. I think that we are only further intensifying these conflicts.

Human Beings Can Travel Through Time: We can remember from our early years, and we can anticipate what will happen tomorrow, next week, or decades from now. In most cases this is an asset, but it is also a source of some fundamental conflicts even among normals. In the future, inevitably we see old age and death, and in our culture this is not a particularly cheerful future for anyone. To the handicapped individual, who is already characterized as an undesirable, rejection increases rather than decreases.

Size and Scope of Problem: The following statements relate only to the population served by the Department of Mental Health and Mental Retardation, and not to the general population. In spite of all our inadequacies, programs for the mentally retarded have reached a size and scope unprecedented in our state's history. Prior to 1960 we operated only four MR facilities. Today we have eleven counting two state centers for human development, and serve nearly 12,500 residents. Despite this growth in physical facilities, our waiting list continues to hover around the 1,400 mark; and the pressures it places on all of us are hard to conceive and almost impossible to convey to someone not directly involved. In 1959, 69% of our residents were severely or profoundly retarded; the current figure is 82%. In 1958, 41% were under age 25; today almost 50% are. The trend is toward a younger and more severely involved population where long-term residential placement and specialized programs are a must. Furthermore, 59% of our state school residents have been admitted since 1960. Only about 9% have been institutionalized more than 18 years. In 1958, 5% of our state school population was under 11 years of age. Today, over 12% of our population is under 11 years of age. Correlated closely with this increasingly younger population is a significant increase in admissions of retardates with orthopedic and sensory impairments.

What are we doing to serve this population? Have improvements really been made? Table 1 shows some comparisons.

With inclusion of newest facilities, the ratios and per diem costs will improve. The quality of program that we give our residents today is the highest ever. Maybe this is not saying much, but we are moving forward. Our institutional death rate has gradually declined despite the admission of more severely involved residents. The general range of all services has broadened

	1959	1969
Number of Residents	6,389	12,500
Employee Resident Ratio	1:3.36	1:2.2
Per Diem Cost Per Patient	$3.08	$7.10

Table 1.

in the past few years so that increased special programming for the severely, profoundly, and multiple-handicapped mentally retarded individual is in evidence at all facilities along with improved programs for the more mildly involved. We now have programs of physical therapy in most of our institutions. Programs for the blind and for the deaf are now reality. One of our state schools is developing a special program for the cerebral palsied. Another has a pilot project for the delinquent retarded.

In terms of facilities, Texas has been a national leader in upgrading and improving its MR residential centers. During 1969 alone we spent almost $7 million for renovation and new construction. We soon will have opened five new institutions since 1960 (Denton, Lufkin, Richmond, Lubbock, and Corpus Christi). We can expect that one and perhaps two more will be authorized and funded. Three of our older facilities will have significantly reduced their populations by the end of this year, which will permit more adequate programming and a better resident-employee ratio for the remaining residents. The recent opening of the Beaumont and Amarillo State Centers for Human Development represent additional significant programs. The service projection patterns these units are offering have already given us a great deal of valuable information and made a significant impact in providing successful outreach services, especially in rural and sparsely populated regions. Furthermore, there are smaller but nonetheless significant program facilities that have been, or are being, completed—chapels, swimming pools, recreation training buildings, and workshop units, to mention a few. New construction will involve long-needed special units for the blind, deaf, cerebral palsied, and the delinquent retarded which will enable us to expand and improve our already existing programs for these groups.

Vocational rehabilitation has undergone phenomenal development in our state schools. On-campus evaluation and training centers have been authorized for each school. Contract work programs are blossoming everywhere. New interagency contracts with the Department of Vocational Rehabilitation have provided expanded coverage and numerous innovations in work evaluation and training, as well as broadened assistance in removing the client's physical impairments to successful job placements and performance. Seven departmental half-way houses have been initiated, two being directly operated by special schools, and some 900 half-way house beds are available for the retarded in Texas. In 1956, $120,000 was spent on rehabilitation in our entire system. This year, more than $1,100,000 will be spent in the area of the mentally retarded alone.

Significant new developments also have taken place in the community program area. Although hard data about the effectiveness of local MH-MR centers is not yet generally available, the ultimate impact of these efforts cannot help but materially reduce our waiting lists and improve supportive services to accommodate our discharge programs.

Summary: Our challenge, therefore, is a multifaceted one. We must define, diagnose, and treat the multiple-handicapped mentally retarded individual in a multidisciplinary fashion. It is imperative that we establish, maintain, and enhance positive, productive dialogue between all involved professional groups.

We must recognize the "physio-psycho-sociocultural" implications and their impact upon the multiple-handicapped mentally retarded and work toward their resolution. If we are to help the mental retardate, we must shed our protective professional shields and involve ourselves in the external forces that affect him.

We must have an acute awareness of the size and scope of the problem in the numerical sense, so that we can use our resources efficiently.

We must remain constantly aware of where we are in regard to our programs, and build upon existing resources rather than indulge ourselves in the destruction of what we have accomplished under the guise of creating something "new and innovative" or in wasteful duplication.

And, we must not let prophets of gloom depress us. We are far from victory, but we are still in the fight and we are making progress.

Mr. Doggett, P O Box 1267, Brownwood, Tex 76801.

THE HIGH-RISK AND UNDERACHIEVING CHILD

The apparently normal child whose academic achievement is deficient faces many risks. Repeated failures may damage his ego long before his basic learning disability is diagnosed, if it ever is. Then, he may be labeled according to one or more symptoms which do not cause his problem, and "helped" by various people who are not trained to do so. There is no simple or single solution. Thus far, the best progress has been achieved by children who remain in regular classrooms, but receive individual supportive teaching after school from teachers who are specifically trained for this work.

EMPRESS Y. ZEDLER, PhD

IN THIS ARTICLE, "underachievement" refers to the scholastic underachievement which occurs in apparently normal children whose presenting complaint is overall academic deficiency. These are children who either fail grade-levels in school or make grade-marks far below their intellectual potential. Their failure to learn is not primarily the result of poor instruction, for others in the same instructional environment do learn; nor of sociocultural deprivation, for this type of failure occurs in all cultures and at all levels on the continuum of social advantage; nor of primary emotional disturbance, for these children can relate appropriately to others and their personalities are intact until their self-esteem begins to be weakened from repeated failure in school; nor to deficient visual or auditory acuity or intelligence, all of which can be dependably measured.

To what then may their scholastic underachievement be attributed? All of them have one characteristic in common—a characteristic that is not found in children whose scholastic achievement is adequate. They have failed to acquire expected competence in one or more, and usually in all, of the modalities of language—understanding speech, speaking, reading, and writing. The terms language disabilities and learning disorders have come to be synonymous in describing these children.

There is always the question as to how much of failure to learn basic school subjects may be attributed to initial teaching methods and how much to the constitutional characteristics of the child. There is good evidence that both are involved. It seems warranted to conclude, however, that these children with language disabilities are constitutionally different from their age-mates who do learn the code of language regardless of the quality or type of methodology used in teaching them. What are their constitutional differences? In an attempt to answer this question, "high- risk" as a descriptive term entered the thinking of psychologists and educators.

A phenomenon in the history of child development as a scientific study is the keen interest and vigorous activity engendered in a specific problem area when the demands of society enforce a shift of focus. With the firing of the first Sputnik there came an innovative surge in the United States toward literacy and greater academic achievement for all. We are now witnessing a productive and perhaps inevitably chaotic period in man's concern with the language-learning disabilities of children.

As recently as ten years ago there was little public awareness of the nature or incidence of language disorders. If a child failed to acquire expected competence in speech or in the basic school subjects or both, it was attributed vaguely and without good evidence to "immaturity"; to parental overprotection, rejection, or failure to provide stimulation; or to incompetence of teachers and educational methods. The attributed cause depended largely upon whether parents or teachers were making the judgment. The remedial process usually was delegated to the passage of time, which was seldom effective.

Not so today. Throughout our social structure there has erupted a sudden awareness and often rampant interest in the problem area. Parents, counselors, teachers, optometrists, psychologists, and others—privately and in special evaluation centers—have become tireless diagnosticians of dyslexia and its various contexts; of specific learning disabilities; of developmental language disorders; of perceptual disabilities—visual, auditory, and kinesthetic; of motor incoordination; of cerebral dysfunctions; and of minimal brain injury. Few if any of these diagnosticians have had training or experience in teaching oral language or beginning reading or writing to children. Many

of the more conscientious ones make no pretext of prescribing treatment. Those who are less knowledgeable or less scrupulous introduce and profit financially from panaceas and one-method remedies, making up in enthusiasm what they lack in grasp of the complex issues they seek to solve.[3,9]

In 1962 we at Southwest Texas State University tried our skills as diagnosticians. We devised a cooperative study, with the help of the private physicians of 113 scholastically underachieving children, to test the concept that, by observing their behavior during psychological testing, children could be meaningfully screened for a variable which we called minimal neurological impairment and could be subsequently rated on a continuum of risk ranging from none through minor, moderate, high, and very high. The result was a practical screening instrument which correlated significantly and positively with validating medical examinations of the children.[4]

The original purpose of this screening instrument was to discover those scholastic underachievers whose learning disabilities might be attributed to obvious constitutional deficiency or disability, and to refer them to special education classes where we hoped they could overcome their learning problems. But this was wishful thinking. The results of a subsequent research project[8] cast serious doubt upon the effectiveness of special education classes for such children. Those who remained in regular classrooms, participating fully in the general curriculum but receiving individual supportive teaching after school hours, made significantly greater gain in scholastic achievement and in mental function than control subjects with similar characteristics who were enrolled for special education.

New Risk: In our eagerness to identify, diagnose, classify, and involve parents in the language-learning disabilities of children, we have engendered a new risk—the danger of creating more serious problems than we seek to solve. There is high risk of our creating a category into which parents and teachers relegate those children whose language competencies are not high, but whose language incompetencies are not extreme. When society recognizes a behavioral disability and sets about to prevent or ameliorate the symptoms, there must be an understanding of the continuum of individual differences within the trait or skill.[9] Diagnosis and treatment of language-learning disorders are not to be used with all who manifest symptoms, but only with those for whom the potential benefit from treatment will outweigh injury invariably incurred from labeling. Furthermore, to diagnose without prescribing a dependably effective treatment, or to prescribe a treatment when there is no source for obtaining it, is to raise serious questions regarding the ethics of dealing with children and their parents.

Training for Teachers: There is no simple formula for teaching the child who has not learned to influence his environment with speech by the time he is three years old, or to read and write by traditional classroom methods by the time he is seven. The task is complicated and arduous, calling for the combined efforts of sophisticated, knowledgeable, highly trained, skillful classroom as well as clinical teachers. These teachers must understand the nature of language, of children, and of the learning processes. They must be skillful in evaluating and circumventing potential reading disorders at the preschool levels. Such knowledge and competencies do not come from experience, nor are they acquired from brief seminars, in-service workshops, short courses, visiting lecturers, or purchased materials however expensive. They come only from a well-planned, five-year program in a college or university department dedicated to preparing teachers who can recognize potential learning disorders and circumvent them before a child has become an underachiever with its ego-shattering consequences. It must be a training program in which the student-teacher can develop skills in (1) observing and interacting with children, (2) teaching basic school subjects to normal children as well as those with learning disorders, (3) appraising, selecting, adapting, and creating methods, materials, and devices to meet each child's needs, (4) evaluating the results of their teaching and making constructive use of their own mistakes, (5) organizing reports which can be used by others involved in working with the child, and (6) protecting at all times each

child's dignity and self-respect, communicating to him constantly that there is help for him until he is able to achieve satisfactorily.

Such preparation of teachers is available in a few colleges and universities, but it is time-consuming and expensive. Few will avail themselves of it until the public demands it. In lieu of adequately trained teachers, and in response to the public's demand for remedial procedures to alleviate if not eradicate the language-learning disorders of children, curriculum directors in schools are being led "down the garden path of beguiling but randomly selected devices and techniques."[2] There is high risk of teachers' and schools' becoming one-method, simple-solution advocates; of their succumbing to the use of nostrums whose relationship to the learning of language in any of its modalities has never been established.

If you doubt that chaos reigns, you should visit a schoolroom of underachievers and observe a trained teacher of reading interrupting her class in an attempt to improve their motor coordination, or visit a gymnasium in a special treatment center where attempts are being made to develop the ability to read from a prone position or a trampoline.[3]

Symptoms Are Not Causes: When diagnosticians delineated the physical characteristics which seem to be more prevalent among children who have language-learning disabilities than among those who do not, they failed to emphasize that these physical correlates are symptoms in a syndrome, not causes of language-learning disorders. Consequently such physical characteristics as muscular imbalance of eyes, inconsistent hand preference, contralateral preference of hand for writing and eye for sighting, hyperactivity, involuntary movements, and overall motor incoordination became inordinately important to teachers. Many, in doubt of their concept as teachers, attempt to function as physical therapists concerning themselves superficially in complementary areas in an evasive search for the answer to children's scholastic underachievement. Certain enthusiasts' claim to the contrary, the literature affords no unbiased evidence that amelioration of these physical components will lessen a child's language-learning disabilities. There is high risk, however, of wasting time waiting to see if gain in motor coordination may reflect positively upon learning to understand speech, to speak, to read, and to write.

Help Needed Early: Learning to read is nothing more than learning a printed code for one's native speech.[1] It follows, therefore, that the child who is delayed in the acquisition of speech, who hears but does not understand oral instructions, or whose own speech is defective in sounds, word forms, and/or sentence structure is the highest risk for future scholastic underachievement. Such a child should be discovered long before he has experienced school failure. He should be taught coping techniques so that he will not develop the frustration and depression which inevitably result from scholastic failure. Such a child probably will always find language skills difficult, but he will persist because he will have acquired at an early age the feeling that he *can* learn because he has teachers capable of teaching him.

REFERENCES

1. Bloomfield, L: Language, New York, Holt, Rinehart, and Winston, 1933.

2. Hardy, M P: Communication and Communicative Disorders, in: Cruickshank, W M, Ed: The Teacher of Brain Injured Children, Syracuse, N Y, Syracuse University Press, 1966.

3. Zedler, E Y: Conference Charge, in final report of Research Conference on the Problem of Dyslexia and Related Disorders in Public Schools of the United States, US Department of HEW, Project #7-8270, Grant #OEG-7-078270-2684, 1967.

4. Zedler, E Y: Screening Underachieving Pupils for Risk of Neurological Impairment, in: Learning Disorders, vol 3, Seattle, Special Child Publications, 1968.

5. Zedler, E Y: Management of Reading in the Educational Program of Pupils with Neurologically Based Learning Problems, in: Spache, G D, Ed: Reading Disability and Perception, Newark, Del, Proceedings, 13th Annual Convention, International Reading Association, vol 13, part 3, 1969.

6. Zedler, E Y: Development of Competencies for the Teaching of Reading to Children Who Have Not Learned Under Conventional Procedures, National Advisory Committee on Dyslexia and Related Reading Disorders, Department of HEW, 1969.

7. Zedler, E Y: Success for the Child with Language Disabilities in the Regular Classroom, Association for Childhood International, Annual Convention, 1969.

8. Zedler, E Y: Final report, Educational Programming for Pupils With Neurologically Based Language Disorders, Project No. 5-1062, OE-5-10-001, Department of HEW, San Marcos, Southwest Texas State College (Dec) 1968.

9. Zedler, E Y: Social Management, in: Irvin, J V, Ed: Management of Children with Language Disorders, in press.

Dr. Zedler, Department of Special Education, Southwest Texas State University, San Marcos, Tex 78666.

CHILDHOOD

Depression does occur in children and with some frequency. Its manifestations are varied and often masked. School phobia, delinquency, apathy, and antisocial behavior may be signs of a depression. The family physician often is in the best position to help these children because of his familiarity with them and their families.

ADULT DEPRESSION is a well known clinical entity; its symptoms are familiar to all physicians. Unfortunately, childhood depression has received less attention. Much of the problem has been nosologic. Depression is both a diagnosis and an affect. Much difficulty is encountered when one occurs without the other, and this problem has caused many workers to deny the existence of depression before puberty. Others have said that childhood depression is uncommon. But in fact, childhood depression is common and is frequently seen by pediatricians and family physicians. It appears most commonly, however, in "affect equivalents"; that is, while the psychodynamics of depression are operating, the common symptoms are not apparent. School phobia, delinquency, accident-proneness, learning disorders, and other behavior disturbances may all be manifestations of depression. Since it is advantageous to classify a syndrome by its etiology, a depression should be described by its dynamics, not its symptoms. Let us look, then, at the dynamics of depression.

Psychodynamics: In studying patients who are depressed, one frequently finds a premorbid character that is selfish and demanding. What people think of him is important in determining what he thinks of himself. His infantile needs for satisfaction cause him to make great demands on his environment, especially on those closest to him. Inevitably his needs meet frustration. His superego is strict, punitive, rigid, and strong.[1] Thus the child is trapped. If he lets the drives run free, he will castigate himself much as his parents would do. If he controls his needs, he is frustrated. In either case, he becomes angry, an emotion our society hardly accepts.[2] He has learned to handle anger poorly and turns it onto himself. Thus, mixed emotions are common in the premorbid personality of the patient. This, then, is the pattern of depression except for the "object loss" so emphasized in adult depression. A better way to express this concept is the "loss of an ideal state." All of us have a concept of what we would be and what we would possess under ideal conditions. Against this ideal state, we compare the more realistic truth of what we are. A child who loses an object loses some self-esteem. He feels that he has lost the object because either he did not deserve it, or he actually made it go away. The child who must face a newborn sibling's entrance into family life actually loses some of mother's time and attention. He interprets this as a loss of his own importance to his mother, and thus to himself. A myriad of causes can induce depression, but four areas should be evaluated in each case: (1) infantile needs, (2) a strict, punitive, strong superego, (3) the means of handling anger and (4) some object loss.

Classification: Bereavement, a frequent reaction, is the appropriate sad response to an obvious external object loss. Neurotic depressions and the masked depressions (depressive equivalents) make up the majority of depressive reactions in children and adolescents. Psychotic depressions may appear in the first few years of life in the form of anaclitic depression, hospitalism, early infantile autism, or symbiotic psychosis of childhood. A true psychotic depression is uncommon in childhood and manic-depressive illness is practically nonexistent. Finally, there are the physiologic or organic depressions which, though infrequent, must be considered.

Bereavement (Grief Reaction): Bereavement is a short-lived depressive state. Although ambivalent feelings exist in these children, they have been better handled than by those children who

MARK J. BLOTCKY
LARRY R. KIMSEY, MD

DEPRESSION

develop neurotic depression. Frequently the child is aware that his sad mood will come to an end. The symptoms are similar to those of a neurotic depression. The child is sad and somewhat pessimistic. But, unlike the neurotic depression, self-criticism, feelings of worthlessness, and guilt are not pronounced. Somatization may be seen; for example, the child may have chest or abdominal pain. Hyperventilation is also common. The duration and depth of the grief reaction are less than that of the neurotic depression. The child may be fatigued, irritable, and may lose enthusiasm and interest for his usual activities. The duration of bereavement is usually considered limited to six months to a year.

In the death of a parent, the surviving parent's attitude bears highly on the course of bereavement in the child.[3] A parent's showing grief and mourning which is shared with the child gives him the opportunity to vent some of his anger. If a child uses denial, it may be an imitation of the parent who feigns no grief. Anger not vented may turn inward and cause much trouble later in life.

It is impossible to differentiate a grief reaction from a neurotic depression with a few simple parameters, but clinically this is of less importance since the treatment will be tailored to the loss of function. The prognosis is, by definition, good, although these children stand an increased chance for psychiatric illness later in life.[4]

Neurotic Depression: Psychoneurotic depression makes up a large group of the childhood depressions. There are many predisposing factors as discussed earlier. Social adjustment is an important factor as well. Interpersonal relationships which add to a child's self-esteem are important in warding off sad, self-deprecating feelings. An interested family physician can do a great deal toward rehabilitating these children.

Since the parents are extremely important to the child, one would expect that the loss of ideal state is often related to their relationship with the child, and this is the case. If the parents feel the child is a burden, he will perceive this very early, well before he can communicate verbally. He will follow his mother's lead and reject himself as an object worthy of love. This loss of self-esteem is accompanied by anger directed at both his mother and himself. Guilt appears over his anger, and the classic depressive reaction is seen. Probably the most common loss is that of the parent. A child always has ambivalent feelings towards his parents. If the loss is handled poorly, the child may feel that his anger actually killed the parent or made him want to die. Quite often the child is angry at the parent for dying, which is equivalent to leaving.

The symptoms of the psychoneurotic depression appears in three general forms: psychologic, physiologic, and masked. The infant and young child usually manifest their depressions through physiologic reactions. Some of the more frequently occurring ones include insomnia, colic, anorexia, weight loss, vomiting, diarrhea, constipation, weeping, hyperventilation, and tachycardia. As the child gets older he may complain of chest pain, dyspnea, or a fluttering behind the sternum. These are the symptoms one would expect in an anxiety neurosis and are due to those components of the depression. Children over seven frequently react with a masked depression, or a depressive equivalent.[5] All these symptoms may be seen in any child, but, in general, the tendency is as described.

The psychologic phenomena are more dependable. Facial expression is often noticeably sad and listless. The patient complains of fatigue, loss of interest in his normal activities, and loss of satisfaction when he participates in activities. He feels rejection in all interpersonal relationships, and he is using so much energy "protecting" himself in the defensive neurotic conflict against what he thinks others see wrong in him, that he has no energy or interest in anything else. He feels anxious in the company of others who try to cheer him and is often irritable with flaring anger at those closest to him. After this angry outburst he may feel

extremely guilty. His hopelessness makes him a tough patient in initial psychotherapy. Much guilt is felt over his ambivalent feelings. He tries to replenish his loss with new sources of self-esteem. He may be extremely demanding and quick to anger when his wishes are unmet. Loss of self-esteem adds to the overall loss of motivation. He may cry, and this may indicate several things. Crying is a sign of helplessness, fear, loneliness, and anger. It indicates a great deal of anxiety about the child's inability to satisfy his own needs and may be an attempt at manipulating his parents. Suicidal thoughts may occur. The purpose of suicide may be to punish the parents, to gain attention, or to punish himself. These thoughts must be faced and carefully examined.

The treatment of psychoneurotic depression includes psychotherapy, psychopharmacology, and hospitalization. Psychotherapy with the neurotic depression is similar to that in the psychotic depression. Interpretations must follow some supportive therapy, and denial must be faced slowly. The therapist often must be quite active in order to get the patient involved in the interview. Medications are withheld when possible. The antidepressants are effective after two or three weeks in about 60%-70% of patients, but 25% of these will improve within three weeks of hospitalization without any treatment. The placebo effect raises the success rate to about 50%. So only an added 20% improvement rate is seen with antidepressants over placebos.[6]

Depressive Equivalents: Depressive equivalents are those syndromes which do not include the symptomatology of classical depression. It is a common means of expressing depression for children, especially adolescents. They include accident-proneness, delinquency,[7] school phobias,[8] and psycho-physiologic disorders.[9] Certain other problems, such as apathy, boredom, restlessness, and hypochondriasis[5] also may result from an underlying depression. Enuresis, sleep disturbances, and speech problems may all be masking a depression.

School phobia is based on unconscious conflicts and is a symptom of this conflict. The reasons the child gives for remaining home are usually rationalizations. Thus, the common-sense approach including reassurance, reasoning, and persuasion usually does not achieve long-term gains.[10] Although a school phobia may be solved by a quick return to school in a young child, the adolescent must be handled differently. An adolescent with a school phobia may be very refractile to reassurance. He may have deep problems that need intensive therapy. Chronic school phobia in an adolescent usually indicates a serious personality disturbance.[10] Acute school phobia is often the result of the child's loss of an ideal state. It usually involves loss of control of an object or situation. Precipitating events may be illness or death of a parent, or a near escape of death by the patient, as after surgery. The essential feature seems to be separation, which is interpreted as death by the child. The school phobia may be an anxiety neurosis or depressive neurosis. All of them have both components. School phobia represents a symptom complex of a neurotic conflict.

Accident proneness is a common and serious problem. The most common cause of death in children age 1 to 19 is accidents.[11] Although many factors including impulsiveness, physique, age, sex, and parental control play an important role in predetermining accidents, depression may often be an underlying factor. Accident-prone children have much hostility and anger which they cannot release. Often a child involved in an accident has been engaged in something he should not be doing. Accidents may be a covert means of expressing anger at oneself or at others.

Delinquency is a difficult and ever-growing problem. Apparently, depression plays a role in the large majority of delinquent children. In a study by Chwast[7] of 121 children referred to him by the New York Police Department, the importance of depression was clearly established. The children were age 7-16, and the average IQ was 90; 50% showed substantial depression, and 94% demonstrated at least mild depression. The delinquent girls were more distressed than boys. Many depressed adolescents turn to drugs to help them escape the cruel realities they see around them. It is, therefore, imperative to consider an underlying depression in any child who is acting out and especially in those in conflict with society.

Our experience in dealing with antisocial children and adolescents at the Dallas County Juvenile Department, the Parkland Memorial Hospital Psychiatry Out-Patient Clinic, and the Dallas Salesmanship Club Camp would indicate

the nuclear importance of an underlying depression in the psychodynamics of delinquent and antisocial children. We have reported these findings in several other publications, but we believe it is necessary to reiterate that depression must be dealt with before the delinquent process can be ameliorated.[12-17]

Deprivation Reactions: Emotional deprivation has been documented as a major cause of what for years was called the "failure to thrive" syndrome. It appears in infants hospitalized for long periods, and in those reared in institutions. Anaclitic depression, first described by Spitz,[18] is most often seen in infants deprived of mothering during the second six months of life. At this time, feeding and holding are synonymous with the emotional needs of the infant. The child shows anger at being left alone, but this soon changes to rejection, and eventually they prefer to be left alone. They are apathetic and listless. Susceptibility to infections and other disease processes increases, and mortality is high. Skeletal and motor development is slower. Social skills fail to develop, and the child loses interest in people. He may cry or lie expressionless with a far-away look. Spitz named this syndrome of crying, apprehension, sadness, lack of expression, and autoeroticism, "anaclitic depression." Treatment consists of reuniting the mother and child. If this is not possible, a mother substitute must be found. Recovery may be seen in a few days, but is unpredictable. Spitz felt that deprivation for more than three months in the second half of the first year caused permanent emotional disability. The etiology of anaclitic depression resides in the biologic loss of self, for at this time separation-individuation[19] of the child from the mother has not occurred.

The failure to thrive syndrome in hospitalized children was originally thought to be a nutritional deficit. Later, infections were thought to be the cause. Schlossman coined the term "hospitalism" in 1926.[7] Many factors influence the acquisition of the syndrome.[11] Children who have attained emotional satisfaction prior to hospitalization are most resistant to deprivation. Children who attract hospital personnel are less likely to get into difficulty in that they maintain some mothering contacts. There also seems to be some relationship to the disease for which the child was originally hospitalized. The etiology of hospitalism is the deprivation of kinesthetic and tactile stimuli as well as loss of self, as an anaclitic depression. Treatment is similar to the treatment of anaclitic depression.

Psychotic Depression: Psychotic depression is uncommon in childhood. It is an infantile response to loss in which the patient is trying to internalize the lost object.[20] The neurotic, on the other hand, is trying to replace the lost object with external factors. Psychotic depression usually appears after some extreme stress has acted upon a child with a long history of traumatic interpersonal relationships.[21] Years of rejection or hostility have made him feel unworthy as a love object, and he expects from the world what he has received at home. The sudden increase of stress causes great anger which he turns on himself. The stress itself may be rejection by a friend, loss of a significant goal, or discipline from the parents.

The child is in a deep depression. Delusions and hallucinations occur, but less frequently than in the adult psychotic depression. The symptoms are those of a severe affective regression. The adolescent, who is more likely to become psychotic than the younger child, becomes acutely aware of his shortcomings and feels that he can never be liked. He becomes fatigued and may spend several hours trying to fall asleep at night as he ponders over his faults. He may eat poorly and lose weight. Life seems useless and not worth the trouble, and suicide is a serious threat. He becomes listless at times. His anger may burst forth in fits of rage after which he feels truly guilty. Somatization and suicidal rumination are common. Retardation of thought and psychomotor activity are prominent. The parents may suspect that the child's irritability is the result of some physical ailment. Often they may be quite indifferent.

The course of these depressions is usually a few months to a year. At this time self-criticism has not disappeared but has lost much of its immediacy. These children run a higher risk of becoming depressed as adults. Treatment[21] consists of four major tools; probably the most successful is psychotherapy. The patient often is quite uncommunicative and afraid. He feels that there is no hope, and he may be very passive. The therapist must be supportive and active. He must gain the child's trust so that later in therapy he can be successful with his interpretations. The parents should be worked

with as well. They need to gain insight into how the child reacts to criticism, whether from himself or others. Until they can understand the pain the child feels, they may be somewhat uncooperative, feeling that some of the child's mood is due to malingering and manipulation. When the child is more productive, insight therapy should begin.

Antidepressants may be useful, especially in the retarded depressions, but many workers think it is better to avoid the use of drugs in children. They remove the child's motivation to learn to handle depression on his own. Thus he will be unprepared to face object loss in the future. Also, the effects of these drugs on the developing brain are unknown.

Hospitalization may be useful in removing the child from a family situation in which mutual respect is not present. It may also prevent a child from running away from home when he really doesn't want to, but knows no other way to deal with his problems. In such a case, the therapist is protecting the child. Electroshock therapy is rarely used in children and its value is controversial even in a psychotic depression.[21]

Manic-depressive illness occurs in females age 15-40, primarily in the third and fourth decade. It is practically nonexistent in children. Diagnosis is based on a history of recurrent depressions, periods of hypomania and frequent somatic complaints. Usually there is no obvious external stimulus.[11] Family history may reveal relatives suffering from the same disorder. Mania is the result of massive denial. Somatization often includes gastric distress, weight loss, tachycardia, dysmenorrhea, and insomnia. Treatment includes antidepressants and electroshock therapy.[11]

Organic Depressions: It is important to keep the organic causes of depression in mind.[22] The most important (frequent) one seen is the postinfectious depression. Any illness which causes general malaise can be associated with depression. Similarly, any time a child is greatly fatigued for any reason he may become depressed. Endocrine disorders are especially likely to be misdiagnosed as psychiatric illness because of their insidious onset. Hypothyroidism, Cushing's, and Addison's disease all may mimic a depression. Neoplasms of the brain and pancreas may also produce depression. Uremia commonly causes depression in children with renal disease. Pernicious anemia has been known to cause severe depressions. Although these may be seen infrequently, it would be more than regrettable to treat them psychiatrically when medical and surgical treatment are available.

Suicide: Depression involves self-deprecation and self-destruction, and it is appropriate to discuss suicide in any review of depression. The hostility and anger of the depressed patient must be vented either externally or internally, but there is always some anger at self. The child may irritate, harass, and disobey those in more powerful positions and thus provoke their anger. In that way, his unconscious desire for punishment is satisfied through the hostility of another person.

Suicide is a major problem in this country. While deaths from other causes have been steadily decreasing, the suicide rate has not followed this pattern. Approximately 0.5-3.0% of all suicides are in children. It ranks fourth in frequency as a cause of death in adolescents age 15-19, and in 1963, there were 468 reported cases of suicide in adolescents.[7] This accounts for more deaths than pneumonia, tuberculosis, leukemia, poliomyelitis, or renal disease.[11] A report from Yale stated that from 1925 to 1955, suicide was the leading cause of death in students and represented 12% of all deaths.[11] The actual number of suicides probably far exceeds those reported in any study. Accidents have long been considered to have emotional overlay.

Studies of attempted suicide show parents who are cold and hypercritical. They are unhappy with their roles as parents and feel burdened by the child. Also, a high rate of suicide has been noted in broken homes.[11] Suicide in children under ten years old is extremely rare and only occasional cases are reported. This may be related to the fact that at this age the child does not comprehend the meaning of death. The highest incidence is in adolescents age 15-19.[23] From 1951 to 1953 there was a suicide rate of 5.5/100,000. Girls make more attempts, but boys are more often successful. In children suicide attempts are successful about 2% of the time.

Jacobziner (1960) studied 299 children age 8-19 who attempted suicide with an ingested agent. Reasons for attempted suicide were discipline (27%), emotional upset (20%), de-

pression (20%), and jealousy (13%). Other causes included school difficulties, family problems, giving illegitimate birth, and drug addiction. In 29% of the attempts the mother was in the home, while in 50% no member of the family was present.[24] The vast majority of adolescent suicidal attempts are made by patients who are in severe depression. A few are schizophrenic.[21]

Suicide is an impulsive act in children, and thus is more frequent in girls and adolescents. It is a reaction to "unresolved conflicts, frustrations, disappointments, guilt feelings, loss of self-esteem, fear of punishment, and the real or imaginary loss of a love object."[24] The adolescent is struggling with ambivalent feelings concerning independence. He must gain recognition from his peers, and he must adjust to a new upsurge of libidinal energy. Anxiety and doubts plague him, and his self-criticism can become lethal. In this condition he needs all the support he can get, and the adolescent with family, school, or social problems may look for an escape or a way to ask for help and understanding.

The estimation of suicidal tendency in any patient is difficult, and especially so in a child. Certain factors predispose the child to attempts at suicide. A deepening depression should be a warning, but also a child coming out of depression may gain more energy and motivation to enable him to take this action. Caution must be exercised in both these cases. A death in the family or a suicide in the family increases the likelihood of suicide. A written note in a matter of fact tone is perhaps the most ominous sign. Increased agitation, anxiety, irritability, and anorexia may all be clues. Temper outbursts may indicate increasing anger which must be ventilated. Previous attempts are indicative of a predisposition in this direction. At any rate, the evaluation must be a subjective overview of the case including the past history, family history, and clinical status of the patient.

Treatment of any attempt must be considered serious. The child is trying to say something about which he can no longer keep silent and knows no other way to express. Hospitalization is the only sure way to protect the child from his own impulses.

REFERENCES

1. Finch, S: Fundamentals of Child Psychiatry, New York, W W Norton & Co, 1960.

2. Rie, H E: Depression in Childhood; A Survey of Some Pertinent Contributions J Amer Acad Child Psychiat 5:653 (Oct) 1966.

3. Miller, E, Ed: Foundations of Child Psychiatry, New York, Pergamon Press, 1968.

4. Brown, F: Childhood Bereavement and Subsequent Psychiatric Disorder, Brit J Psychiat 112:1035 (Oct) 1966.

5. Toolan, J M: Depression in Children and Adolescents, Amer J Orthopsychiat 32:404, 1962.

6. Lehmann, H E: Clinical Perspectives of Antidepressant Therapy, Amer J Psychiat 124:(Supp 12-21) (May) 1968.

7. Chwast, J: Depressive Reactions as Manifested Among Adolescents, Delinquents, (July) 1967.

8. Agras, S: The Relationship of School Phobia to Childhood Depression, Amer J Psychiat 116:535, Part I (Dec) 1959.

9. Glase, K: Masked Depression, Children and Adolescents, 21:565 (July) 1967.

10. Sperling, M: School Phobias, in the Psychoanalytic Study of the Child, New York, Universities Press, 22:375, 1967.

11. Bakwin, H, and Bakwin, R: Clinical Management of Behavior Disorders in Children, Philadelphia, W B Saunders Co, 1966.

12. Kimsey, L R: Long-Term Camping for Emotionally Disturbed Boys, 21st annual meeting of the American Association of Psychiatric Clinics for Children, Boston, (Nov) 1969.

13. Kimsey, L R: Mental Health Commitment in Dallas County, Dallas Med J, 54:381 (Aug) 1968.

14. Kimsey, L R: Out-Patient Group Psychotherapy with Juvenile Delinquents, (abstract) Psychiatric Spectator, 5:5 (May) 1969.

15. Kimsey, L R: Out-Patient Group Psychotherapy with Juvenile Delinquents, Dis Nerv Sys 30:472 (July) 1969.

16. Kimsey, L R: Some Observations on the Psychodynamics of Juvenile Delinquents, Adolescence, Summer, 1970.

17. Kimsey, L R, and Titone, A: Use of Mental Health Volunteers, Dallas Med J 54:381 (Aug) 1968.

18. English, O S, and Finch, S: Introduction to Psychiatry, New York, W W Norton & Co, 1964.

19. Mahler, M: On Childhood Psychosis and Schizophrenia, The Psychoanalytic Study of the Child, New York, International Universities Press, 1952.

20. Freedman, A, et al: Comprehensive Textbook of Psychiatry, Baltimore, Williams & Williams Co, 1967.

21. Chapman, A H: Management of Emotional Problems of Children and Adolescents, Philadelphia, Lippincott, 1965.

22. Barry, M J, Jr.: Non-Neurotic Neurotics, Postgrad Med, 43:87 (April) 1968.

23. Schrut, A: Suicidal Adolescents and Children, JAMA 188:1103 (June 29) 1964.

24. Jacobziner, H: Attempted Suicides in Children, J Pediat 56:519 (April) 1960.

25. Bowlby, J: Separation Anxiety, Int J Psychoanal 41:89 (March-June) 1960.

26. Freud, S: Mourning and Melancholia, in: The Complete Psychological Works of Sigmund Freud, London, Hogarth Press, 14:243, 1953.

27. Kanner, L: Early Infantile Autism, J Pediat 25:211, 1944.

28. Sandler, J, and Joffe, W G: Notes on Childhood Depression, Internat J Psychoanal 46:88, Part I, (Jan) 1965.

29. Spitz, R: Anaclitic Depression, The Psychoanalytic Study of the Child, International Universities Press, 2:313-342, 1946.

30. Spitz, R: Hospitalism, An Inquiry into the Genesis of Psychiatric Conditions in Early Childhood, The Psychoanalytic Study of the Child, 1, International Universities Press, 1945.

31. Symonds, M: The Depressions in Childhood and Adolescence, Amer J Psychoanal 28: 1968.

Mr. Blotcky, 3607 Miles, Apt 127, Dallas, Tex 75209. Dr. Kimsey, The University of Texas (Southwestern) Medical School at Dallas, 5323 Harry Hines Blvd, Dallas, Tex 75235.

PROPOSAL FOR PILOT PROJECT

Emotional Education

HARRY K. DAVIS, MD

The purpose of this proposed program is to teach the so-called normal child effective and acceptable ways to cope with common emotions and stress. Thus equipped, he will be better able to deal adaptively with situations which might otherwise lead to serious mental illness in later life. The program would utilize existing schools and community resources, and establish a curriculum and training program for teachers. Pilot projects are desirable to test the effectiveness of this approach to prevention of mental illness.

PROGRAMS TO TEACH the elementary school child how to handle his emotions may be significant steps in the primary prevention of mental illness. Caplan defines primary prevention as an action to reduce the incidence of mental illness and disability; secondary prevention as the identification of the mental disorder; and tertiary prevention as the actual treatment of mental illness.[1] The proposed programs would involve teaching emotional education (basic mental health principles) in the first three grades of public elementary school. This would begin as a pilot project in the first grade.

Discussion: When we try to think of mental illness in terms of prevention, we are overcome by the gigantic size of the task. Planning is easy but action is almost impossible. There are many avenues of approach, but not enough personnel to cope with the existing mental health problems, let alone work in the field of prevention. At present, most states are making efforts toward primary prevention, but most of the professional and para-professional mental health personnel are being utilized in secondary and tertiary prevention.

Primary prevention[1] encompasses the study of the needs in population as it attempts to modify community practices to meet the individual person's needs. This may be accomplished by changing laws, regulations, customs, division of values systems, attitudes, etc, to reduce interactional patterns which may be contributing to psychopathology. It also involves widespread prevention programs where physical illness may result from environmental problems of deprivation, sanitation, nutrition, genetic and constitutional constituents as well as many other causes. Psychosocial needs primarily evolve around maintaining a healthy family environment. With our mobile society and weakening home ties, psychosocial problems are definitely on the increase. Efforts through coordination of various social agencies have helped solve some of these. Social-cultural needs have to be considered, and the most important one is in the educational system. Meeting this need would involve didactic instructions (general information campaigns) as well as the education provided by all mental health personnel involved in altering behavioral patterns by any type of treatment which is currently being used. It also would involve sociological approaches to the treatment of the multitude of social problems. These sociologic approaches now involve social and vocational education and rehabilitation to deal with increasing rates of delinquency, alcoholism, illegitimate preg-

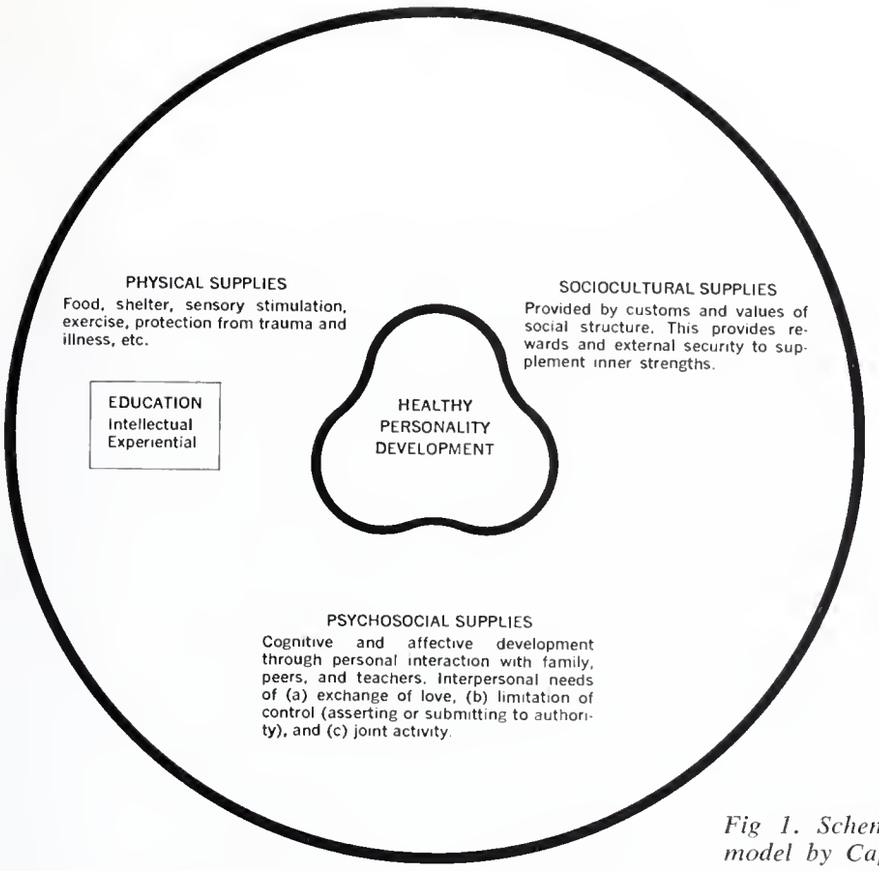


Fig 1. Schematic representation of the conceptual model by Caplan.[1]

nancies, abortion, venereal disease, and other problems. Other primary prevention techniques being used now are short-term crisis-intervention type therapies at personal, family, or community levels. Additional methods include mass population education, mental health consultation, mental health emergency care, and suicide centers.

From a practical standpoint, each state has moved quite a distance toward assuming various responsibilities for primary prevention, but we all know that this is not enough. Mental illness persists and continues unabated at an overwhelming rate.

Conceptual Model: Working conceptual models in the field of primary prevention are notably scarce. Probably the most workable one is Caplan's,[1] which we have already mentioned. He believes that a mentally healthy person needs continual "supplies" commensurate with his current stage of growth and development. These supplies can be classified roughly into three groups: physical, psychosocial and sociocultural (Fig 1). By physical supply he means food, shelter, sensory stimulation, opportunity for exercise and work, and the like; psychosocial supplies include stimulation of cognitive and affective development through personal interaction with significant others in the family and with peers and older persons in school, church, and work; and sociocultural supplies are those influences on personality development exerted by the customs and values of culture and social structure.

Bloom's unpublished model focuses on the total community and on people of certain ages and high-risk groups, while Bolman and Westman[2] believe preventive programs should be society-oriented with family and child-centered efforts.

Proposal for Pilot Project: This proposal would involve the public school as a community agency and utilize the personnel and physical facilities already available. The public school would teach mental hygiene (emotional education) in its first three grades. Physical education and personal hygiene courses have been taught successfully for years on a similar basis. Recently, Auerback[4] has advocated that sex education be taught in kindergarten as prevention for the multiple sex problems in our society. The basic idea is to work with the so-called "normal" child so that he may learn to cope with stresses of living before actual symptoms or incapacitating disability, or both, develop.

There is some division of professional opinion about the usefulness of teaching mental hygiene in the elementary school. Several reports indicate that the young child can acquire skills for dealing with temporary insoluble problems.[5-7] In the past 20 years much effort has been made to move beyond "surface," automatic, rote (nonthinking) learning and move toward the "causal" (thinking) approach. Morgan and Ojemann[6] showed that the child taught with the "causal" (thinking) approach was better able to solve novel intellectual problems, tolerate frustration, and learn to deal adaptively with crisis. Hahn,[8] in his outward bound movement in Britain, exposed students to nat-

ural hazards such as mountain climbing and sailing to induce a crisis. Students were provided healthy adult support which then led to maturation of personality and increased independence. As is usual, the teacher's role is "someone to help" and "one who cares." Ojemann[5] states that it may take a teacher as long as two years to move toward a "causal" (thinking) approach. The student will soon learn that his teacher understands, and the classroom becomes a laboratory to study disturbed behavior. If rules are broken, the class addresses itself to the problem that lies behind this behavior and what it means. The teacher would know the student's feelings, both positive and negative, and might take the initiative in talking these over with him. This discussion would help the teacher in understanding and relating to the student more effectively. Stories and plays could be used to illustrate the "causal" (thinking) and "surface" (nonthinking) approaches.

In our proposed program, the individual child's adaptive mechanisms will be strengthened as he is guided both intellectually and emotionally toward better mental hygiene. The child as an autonomous person moves toward self-sufficiency, assumes more responsibility for emotional control, and is granted more freedom commensurate with this responsibility. This movement is toward emotional health and maturation. It is well understood that exposing a person to a problem and helping him find constructive ways to master it fosters character development. It is also believed that the ability to resist a mental disorder can be increased by helping the individual improve his problem-solving skills so that he does not need to use regressive or sick ways of dealing with these stressful situations. No agency, community program, federal government regulation, or congressional appropriation will be necessary for the institution of such a program. Parental involvement will not be mandatory.

At age six (first grade) the child is well into his latency period of personality development (sense of industry). Following the oedipal phase of development (sense of initiative), he has become quieter and has less inner turmoil. He now has a chance to explore and master his self abilities so he can move toward autonomy. Fantasy subsides, and the child is involved in real tasks that he carries to completion. He emerges from his home to the wider community (notably school) with confidence, as well as basic motor, social, and perceptual skills. For the most part, the child is eager to learn in all areas; hence, emotional education should be an integral part of his personality growth and development. At this time he is gaining more emotional control and forming new relationships in each of his groups. For the immature child with residual oedipal conflicts, an education program would help him move toward maturity and not be arrested or fixated in the oedipal stage or other previous stages.

In terms of the crisis theory, an individual operates within certain patterns of behavior which help him handle current interpersonal as well as environmental stress. When these patterns of behavior are interrupted, then a crisis develops. If he can identify the problem within himself and can move immediately toward the use of some type of helpful adaptive techniques, then he can begin his return to emotional normality or anxiety-free state. If the problem is a massive one, he undoubtedly will need to know the resource person who can help him arrive at a satisfactory solution. These resource people need not be professionals, but only people who "care." If a child has satisfactory techniques for handling stress, then he can experience quick relief of his tension state and consequently will not develop repetitive patterns of pathological behavior.

One of the holdovers from our Victorian heritage has been lack of communication between the child and the meaningful adults in his life. Effective communication can be established when a child begins to relate in a meaningful way to authority figures. Even though faulty patterns of communication are a residue from the conflict of submission versus control, the teacher (parent surrogate) can establish new communication patterns in this as well as in other conflict-ridden areas. Different types of group communication can be taught easily in such a program.

Lindemann[9] coined the phrases, "anticipatory guidance" or "emotional inoculation" 25 years ago, and they are particularly useful in terms of primary prevention. The emotional inoculation anticipates problems and provides predictable responses for the patient when he gets under stress; for example, moving from elementary to junior high school is discussed before such a move occurs. This type of anticipatory guidance is something that the child learns to in-

corporate in his modes of relating at an early age. He asks what the problem is, discusses it, and understands its details before he actually has to cope with it. Such emotional inoculation gives him a satisfactory way to cope with the stressful situation. This protects the child from being overpowered by anxiety with the subsequent emotional symptoms. The proposed program already has the physical facilities and students, so we must now look at personnel, curriculum, and techniques.

The state education agencies, through efforts in the departments of special education, have made great strides in instructing teachers how to identify, refer, and relate to the emotionally disturbed child in the classroom.[10] The programs in special education at major universities are making satisfactory progress. The mental hygiene classroom teacher probably will not require all the courses that the special education teacher does. It is likely that the classroom teacher (if healthy emotionally) can be taught basic mental hygiene principles by didactic instructions and then be able to function effectively as a classroom teacher of mental health. She should have a consultant (mental health professional) readily available, as well as an opportunity to work in some type of on-going in-service training with the mental health professional.

The curriculum will be designed jointly by educators and mental health professionals. By necessity, it must approach the student at an intellectual and experiential level. At the intellectual level, basic mental health principles are taught in much the same manner as are physical health principles. Concomitant with this, the child will experience the intellectual materials in the classroom interaction as well as through the use of aids such as slide sets, movies, and cartoon strips. The students may even devise their own materials and feel more comfortable in this procedure. Classroom plays, improvised skits, and discussion groups will further aid the experimental techniques of instruction. Content of the curriculum will deal initially with teaching the child about the basic affects such as anger, happiness, grief, sadness, frustration, aggression, erotic feelings, love, and hate, with particular emphasis on how to handle these to relieve anxiety. Studies of psychological defenses, basic interpersonal interaction patterns, and family interactional patterns will be helpful. Some basic personality development concepts might be added toward the end of the curriculum course. Every effort to combine intellectual learning with experience will be necessary for a successful curriculum and its implementation.

Pilot projects in several urban schools would be desirable. Consultation by a mental health professional as well as ancillary aids are available more easily in the urban areas. The projects would be a bonanza for research in the departments of education and psychology at the teachers' colleges and universities. This format lends itself readily to program evaluation. Control groups of the same make-up (socioeconomic, ethnic, regional) would be readily available in each school. Evaluation of the program would be ascertained by a battery of psychological tests, maturity ratings, adaptability, teacher and clinical evaluations, behavioral ratings, ease of adaptation, and emotional growth. Any number of measures could be used to determine program effectiveness.

If such a program—modified to meet educational and mental health program needs at community and state levels—were in effect, we would make another step forward in primary prevention of mental illness.

REFERENCES

1. Caplan, G: Principles of Preventive Psychiatry, New York, Basic Books, Inc, 1964.

2. Bolman, W M, and Westman, J C: Prevention of Mental Disorder; An Overview of Current Programs, Amer J Psychiat 123:1058 (March) 1967.

3. Report of the Governor's Committee on Public School Education, Austin, Texas (Aug 31) 1968.

4. Auerbach, A: Personal communication.

5. Ojemann, R H: Investigations on the Effects of Teaching an Understanding and Appreciation of Behavior Dynamics, in: Caplan, G, Ed: Prevention of Mental Disorders in Children, New York, Basic Books, Inc, 1961, pp 378-397.

6. Morgan, M I, and Ojemann, R H: The Effect of a Learning Program Designed to Assist Youth in an Understanding of Behavior and its Development, Child Development 13:181 (Sept) 1942.

7. Caplan, G, Ed: Prevention of Mental Disorders in Children, New York, Basic Books, Inc, 1964.

8. Hahn, K: Origins of the Outward Bound Trust, in James, D, Ed: Outward Bound, London, Routledge and Kegan Paul, 1957.

9. Lindemann, E: Symptomatology and Management of Acute Grief, Amer J Psychiat 101:141, 1944.

10. Marks, C H: Personal communication.

Dr. Davis, Department of Neurology and Psychiatry, The University of Texas Medical Branch, Galveston, Tex 77550.

Nutritional Rickets among Indigent Children in Houston

BUFORD L. NICHOLS, JR, MD
CORINNE MONTANDON, MPH
ELAINE POTTS, BS

Four cases indicate that nutritional rickets still occurs among indigent families in Houston. The contributing economic, educational, and nutritional factors illustrate the complexity of the general problem of health care for the indigent and the need for improving the prophylactic pediatric care among these people.

Fig 1. Child with clinical rickets seen during Texas Nutrition Survey. Physical findings included widened wrists, beaded ribs, and tibial bowing.

IN 1921, PARK STATED that few drugs for rickets had been as effective as cod liver oil.[1] The public health benefits of his research on vitamin D are equally miraculous. In the late 1920s, rickets occurred in as many as half of all children in the Southern United States. The virtual eradication of this nutritional disease has been reviewed by Weick.[2]

In recent years, renewed interest in the nutritional state of the indigent has led to an evaluation of the effectiveness of standard public health procedures as they relate to this segment of the population. In the Texas Nutrition Survey,[3] 2% of the examined indigent children had widening of the wrists consistent with rickets. One of us (Dr. Nichols) saw clinical rickets in children in San Antonio, Austin, Houston, and the Rio Grande Valley, where he performed clinical examinations during the survey. Fig 1 shows one of these cases. The diagnosis of nutritional rickets depends upon a therapeutic response to moderate doses of vitamin D; therefore, while the cross-sectional investigation indicates the extent of the disease, its precision is limited. For that reason, we report four recent and carefully documented cases of nutritional rickets studied in Houston at Texas Children's Hospital.

Case Reports: *Case 1:* In this 25-month-old girl, physical findings consisted of frontal bossing; Harrison's grooves; flaring of wrists, knees, and ankles; and bowing of tibias (Fig 2a). She was treated with 50,000 units of vitamin D by mouth. Forty-two days later, roentgenograms showed significant healing (Fig 3a) although the physical findings were unchanged.

Case 2: Rickets was diagnosed when this boy, age 32 months, was admitted with an acute infection. The significant physical findings consisted of Harrison's grooves; rachitic rosary; widened wrists, ankles and knees; and tibial bowing (Fig 2b). He was treated with 50,000 units of vitamin D by a single intramuscular injection. When he was next seen 22 months later, the physical findings and roentgenograms were normal (Fig 3b).

Case 3: This child also had rickets when she was admitted for an acute infection. At age 22 months, physical findings included frontal bossing; Harrison's grooves; rachitic rosary; and flaring of the wrists, ankles, and knees (Fig 2c). She was treated with intramuscular injections of vitamin D, 50,000 units, on two occasions, but the drug appeared to be inactive. When the patient was brought to the clinic ten months later, the physical abnormalities had progressed and tibial bowing was evident. She was given 50,000 units of vitamin D by mouth, and roentgenograms made 70 days later were normal (Fig 3c). The physical findings were unchanged at that time.

Case 4: This 18-month-old boy was referred by a legal organization which was investigating the welfare support of his family. The salient physical findings included moderate flaring of the wrists, ankles, and knees with bending of the ribs (Fig 2d). Because of legal considerations, no therapy was possible. Seven months later, the patient returned to the clinic. Physical stigmata of rickets were still present, the wrists were flared, and significant tibial bowing was present. Follow-up roentgenograms showed complete healing of the rickets (Fig 3d).

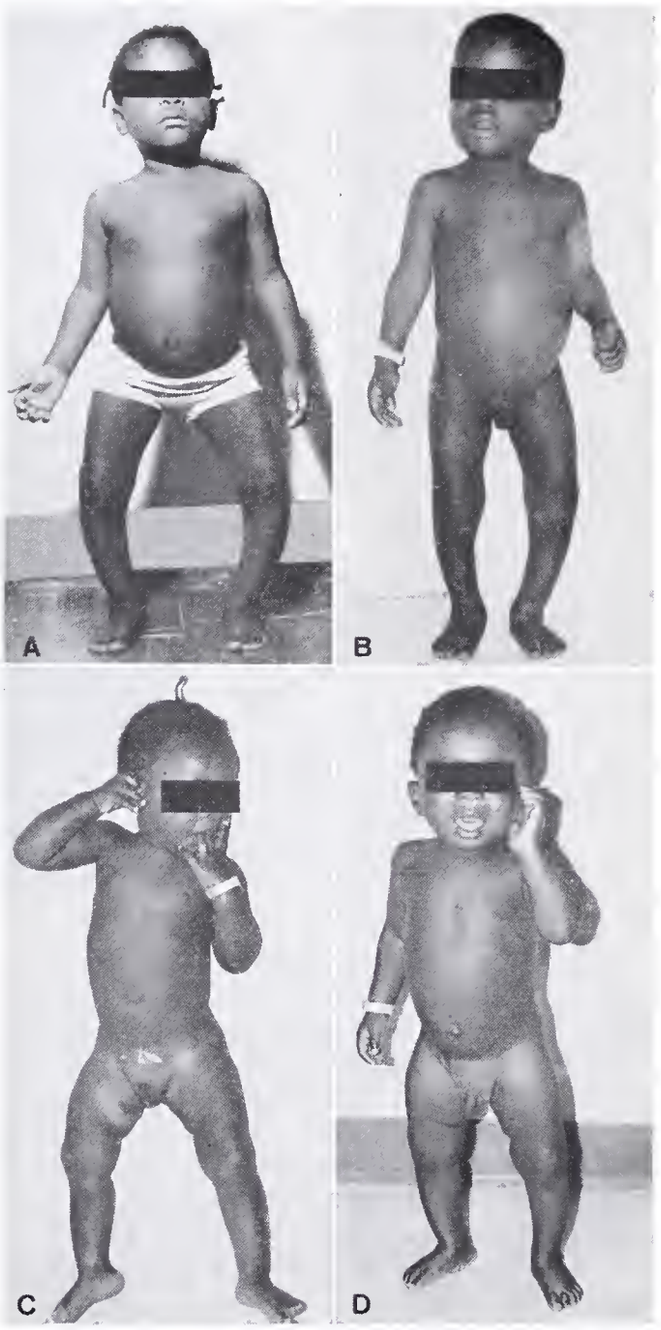


Fig 2. Indigent children with nutritional rickets.

Discussion: There can be little doubt that nutritional rickets is rare in the United States. Owen,[4] in his Preschool Nutrition Survey now in progress, states that no clinical cases have been detected by his examiners or documented by wrist roentgenograms. This stands in contrast to the results of the Texas Nutrition Survey; however, the surveys do not sample the same population. The Preschool Nutrition Survey sample is a cross-section of all economic groups. In the Texas Nutrition Survey, 80% of the subjects were from the lower 25% income level. The apparent divergence of these reports indicates that rickets is limited to children in lower income groups and rare in the general population.

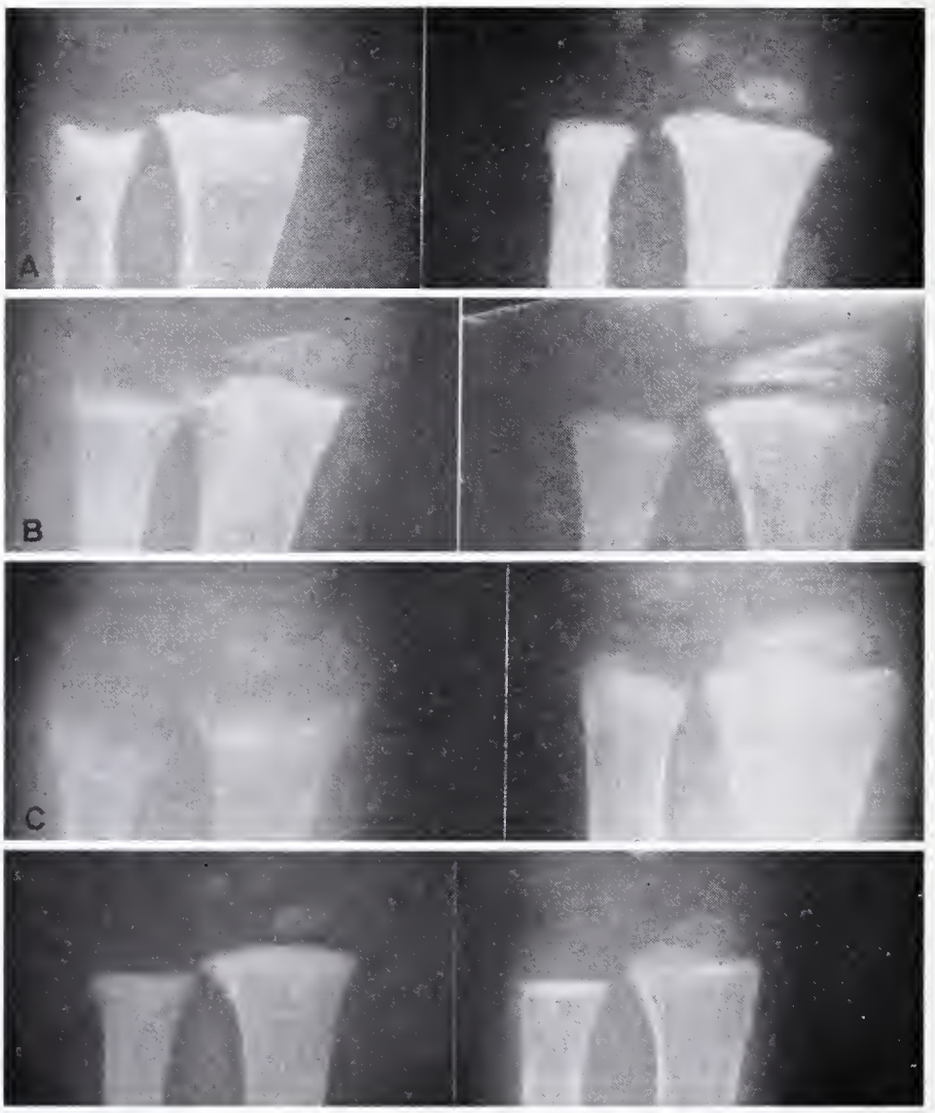


Fig 3. Roentgenograms of the wrists at time of diagnosis (left) and at time of follow-up (right). All the children had other epiphyseal involvement, including the bones of the ankles and knees, documented by roentgenograms.

In the cases of rickets reported here, the nutritional basis was suspected by the dietary history and documented by the response to vitamin D in moderate dosage. The dietary evaluation included a historical review of family feeding habits and a home visit to document the eating pattern. It is clear from this information that poverty alone may account for occasional cases of nutritional rickets. In case 4, the sole supply of milk, available through a government program, became enriched with vitamin D during the period of observation. Healing of rickets occurred with this dietary change. The other families had sufficient income to buy vitamin D-fortified milk; however, because of faulty knowledge in food purchasing practice, milk was almost completely unavailable to these children after weaning. This reflects the importance of education in implementing public health measures.

None of our patients, or those discovered in the Texas Nutrition Survey, had had prophylactic well-child care. This was available to the child in each case. We can assume that continued pediatric surveillance would have prevented the development of these cases of nutritional rickets by insuring the education of the mothers concerning preventive nutrition. In Houston, at the time of this study, only half of the children born at the city-county hospital were ever seen in well-child conference.[5] This suggests that inadequate information or motivation prevents the utilization of prophylactic pediatric care by the families. In case 1, education alone was inadequate to prevent rickets, for we had treated the child's half brother (case 2) two years previously. It was also inadequate to cure the child in case 3 during the time she was lost to medical supervision.

The problem of motivation toward prophylactic health and nutrition practices is not a new subject, but we can point to some factors which may have kept these families from obtaining available preventive health care. In each case, the mother's education level was low. This implies that preventive health, nutrition, and home economics should be taught earlier in public schools where the drop-out rate is high.

Table 1. Clinical data on children with nutritional rickets.

Case	Age at Diagnosis	PHYSICAL FINDINGS					
		Wide Wrists	Wide Ankles	Bowed Legs	Harrison's Groove	Beaded Ribs	Frontal Bossing
1	25 months	++	++	++++	+	+	++
2	32 months	+++	+	++	0	+	++
3	22 months	+++	+++	+	++	++	++
4	18 months	+	+	+	0	+	0

Case	LABORATORY FINDINGS BEFORE/AFTER THERAPY			
	Calcium mg/100 ml	Phosphorus mg/100 ml	Alkaline Phosphatase BLU*	Vitamin D Therapy
1	9.6/9.7	4.3/4.2	8.3/5.5	50,000 IU PO
2	9.4/9.7	4.5/5.2	22.5/5.8	50,000 IU IM
3	9.0/–	3.4/–	18.5/–	50,000 IU PO
4	9.8/–	4.2/–	9.3/–	Addition of fortified milk to commodity program

*Normal, 2.8-6.7 Bessey-Lowry units.

Case	Daily Milk Intake	Type of Milk	Daily Vitamin D Intake from Milk	Family Income	Number of Dependents
1	½ cup	Usually donated dried skim; occasionally homogenized	0-50 IU	$45 weekly bring-home pay, plus commodity foods	Mother, father, 9 children (8 live at home)
2	½-1 cup daily unless on cereal; mixed with chocolate	Usually donated dried skim; occasionally homogenized	50-100 IU	$45 weekly bring-home pay, plus commodity foods	Mother, father, 9 children (8 live at home)
3	Varies: 5-10 oz or none	Homogenized vitamin D	62.5-125 IU	Initially $55 weekly bring-home pay; presently $95	Mother, father, 3 children
4	Refuses milk	Donated dried skim	0-10 IU	AFDC $135 monthly plus commodity foods	Mother, 8 children

Table 2. Nutritional data on children with nutritional rickets.

None of the families had automobiles available for daytime transportation to health care centers. In times of illness, they prevailed upon neighbors with automobiles at home to take them to the health care units. Transportation is not available during the usual working hours when well child conferences are available. Public transportation systems were not readily accessible to these families, and no convenient connections servicing the area of well child conferences were available.

The mystical role of milk in child-rearing practices is often observed by pediatricians who see iron deficiency anemias resulting from excessive milk in the diet. In contrast, in three of these cases, milk deficiency caused rickets. In investigating these families' attitudes toward milk, we found that its relatively high price contributed to its rejection. Also, refrigeration was not always available to some of the families, and therefore they chose staples which were easily stored and easily prepared.

Acknowledgements: This study was supported in part by the Children's Clinical Research Center, supported by NIH grant FR-00188. The observations during the Texas Nutrition Survey were made possible by the close cooperation of many fellow workers on the survey team.

REFERENCES

1. Park, E A, and Howland, J: Radiographic Evidence of the Influence of Cod-Liver Oil in Rickets, Bull Johns Hopkins Hosp 32:341 (Nov) 1921.

2. Weick, M T: A History of Rickets in the United States, Amer J Clin Nutr 20:1234 (Nov) 1967.

3. McGanity, W J: Nutrition Survey in Texas; Preliminary Findings, Texas Nutrition Survey Team, Texas Med 65:40 (March) 1969.

4. Owen, G: Personal communication.

5. Rudolph, A J: Personal communication.

Dr. Nichols, Department of Pediatrics, Baylor College of Medicine, Texas Medical Center, Houston, Tex 77025.

Mrs. Montandon and Miss Potts, Nutrition Clinic, Texas Children's Hospital, Houston, Tex 77025.

Successful Chemotherapy for

The three-drug combination of vincristine, actinomycin D, and cyclophosphamide administered in conjunction with surgery or irradiation or both, has proved effective in the treatment of children with rhabdomyosarcoma. Case reports illustrate the chemotherapeutic strategy in different clinical stages of the disease.

STATISTICS FROM SEVERAL tumor clinics indicate that rhabdomyosarcoma constitutes 20 to 25% of all malignant solid tumors occurring during childhood.[1,2] Prognosis in children with rhabdomyosarcoma depends partly on the histologic type, partly on the anatomic site of the primary lesion, and partly on the child's age.[2] The extent of the disease at institution of treatment is also an important consideration.[2] The values of surgery and of radiotherapy[4] in the curative and palliative treatment of patients with rhabdomyosarcoma have been documented. We shall explore the potentialities of combination chemotherapy for the effective control of this tumor. In particular, we will describe the chemotherapy regimen currently used by the Department of Pediatrics at The University of Texas MD Anderson Hospital and Tumor Institute at Houston, and illustrate the successful application of this approach in the therapy planning for different clinical stages of rhabdomyosarcoma in children.

Rationale for Chemotherapy: 1. Rhabdomyosarcoma is a curable tumor in many patients. A tabulation of long-term survivors (those living with no evidence of disease three years or longer from time of diagnosis) among 78 children with this cancer seen at Anderson Hospital shows that there are definite survival rates for the two histological types of rhabdomyosarcoma of childhood and for tumor arising at various sites and at various ages (Fig 1, Tables 1 and 2). All modes of therapy, therefore, should be exploited to improve these cure rates.

2. Both surgical and irradiation procedures remove or destroy variable amounts of tumor mass. If all tumor mass is annihilated, cure results. Target-limited therapy does not destroy cells that are not in the target zones. Recurrences indicate that even within the target zone, it is not always possible to excise or kill all tumor cells. Systemic drug therapy can be expected to have greater effectiveness when the residual or metastatic cell population is small—situations that exist immediately after surgical or irradiation treatment, or both.

3. Several drugs have shown variable tumoricidal activity in rhabdomyosarcoma. In patients with disseminated tumor, actinomycin D (AMD),[5] vincristine (VCR),[6] and cyclophosphamide (CYT),[5,7] used singly, have produced tumor regression. Each of the three drugs has a different mechanism of action against tumor cells. The major manifestations of toxicity are different among the three drugs. Therefore, the drugs can be used in combination, at full dosages, with the expectation of at least additive antitumor effect and without summation of prohibitive toxicity.

4. The combination of drug administration with irradiation has produced, in some instances, antitumor effect greater than that expected from the use of each modality alone. For Wilms' tumor, the antitumor effect seems even greater than that anticipated from the summation of the effects of the two types of treatment used separately.[8]

Treatment Strategy is as follows:

1. Surgical excision of primary lesion, whenever possible.

2. Preoperative chemotherapy when reduction of tumor mass, if achieved, would permit more adequate surgical excision.

3. Combination multidrug chemotherapy and radiotherapy if a surgical approach is not possible, or if only partial surgical excision was achieved.

This investigation was supported in part by USPHS Grant CA-3713 and by PHS Research Center Award CA-2501 to Dr. Sutow.

W. W. SUTOW, MD; M. P. SULLIVAN, MD

Childhood Rhabdomyosarcoma

4. Adjunctive use of multidrug chemotherapy after satisfactory surgical excision for the management of occult metastases (if any) and of any residual tumor.

5. Continuous maintenance chemotherapy with CYT, two years' duration, periodically reinforced with courses of AMD every three months for one year.

6. Persistent, intensive, carefully planned use of all treatment modalities, even for recurrent or metastatic disease.

Basic Dosage Regimens: The basic regimens for AMD, VCR, and CYT have been well established clinically. Important factors are dosage, duration of drug administration, and schedule. The three drugs are started simultaneously in combination (except during irradiation when CYT may have to be withheld). The courses are interdigitated with one another and with other treatments as follows:

1. VCR: 2 mg/M^2 intravenously weekly for a minimum of 8 doses, preferably for 12 doses. The maximum single dose is 2 mg.

2. AMD: 75 gamma/kg of body weight intravenously per course. The drug is usually given over a period of five days; each daily dose is 15 gamma/kg. In children about 8 years and older, the maximum tolerated dose may not exceed 200 to 300 gamma. In such children, the maximum tolerated dose is given daily until the cumulative dose reaches the calculated total for the course. A course of AMD is given every 3 months for the first 12 months.

3. CYT: 2.5 mg/kg of body weight daily by mouth. This drug frequently is omitted during the period of radiotherapy. It is continued, if tolerated, for 24 months.

Dose-Limiting Drug Toxicity: The well-known dose-limiting side effects of the drugs are: (1) VCR: severe neuropathy, severe obstipation, and severe abdominal pain. (2) AMD: severe mucositis, severe abdominal pain, severe vomiting, thrombocytopenia, and excessive reaction of previously irradiated epithelial surfaces. (3) CYT: myelosuppression and chemical cystitis. In most cases, recovery occurs if the drug is temporarily discontinued; administration is then cautiously resumed. If significant toxicity recurs, a reduction in drug dosage is

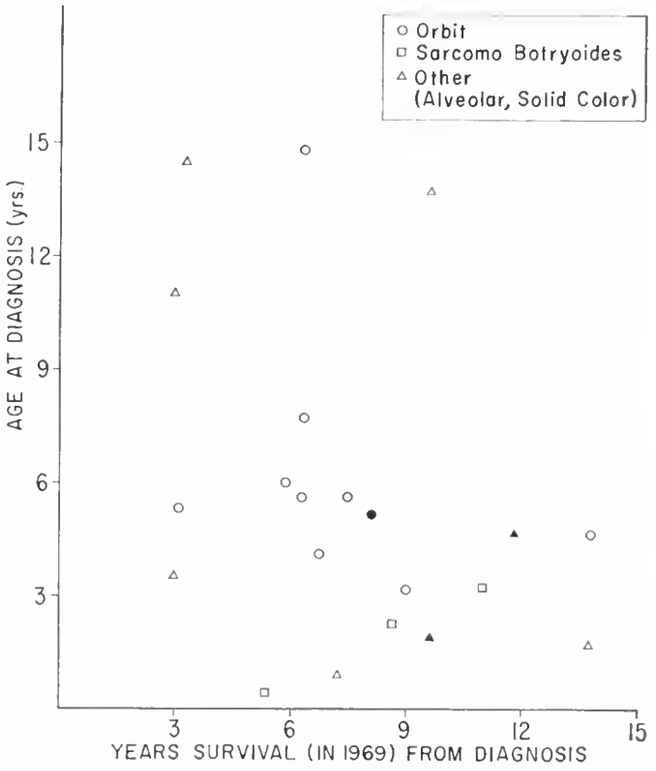


Fig 1. Age at diagnosis and length of survival of 21 patients with rhabdomyosarcoma.

Total in series	78
Lost to follow-up before 2 years	1
Follow-up less than 2 years	2
2-Year outcome known	75
Dead	50
Survival, 2 years or more	25
Survival, 2-3 years	4
Survival, over 3 years	21

Table 1. Rhabdomyosarcoma (1969).

Table 2. Rhabdomyosarcoma; long-term survivors (over three years).

Primary Site	Total Number	3-Year Survivors	Survival Rate %
Head and Neck			
Orbit	15	9	60
Other	34	4	12
Body Wall	5	1	20
Genitourinary Tract	7	2	28
Retroperitoneum	2	0	0
Unknown	2	0	0
Sarcoma Botryoides	5	3	60

usually necessary. AMD and VCR must be given intravenously. Extravasation will cause severe local reaction and may lead to sloughing of tissue.

Case Reports and Comments: *Case 1:* On July 6, 1964, this 2-year-old white girl had a total pelvic exenteration, sigmoid urinary conduit, and a sigmoid colostomy for sarcoma botryoides of the vagina. The girl did well without further therapy until January 1965. Recurrent tumor then developed in the pelvis, with intestinal obstruction and interference with urinary drainage. The child became critically ill with anuria, uremia, hypertension, and severe electrolyte imbalance. Peritoneal lavage failed to improve the clinical situation. On Jan 18 VCR therapy was initiated and response was prompt. The tumor mass shrank, urinary output was restored, and electrolyte imbalance was corrected. On Feb 7, a laparotomy was done, but the tumor was not resectable. X-ray therapy was administered from March 11 to April 26. The first course of 18 weekly doses of VCR was followed by a second course of 7 doses in July and August of 1965. The girl remained in satisfactory condition until July 1966 (18 months from the first dose of VCR) when problems related to recurrent tumor again became evident. Surgical procedures and further chemotherapy with VCR, AMD, and CYT provided meaningful palliation for another six months. The clinical course began to deteriorate rapidly in April 1967, and the child died on May 11.

Comment: The prompt antitumor action of VCR rescued this girl from a medical emergency. This permitted subsequent application of other treatment modalities as well as continued chemotherapy. The end result was significant palliation with definite prolongation of life.

Case 2: This white girl, age 4 years 10 months, was referred to Anderson Hospital on Aug 30, 1957, after surgical excision of a mass in the right jaw. A pathological diagnosis of alveolar rhabdomyosarcoma was made. No further therapy was given. On Sept 11, 1958, a right radical neck dissection was done for recurrent tumor. After surgical treatment, two courses of AMD and nitrogen mustard (HN2) were given. On Oct 16, 1959, a recurrent tumor was excised from the right cheek and another course of AMD and HN2 was given. On July 7, 1960, a new mass was excised from the right cheek and CYT was administered for two weeks. A recurrent nodule was excised from the right cheek on Feb 7, 1961. The girl received CYT for one month. A mass recurred once again, and a right preauricular tumor was excised on June 7, 1961. At this time, two courses of AMD were administered in addition to CYT. CYT was then continued until Dec 22, 1962. The girl has had no drug therapy since that time. In 1969, she was doing well with no evidence of tumor recurrence.

Comment: Persistent surgical and chemotherapeutic attack on this recurrent and metastatic tumor eventually achieved a probable permanent control of the disease in this patient.

Case 3: In this 11-year-old white girl, a histologic diagnosis of embryonal rhabdomyosarcoma was made May 31, 1966, after biopsy of a right supraclavicular mass. The tumor filled the right supraclavicular fossa and involved the trapezius muscle. Repeated bone marrow aspirations showed infiltration by tumor cells. VCR and AMD were started July 6. X-ray therapy to the right supraclavicular fossa, right axilla, mediastinum, and right posterior area of the neck was given between July 7 and Aug 11. A total of 11 weekly doses of VCR was administered; the last was given on Oct 5. The second course of AMD was delayed until Jan 11, 1967. CYT therapy was started on Aug 9, 1967, and the drug has been maintained since. Tumor response was complete. The bone marrow contained tumor cells until June 1967. At the last follow-up examination on March 7, 1969, there was no evidence of disease activity.

Comment: The combination of drug treatment with irradiation has controlled the primary

disease so far. The clearing of the bone marrow is definitely an effect of chemotherapy. The girl was very sensitive to AMD, which accounts for only two courses being given and for the long interval between courses.

Case 4: A Negro boy, age 4 years 7 months, was first seen at Anderson Hospital on April 10, 1967. He presented with a large left scrotal mass that had been increasing in size during the preceding five months. In addition, the boy had a large intra-abdominal tumor on the left side. The diagnosis of embryonal rhabdomyosarcoma was established by needle biopsy. The tumor was considered inoperable. Combination chemotherapy using AMD, VCR, and CYT was instituted on April 18. Tumor regression began within a week and notable shrinkage occurred by two weeks. On May 25, the tumor was excised surgically. A separate left abdominal mass was removed with the left kidney. After surgical therapy, the left side of the scrotum and left abdominal bed were irradiated. During irradiation, the administration of drugs was temporarily discontinued. Chemotherapy was resumed on July 6. In all, the boy received 12 doses of VCR and five courses of AMD. In August 1967, CYT maintenance therapy was interrupted briefly because of hematuria. Hematuria developed again in October 1968, and CYT was completely discontinued at that time. At the last follow-up examination on March 3, 1969, the boy had no evidence of recurrent or metastatic disease.

Comment: This patient had a dramatically successful result from preoperative chemotherapy. An inoperable situation was converted into an operable one. Postoperative irradiation became more meaningful. Although metastases were present at the time of diagnosis, two years later this boy shows no evidence of disease activity.

Case 5: A white girl 10 years, 6 months old, old, was admitted to Anderson Hospital on July 18, 1967, with a large, nasopharyngeal mass. Embryonal rhabdomyosarcoma was diagnosed by biopsy. AMD and VCR therapy was begun on Aug 11, as was irradiation of the nasopharynx. Because of severe reaction to the drugs manifested by profound mucositis, ulceration, and significant weight loss, the administration of drugs was interrupted and reduction in dosages was necessary. Radiotherapy was completed on Sept 14. There was prompt, notable, progressive shrinkage in tumor mass. CYT was started on Sept 25, after completion of radiotherapy. More drug toxicity occurred and adjustment of drug dosages was again required. VCR therapy was completed Nov 27 after 12 doses were given. Additional AMD courses were given in February and July 1968. CYT, at half dose, has been continued to the present. At the follow-up evaluation on April 14, 1969, there was no clinical evidence of recurrent or metastatic disease.

Comment: Although considerable toxicity was encountered, the end result of the combination therapy with drugs and irradiation was greater than that expected from irradiation alone.

REFERENCES

1. Murphy, M L: Curability of Cancer in Children, Cancer, 22:779 (Oct) 1968.

2. Sutow, W W: Chemotherapeutic Management of Childhood Rhabdomyosarcoma, in: Neoplasia in Childhood, Chicago, Yearbook Medical Publishers, Inc, 1969, pp 201-208.

3. Martin, R G, et al: Soft Tissue Tumors: Surgical Treatment and Results, in: Tumors of Bone and Soft Tissue, Chicago, Year Book Medical Publishers, Inc, 1965, pp 333-347.

4. Nelson, A J, III: Embryonal Rhabdomyosarcoma. Report of Twenty-Four Cases and Study of the Effectiveness of Radiation Therapy Upon the Primary Tumor, Cancer 22:64 (July) 1968.

5. Pinkel, D, and Pickren, J: Rhabdomyosarcoma in Children, JAMA 75:293 (Jan 28) 1961.

6. Sutow, W W, et al: Vincristine Sulfate Therapy in Children with Metastatic Soft Tissue Sarcoma, Pediatrics 38:465 (Sept) 1966.

7. Haddy, T B, et al: Cyclophosphamide Treatment for Metastatic Soft Tissue Sarcoma; Intermittent Large Doses in the Treatment of Children, Amer J Dis Children 114:301 (Sept) 1967.

8. D'Angio, G J, et al: Potentiation of X-Ray Effects by Actinomycin D, Radiology 73:175 (Aug) 1959.

Drs. Sutow and Sullivan, Department of Pediatrics, M D Anderson Hospital and Tumor Institute, Houston, Tex 77025.

Ulcer of the ileum is an unusual condition in a premature infant, and a case report and review of the literature are presented.

Ulcer of Ileum in a Premature Infant

WALTER B. KING, JR, MD

ALTHOUGH LOCALIZED ULCERATION of the small intestine is uncommon, interest in this condition increased during the early 1960s when enteric coated potassium, used in conjunction with the popular thiazide diuretics, was implicated as a causative agent.[1]

Although nonspecific ulceration of the small intestine was first recorded in 1805, only 170 cases were reported before 1963.[2] By 1965, some 500 cases had been recorded. In more than 50% of these cases there was no relationship to enteric coated potassium or thiazide. Most of the remaining cases were classed as idiopathic or nonspecific.[3]

Clinically, the two groups are similar, with partial intestinal obstruction, melena, and perforation as predominant features. Since 1959, the predominance of perforation has been replaced by signs and symptoms of obstruction. Although several cases of ulcer perforation of the small bowel in infants were recorded before 1955,[4-7] we found none in the recent literature.

The generally accepted etiologic theory is that severe but subnecrotizing ischemia of a short segment of small intestine will result in death of the mucosa, while the muscularis and serosal coats survive because of the intramural collateral circulation. Exposure to intestinal contents causes an inflammatory response in the submucosa; fibrosis and stricture follow. Such a picture can be seen after reduction of strangulated hernia or volvulus, and even in association with blunt trauma. Syphilis, periarteritis nodosa, and radiation may produce localized stenosing ulceration indistinguishable from that which some consider characteristic of an ulcer caused by potassium chloride.[8]

Case Report: A 3 lb, 13 oz, white boy was born Nov 14, 1968, some six to ten weeks before his estimated birthdate. This child had no evidence of birth abnormality, and his course in the premature nursery was uneventful until Dec 5, 1968. At that time he was 21 days old and weighed 4 lb, 2½ oz. Around noon he had sudden abdominal pain associated with distention, nausea, and vomiting. He had shortness of breath and cyanosis. A nasogastric tube was inserted, fluids were started intravenously, and roentgenograms of the abdomen were made. Intestinal obstruction was diagnosed and surgical consultation was requested. When we examined the child, he had returned from x-ray and had several loose bowel movements. He had no abdominal distention, shortness of breath, or cyanosis, and was tolerating water orally.

The infant was considered a poor surgical risk and the obstruction had been relieved spontaneously; therefore, continuation of the current regimen was suggested.

He tolerated his usual formula without nausea or vomiting, and had several soft stools daily but no watery diarrhea. His course was essentially stable until five days later, Dec 10, at which time he vomited, his abdomen became distended, and he had several watery stools. A Levin tube was inserted, fluids were started intravenously, and a stool culture was done. Neomycin suspension was administered via the feeding tube. He tolerated this and his formula for the next two days and had no nausea or vomiting. He had a soft bowel movement each day. By Dec 13 his abdomen was becoming more distended and a roentgenogram showed a distended small bowel, but also some distention of the colon. Because of the possibility of an obstructing lesion of the colon, a small amount of barium was injected under low pressure through a catheter in the rectum. This showed a slightly distended and slightly abnormal sigmoid, but the rest of the colon appeared to be normal.

Following these procedures, the patient expelled the barium and also a green liquid stool. There was less distention, and since the pre-

vious episode had been resolved spontaneously within a few hours, we decided to continue fluid and electrolyte replacement, suction, and careful observation.

On the morning of Dec 14, it was obvious that the abdominal distention had increased despite suction, so the child was prepared for surgery. A transverse incision was made on the right side just above the level of the umbilicus. The dilated small bowel was delivered through the incision and a constricted area in the distal ileum was identified. The proximal small bowel was deflated with trocar suction and the entire small bowel was examined. The stenotic area was the only apparent abnormality. No congenital bands or evidence of malrotation were found. The stenotic small bowel was excised and end-to-end anastomosis was made using one row of interrupted 4-0 Tevdek sutures. Because of the possible alteration of the motility of the proximal dilated small intestine, a long-arm T-tube was inserted through a small opening in the proximal bowel, and the long arm was passed through the anastomosis. The T-tube was brought out through a stab wound below the main incision and this loop was snugged up to the abdomen, but not sutured. The abdominal wall was closed in layers with interrupted 4-0 Tevdek sutures. The gross specimen showed dilated small bowel proximal to the central stenotic area. On cut section, a shallow mucosal ulcer with an underlying thickened muscularis layer was found (Fig 1). Microsocpic examination showed the mucosa to be destroyed. An acute inflammatory exudate covered the ulcer base. The inflammatory cells penetrated all layers. Granulation tissue was present on the serosal surface. The muscularis was thickened. These findings are characteristic of the so-called nonspecific localized ulcer of the small intestine, and are also essentially the same as those of the potassium-induced ulcers.

The postoperative course was amazingly uneventful. The Levin tube was clamped on the first postoperative day, and the baby tolerated glucose water without distention. The Levin tube was removed on the second day, and formula feedings were started. The T-tube was left open and it was irrigated with normal saline as necessary to deflate the small bowel. On the third day, the patient had a normal bowel movement per rectum, and from that time tolerated oral progressive feedings. The T-tube was clamped most of the time until it was removed on the 14th postoperative day. This area healed without complication, as did the abdominal incision. His weight gradually increased to 5 lb, 3 oz on Jan 10, 1969, which was 27 days following surgery.

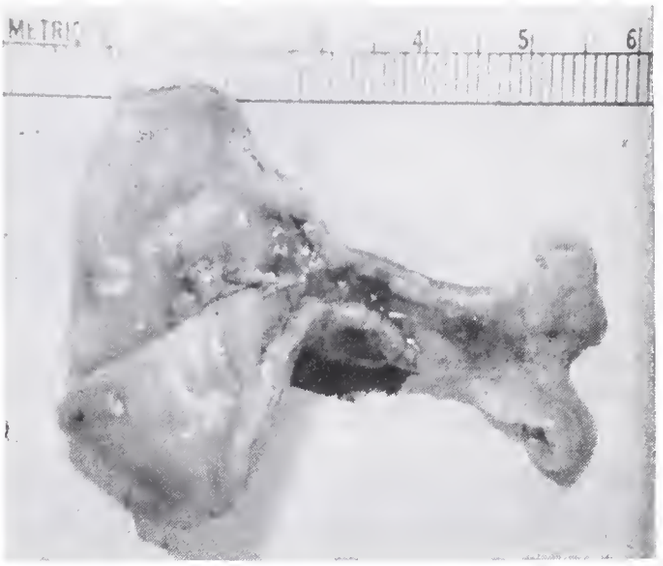


Fig 1. A shallow mucosal ulcer is seen in this gross specimen.

In retrospect, we assume that the first acute abdominal episode was caused by a volvulus that was relieved spontaneously. The localized mucosal ischemia resulted in the acute ulcer that gradually produced stenosis.

This case is presented as an unusual condition in a premature infant, but localized ulcer of the small intestine may occur at any age, and should be considered in any case of obscure intestinal bleeding or signs of obstruction.

REFERENCES

1. Lindholmer, B, et al: Nonspecific Stenosing Ulceration of the Small Bowel; A Preliminary Report, Acta Chir Scand 128:310 (Sept) 1964.

2. Watson, M R: Primary Nonspecific Ulceration of the Small Bowel, Arch Surg 87:600 (Oct) 1963.

3. Brown, C H, and Akin, N: Stenosing Small-Intestinal Ulcers, Report of Eleven Cases, Cleveland Clin Quart 33:85 (April) 1966.

4. Agerty, H A, et al: Case of Perforation of the Ileum in a Newborn Infant with Operation and Recovery, J Pediat 22:233 (Feb) 1943.

5. Lee, C M, Jr, and MacMillan, B G: Rupture of the Bowel in the Newborn Infant, Including Case Report of Rupture in Large Intestine with Recovery, Surgery 28:48 (July) 1950.

6. Moses, E: Atresia of Terminal Portion of Ileum, with Perforation, in a Premature Infant, Amer J Dis Child 62:141 (July) 1941.

7. Schiff, C A: Perforation of Small Intestine in a Newborn Infant; Review of Literature and Report of Case in a Premature Infant with Recovery, Arch Surg 70:439 (March) 1955.

8. Wayte, D M, and Helwig, E B: Small-bowel Ulceration—Iatrogenic ar Multifactorial Origin? Amer J Clin Path 49:26 (Jan) 1968.

Dr. King, 2320 Columbus Ave, Waco, Tex 76702.

PEDIATRIC GYNECOLOGY

JOE S. McILHANEY, JR, MD; ALAN L. KAPLAN, MD

Research has clarified many problems in pediatric gynecology, but since these disorders are infrequent it is difficult to gain extensive experience in treating them. Since Texas Children's Hospital was opened in 1954, it has admitted 159 patients with gynecologic problems. There is an obvious need to concentrate case material and to cultivate pediatric gynecology as a subspecialty. Better care of the individual patient, better resident training, and more informed consultation will be the end result.

PEDIATRIC GYNECOLOGY'S place in modern medicine is only now being defined. At present it is practiced by general practitioners, pediatricians, pediatric surgeons, and at times even by gynecologists. Selection of a physician for such a patient is a random process and, consequently, ill-informed advice or therapy is often administered.

Limitations to the intelligent handling of pediatric gynecologic problems are no longer imposed by meager available information. Schauffler states, "Information in this field, once vague and obscure, has evolved into accurate and precise knowledge."[1] However, other factors compromise the expert practice of pediatric gynecology. First, these problems are infrequent and significant disease is uncommon, thus it is difficult for a physician to gain much experience in his own practice. Second, the genital system is essentially quiescent until menarche, and a complete examination often seems unimportant. Third, standard office equipment usually does not include instruments necessary for proper examination of such patients.

The obvious solution to this problem is to develop a subspecialty, form special clinics, and cultivate gynecologists who have special interest in pediatrics. A few such clinics have been established at university medical centers, and in 1966 the New York Academy of Sciences sponsored a three-day conference on pediatric and adolescent gynecology. In addition, two new books have been published recently.

The following is a report of the experience in pediatric gynecology at a children's hospital in a university medical center without a special gynecologic clinic or service; this has been considerable but has been diluted because of heterogenous management. A special clinic has been established recently.

Materials and Methods: The charts of all patients discharged from The Texas Children's Hospital with gynecologic diagnoses were tabulated. This 115-bed pediatric hospital opened in 1954, and is an integral part of the facilities of the Department of Pediatrics at the Baylor College of Medicine. Information obtained included the gynecologic diagnosis, whether this was the primary or secondary diagnosis, and whether the patient was cared for by a gynecologist or other physician. The results were tabulated.

Results: Since 1954, the hospital has admitted 81,755 patients; of these, 159 had gynecologic problems. Only 24 of these patients were treated solely by a gynecologist, although the majority of the endocrine problems were handled jointly by a gynecologist and pediatric endocrinologist. Ninety-six patients did not see a gynecologist even though the primary diagnosis was gynecologic in 61 cases (Table 1).

Table 2 categorizes the patients into five groups. Vulvovaginitis comprises more than 80% of the cases seen in most pediatric gynecology clinics, but of course it accounts for few hospital admissions. The large number of endocrine problems is accounted for by an excellent

endocrine clinic that meets weekly. Table 3 groups the minor and major anomalies; the former included primarily such entities as labial adhesions and hymenal atresia. The major anomalies are listed, and are exemplary of those that do occur. The startling fact is that 19 of the 20 patients with major genital anomalies were not seen by a gynecologist.

The endocrine problems are listed in Table 4; the majority of these cases have been handled jointly by gynecologists and pediatric endocrinologists.

The tumors of the genital tract are noted in Table 5, and once again it should be noted that most of these lesions were not managed by gynecologists.

Infections and trauma are listed in Table 6.

Discussion: During the past several years gynecologists, pediatricians, and physicians generally have shown an active interest in gynecologic disorders in children. This stems from the realization that the immature female genitalia may be the sites for a number of pathologic states, and that they are not physiologically nor anatomically dormant between birth and menarche. The morbid conditions which affect them are varied. Vulvovaginitis is the most frequent, but few of these cases require hospitalization. Some congenital anomalies produce symptoms before the menarche. The genitalia are involved in several major endocrine and chromosome disorders, notably, isosexual precocious puberty, pseudohermaphroditism, and gonadal dysgenesis. They are not immune to neoplastic growth and sometimes manifest signs reflecting disturbances in general health.

The physician sees so few pediatric gynecologic problems that this sometimes makes the diagnosis difficult and management uncertain. Often the gynecologist is expected to find a definitive solution in such situations, but all too frequently he is discomfited by his unfamiliarity with the problems of the infant or young child.

Our series of patients represents a significant accumulation of pediatric gynecologic diseases. Unfortunately, it does not represent accrued gynecologic experience, for it would have contributed notably to our knowledge and to resident teaching. In fact, the majority of the cases were not even seen by a gynecologist and we would not be aware of their existence had not this review been made.

The major problems that occur in pediatric gynecology require judicious decisions. Their

Management	No. Cases	1° Dx	2° Dx
Gynecologist	24	24	
Joint Management	39	34	5
Not Seen by Gynecologist	96	61	35
Total	159	119	40

Table 1. Gynecologic admissions, 1954-66.

Anomalies	47
Endocrine Problems	53
Tumors	39
Infections	16
Trauma	4
Total	159

Table 2. Gynecologic admissions, 1954-66.

		Gynecology	Other
Minor	27	3	24
Major	20	1	19
Bicornuate uterus, 2			
Double uterus & vagina, 1			
Rectoperineal fistulae, 3			
Rectovaginal fistulae, 11			
Double vagina & cervix, 2			
Absent vagina & uterus, 1			
Total	47	4	43

Table 3. Congenital anomalies.

Virilization	31
Congenital adrenal hyperplasia, 23	
Maternal androgen, 3	
Idiopathic, 5	
Gonadal dysgenesis	10
Precocious puberty	6
Ovarian tumor, 1	
Constitutional, 5	
Menstrual dysfunction	6
Total	53

Table 4. Endocrine problems.

		Gynecology	Other
Benign	32	4	28
Vulva, 2			
Vagina, 1			
Uterus, 1			
Ovary, 28			
Malignant	7	2	5
Vagina			
Sarcoma botryoides, 1			
Adenocarcinoma, 1			
Ovary			
Teratocarcinoma, 3			
2° Metastases, 2			

Table 5. Tumors.

		Gynecology	Other
Infection	16	4	12
Vulvovaginitis, 12			
Cervicitis, 3			
Salpingitis, 1			
Trauma	4	1	3

Table 6. Infection and trauma.

proper management necessitates experience and an intimate knowledge of embryology, cytogenetics, endocrinology, and functional development during childhood. Surgical technique must be delicate and meticulous, and is often difficult because of the small size of the structures. Malignant disease is rare in this age group so that it is not often that life is at stake, but rather the child's well being. Major lesions of the genitalia can do irreparable damage to the psyche if they are not managed properly.

Symptomatic anomalies are rare in childhood and are usually related to some form of vaginal obstruction or absence. The need for a patent vagina must be evaluated and its construction properly timed. Malformations of the vagina are often associated with poorly developed uteri that contain little to no endometrium. Consequently, vaginal construction can usually be delayed until just prior to marriage. If menstruation occurs, construction must be done immediately and this may present a problem in maintaining patency.

Children with rectovaginal fistulae tax both the pediatric surgeon and the gynecologic consultant. These may occur in association with an imperforate anus or may result as a complication following resection for Hirschsprung's disease. Definitive repair should be delayed until the structures are large enough to work with.

The ambiguous external genitalia found with congenital adrenal hyperplasia pose multiple problems. Revision must be done before the child is aware that she is "different," but at a time when the procedure can be done with proficiency. We now remove the ovaries in cases of gonadal dysgenesis where they are only "streaks" because of the possibility of later development of malignancy. The immature uterus that does not appear to be functional is also removed so that the patient can be managed properly with endocrine therapy. Otherwise, it produces cyclic pain and will rarely menstruate according to plan.

When malignant disease occurs, difficult decisions are also involved. Sarcoma botryoides of the vagina can be cured if diagnosed early and treated vigorously by exenterative surgery. Children tolerate this radical surgery well, adapt with relative ease to ostomies, and follow a comparatively normal growth and developmental pattern. The radiotherapeutic management of malignant lesions is also quite complex. Doses often tolerated by adults produce deleterious effects not only in the more sensitive gonad of the child but also in other normal structures that are incidentally included in the beam; for example, the skeleton.

The Department of Obstetrics and Gynecology of Tulane University Medical School initiated a prototype Pediatric Gynecology Clinic in April, 1957. They state that the clinic was established "to facilitate the examination of children with unusual or refractory gynecologic problems. Concentration of case materials allows a thorough examination of each patient and utilization of special diagnostic instruments; teaching is also improved."[2] Since its inception, 114 new patients have been seen in their clinic.

Realizing that more effective use of the clinical material at the Texas Children's Hospital could be made, especially for resident teaching, a Pediatric Gynecology Clinic has recently been established in the Junior League Out-Patient Department. We hope that it will fulfill a much needed role in this area.

REFERENCES

1. Schauffler, G K: Pediatric Gynecology, ed 4, Chicago, Yearbook Publishers, 1958.
2. Macey, H B, Jr, and Barclay, D L: Gynecologic Problems in Children, Bull Tulane Univ Med Faculty, 23:95 (Feb) 1964.

Dr. McIlhaney, 3000 Red River, Austin, Tex 78751.

Dr. Kaplan, Department of Obstetrics and Gynecology, Baylor College of Medicine, Houston, Tex 77025.

LABOR, DELIVERY, & PERINATAL DEATH

C. E. GIBBS, MD

Perinatal loss associated with labor is responsible for a significant number of deaths of infants with otherwise good potential. Causes are frequently identified if careful postmortem examination is done. Many are preventable by careful utilization of modern methods of treatment. Advances in labor room monitoring of the fetus should be of assistance in preventing many of the deaths associated with dystocia and post-date pregnancy.

INFANT LOSS associated with labor occasionally comes as an unexpected end to a previously normal term pregnancy. The causes and prevention of perinatal deaths are discussed, as is the possible place of fetal monitoring in these cases.

Methods and Materials: From Jan 1, 1958, through Dec 1967, 18,526 infants weighing more than 1,000 gm were born at Wilford Hall USAF Hospital. There were 393 perinatal deaths, a rate of 21.7/1,000.[1] Each death was studied carefully by the Perinatal Mortality Conference soon after delivery. Causes of death and preventability were determined, and all pertinent clinical and pathological data were recorded. From this material, all deaths during labor or soon thereafter were selected for review. Excluded from this report were deaths resulting from congenital anomalies, respiratory distress syndrome, and placental complications that were clinically apparent before the onset of labor. Only infants with birth weights in excess of 1,000 gm were included in the study. In all cases, the fetal heartbeat was normal at the onset of labor.

Results: The 57 mothers were similar to the general clinic population; 31 were having their first child, and 48 were 18-34 years of age. Only two had experienced previous fetal loss after 13 weeks' gestation. There were no significant medical and antepartum obstetrical complications. The period of gestation was 38-42 weeks in 33 cases, over 42 weeks in 15 cases, and 34-38 weeks in 9 cases. Table 1 gives the characteristics of the labor. Both meconium and fetal heart irregularities were noted in only 9 cases, with an additional 13 having bradycardia ($<$100/min) or tachycardia ($>$180/min) alone. Tables 2 through 5 list information concerning the births. Fourteen of the babies died soon after birth, the remainder being stillborn. The 43 infants weighing over 2,500 gm constituted one third of all perinatal losses in this weight range during the ten years. Note that 12% of the infants presented by the breech, four times the incidence in the patient population. Table 6 lists the causes of death. There were 56 autopsies and nearly all had careful bacteriologic study.

As can be seen, 24 (42%) of the infants died from unknown causes; 5 of these were over 42 weeks' gestation, and 4 weighed less than 2,500 gm at term. Anesthesia was not directly involved in any case, although the possibility did exist in two deaths following soon after paracervical block. Seventeen infants showed anatomical signs of anoxia. Six of these deaths were considered preventable, 4 needing cesarean section for dystocia, 1 because oxytocin was used unwisely, and 1 as a result of inadequate resuscitation. In 6 cases the autopsies were normal and there was no clinical explanation for the deaths.

In the 13 patients in whom anoxic changes could be related to specific complications, cord obstruction was recognized 7 times; 2 of these

	ONSET	
Spontaneous: 53		Induced (PROM): 4
	LENGTH	
<6 hr: 16	7-18 hr: 32	>18 hr: 9
	FETAL DISTRESS	
Present: 25		Absent: 32
	OXYTOCIN USED	
	18	

Table 1. Characteristics of labor, 57 patients.

Weight (gm)	No. Cases
1,500-2,000	8
2,000-2,500	6
>2,500	43

Table 2. Birth weight, 57 patients.

Presentation	No.
Occiput Anterior	36
Occiput Posterior/Occiput Transverse	9
Brow/Face	2
Breech	7
Transverse	3

Table 3. Presentation, 57 patients.

were prolapsed, 1 deemed preventable because the presenting part was high at amniotomy. The others were entanglements of various kinds. All of the abruptios occurred late in labor and none were considered preventable, although sparteine sulfate had been used in 1 case. The infant loss associated with the uterine rupture was considered preventable because of delay in diagnosis.

All of the 12 deaths from infection occurred in the first five years of the study. Positive cultures of gram-negative organisms were obtained in 5. Clinical amnionitis was present in only 2 of the 12, although the membranes had been ruptured more than 24 hours in 3 others. Four of these deaths were considered preventable, 3 by earlier delivery and 1 by earlier diagnosis and treatment in the nursery.

The birth trauma was intracranial in 7 and intra-abdominal in 1. Three of the infants were delivered by breech; 2 spontaneously from an occiput anterior (OA) position and 1 by low forcepts from an OA position; 1 was a brow and 1 a version and extraction from a transverse presentation. Cause for the trauma was obscure in 4 cases, although 2 were products of rather rapid labors. Four cases were considered preventable. Cesarean section was believed to have been indicated in 1 breech, the brow and the shoulder. The technique of the low forceps delivery was probably at fault in the other.

Fifteen patients had pregnancies lasting in excess of 42 weeks. Twelve of these had recognized obstetrical complications; 8 exhibited dystocia of various kinds; 1 each had amnionitis, breech presentation, and precipitate labor, and 1 was a primigravida 38 years of age. The 3 remaining post-date pregnancies were normal.

Discussion: Death came to 57 infants whose conditions were favorable when labor began. This is an incidence of about 1 in 300 deliv-

eries and might be considered the perinatal cost of labor. Preventability was accepted in 17 cases (30%). Judgment in treatment, either in selection or timing, was considered defective in 12 of these cases; technique was at fault in 4, and in 1 case the diagnosis was missed.

Perinatal loss during labor may be reduced by attacking the known causes. For more than five years, in our hospital, prompt induction of labor for rupture of the membranes after 35 weeks' gestation, together with vigorous treatment of the neonate, have prevented deaths from infection in all infants weighing 1,500 gm at birth. One infant died of respiratory distress syndrome which may have resulted from this plan. Early recognition and thorough evaluation of dystocia is mandatory. Labor in excess of 18 hours must be prevented by the careful use of oxytocin and/or cesarean section. More sophisticated monitoring will be of value in all cases of dystocia. Of particular concern is the problem of pregnancy believed to be 42 weeks or longer in duration. Similar to it is the unusually small baby at term. These two groups of patients will be excellent candidates for monitoring in a clinical environment. Until that is possible, any additional obstetrical complication superimposed on post-date pregnancy requires prompt intervention.

Postmortem examination was extremely helpful in many cases. Only 2 of the 12 cases of infection were diagnosed prior to the autopsy. Trauma was not suspected in 5 of the 8 cases in which it was found. The 24 cases of unexplained deaths are a constant challenge to each of us.

REFERENCES

1. A Guide for the Study of Perinatal Mortality and Morbidity, Chicago, American Medical Association, 1962.

Dr. Gibbs, The University of Texas Medical School at San Antonio, 7703 Floyd Curl Drive, San Antonio, Tex 78229.

Method	No.
Spontaneous	19
Low Forceps	17
Breech Extraction	2
Assisted Breech	5
Midforceps	6
Cesarean Section	5
Version & Extraction	3*

*Second twin in two cases.

Table 4. Method of delivery, 57 patients.

Anesthesia	No.
Vaginal/Perineal	24
Spinal/Epidural	22
General	10
None	1

Table 5. Type of anesthesia, 57 patients.

Cause of Death		No.
Unknown:		
Tissue evidence of anoxia	17	
Autopsy normal	6	
No autopsy	1	
Total		24
Anoxia, Known Cause:		
Cord	7	
Abruptio	5	
Uterine Rupture	1	
Total		13
Infection		12
Trauma		8

Table 6. Causes of death, 57 patients.

Senior Consultants
Perry C. Talkington, M.D.
Charles L. Bloss, M.D.

Psychiatrist-in-Chief
Howard M. Burkett, M.D.

Medical Director
James K. Peden, M.D.

Associate Psychiatrists
Jerry M. Lewis, M.D.
Claude L. Jackson, M.D.
Dode Mae Hanke, M.D.
Thomas H. Allison, M.D.
Maurice S. Green, M.D.
Doyle I. Carson, M.D.
Stanley L. Seaton, M.D.
Keith H. Johansen, M.D.
Charles G. Markward, M.D.
Joe W. King, M.D.
Claude R. Nichols, M.D.
Larry E. Tripp, M.D.
Aretta J. Rathmell, M.D.
Donald N. Offutt, M.D.

Clinical Psychology
David H. Lipsher, Ph.D.
John T. Gossett, Ph.D.
Dale R. Turner, Ph.D.
Robert W. Hagebak, Ph.D.

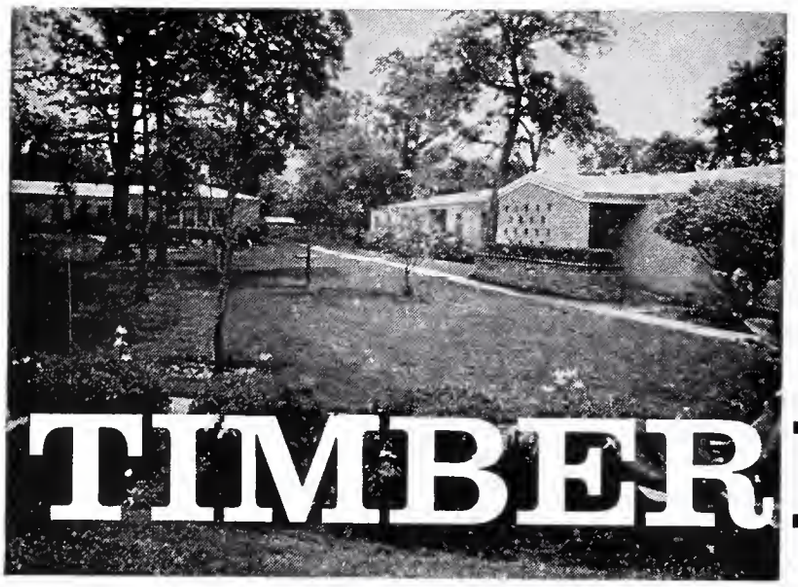
Social Work
Sally Stansfield, M.S.W.
Robert O'Connor, M.S.S.W.
Kathleen Wood, M.S.W.
Margie W. Buell, M.S.S.W.
Robert P. Stewart, M.S.S.W.
Cecilia Coffelt, M.S.S.W.

Occupational Therapy
Geraldine Skinner, B.S., O.T.R., Director

Recreational Therapy
Lois Timmins, Ed.D., Director

Director of Nurses
Mae Belle James, R.N.

Business Manager
Ralph M. Barnette, B.B.A.



PSYCHIATRIC HOSPITAL

DAY HOSPITAL

DEPARTMENT OF OUT PATIENT PSYCHIATRY

DEPARTMENT OF ADOLESCENT PSYCHIATRY

Narcotic Cases Not Admitted

TIMBERLAWN
PSYCHIATRIC HOSPITAL

381-7181 Dallas, Texas 75223 P. O. Box 11288

KELSEY-SEYBOLD CLINIC

6624 FANNIN STREET 526-2671 HOUSTON, TEXAS 77025

INTERNAL MEDICINE

Endocrine and Metabolic Diseases
Mavis P. Kelsey, M.D., F.A.C.P.
Alfred E. Leiser, M.D., F.A.C.P.
E. Peter Pequegnat, M.D., F.R.C.P.(C)

Pulmonary Diseases
H. Irving Schweppe, Jr., M.D., F.A.C.P.
Stanton P. Fischer, M.D., F.A.C.P.

Gastrointestinal Diseases, Gastroscopy
John R. Kelsey, M.D., F.A.C.P.
Philip S. Bentlif, M.D., F.A.C.P.
Ralph D. Eichhorn, M.D., F.A.C.P.
F. Scott O'Neil, M.D. F.A.C.P.
James W. McBee, M.D., F.A.C.P.

Heart Disease and Cardiac Catheterization
Earl F. Beard, M.D., F.A.C.P.
Efrain Garcia, M.D., F.A.C.P.
Wayne E. Dear, M.D.

Arthritis and Rheumatic Diseases
James W. Kemper, M.D., F.A.C.P.

*Military Service

Hypertension and Peripheral Vascular Diseases
Gene E. Burke, M.D.

Cancer Chemotherapy
Carlos F. Taboada, M.D.

Nephrology
Francis X. Schloeder, M.D., F.A.C.P.

Hematology
Jerome B. Bart, M.D.

Infectious Diseases
Stuart Riggs, M.D., F.A.C.P.

Occupational Health Services
Paul E. Wright, M.D., M.P.H., F.A.C.P.
Maurice B. Johnston, M.D., F.A.C.Pr.M.
Richard M. Fenno, M.D., M.P.H., F.A.C.P.
Cannon A. Owen, M.D., F.A.C.S.
Edward A. Anderson, M.D., F.A.C.Pr.M.
William E. Froemming, M.D., F.A.C.P., F.A.C.Pr.M.

GENERAL & THORACIC SURGERY
William D. Seybold, M.D., F.A.C.S.
James D. McMurrey, M.D., F.A.C.S.
Jerry L. Doggett, M.D.

OBSTETRICS & GYNECOLOGY
Melville L. Cody, M.D., F.A.C.S.
William A. Johnson, III, M.D.

PSYCHIATRY
Chester G. Cochran, M.D.
*Ricardo Daichman, M.D.
William H. Boylston, M.D.

PEDIATRICS

Rheumatology
Earl J. Brewer, Jr., M.D., F.A.A.P.

Allergy
Charles W. Ewing, M.D., F.A.A.P.

OTO-LARYNGOLOGY
J. Charles Dickson, M.D., F.A.C.S.
James L. Smith, M.D., F.A.C.S.
Joseph S. Weycer, M.D.

NEUROLOGY
Robert R. Pierce, M.D.

DERMATOLOGY
Wilson M. Fraser, M.D., F.A.A.P.
Donald W. Owens, M.D.

UROLOGY
Don W. Pranke, M.D., F.A.C.S.
J. David Wright, M.D.

ORTHOPEDIC SURGERY
W. Malcolm Granberry, M.D.
Jesse H. Dickson, M.D.

OPHTHALMOLOGY
Henry E. Wahlen, M.D., D.A.B.O.

RADIOLOGY
David M. Rulfs, M.D.
John D. Brooks, M.D.

PATHOLOGY
Robert A. Jordan, M.D.

DENTISTRY
Eugene W. Gray, D.D.S.

PSYCHOLOGY
Mrs. Ruth Blackman, M.A.
Robert de von Flindt, Ph.D.
Cheryl McBride, M.A.

SPEECH PATHOLOGY AND AUDIOLOGY
Donna R. Fox, Ph.D.
Carolyn C. Garcia, M.S.

CONSULTANTS

Maxillo Facial Surgery
Edward C. Hinds, M.D., D.D.S., F.A.C.S.

Psychiatry
Albert Owers, M.D.

Ophthalmology
W. Eugene Alford, M.D.

Infectious Diseases
Fred F. Barrett, M.D., F.A.A.P.

Gastrointestinal Diseases, Gastroscopy
Theodore Hersh, M.D.

Occupational Medicine
Valliant C. Baird, M.D., F.A.C.Pr.M.

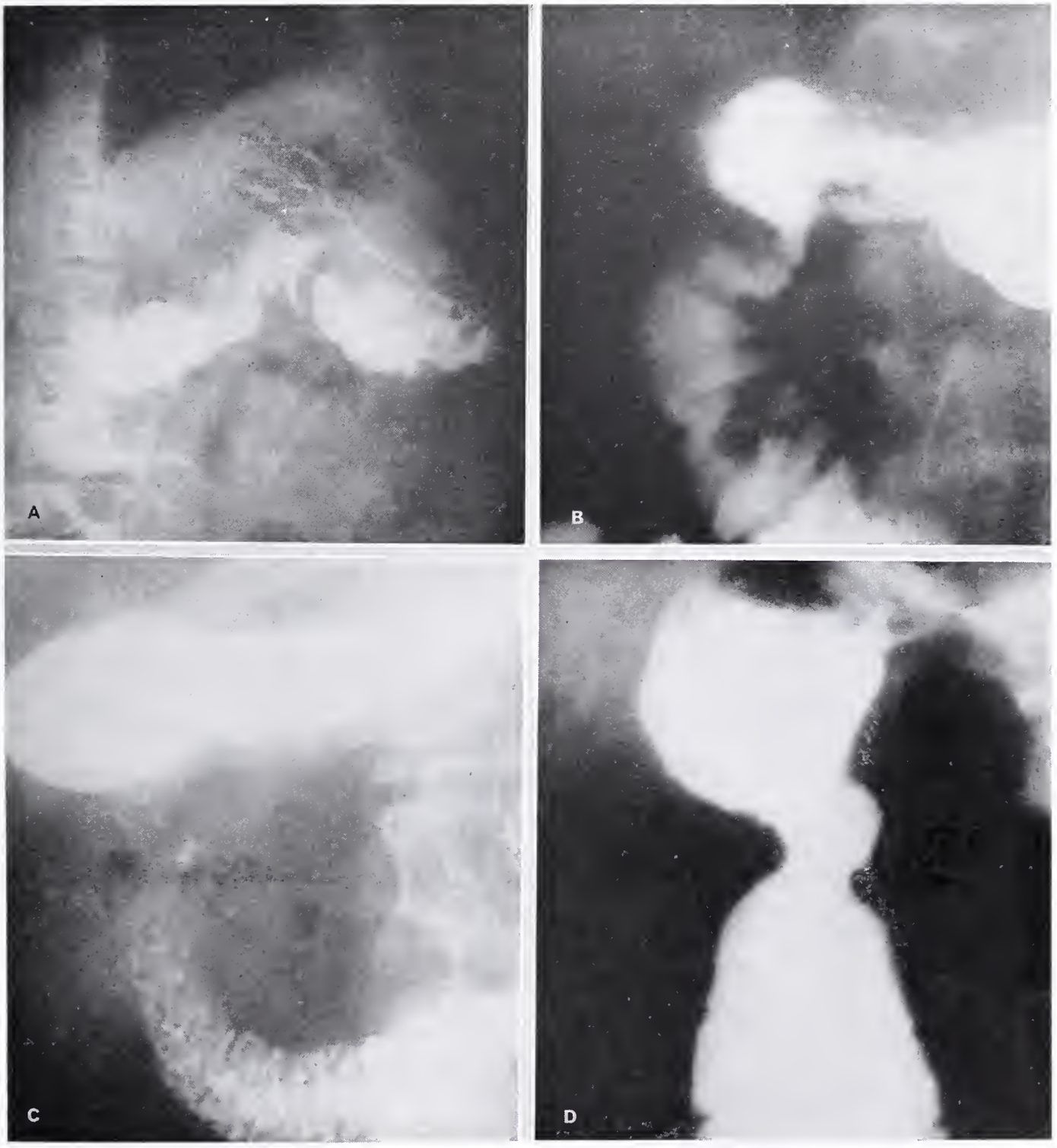
SPECIAL FACILITIES
Radioisotope Laboratory
Registered Dietitian
Electroencephalography
Electrocardiography
Vectorcardiography
Registered Physiotherapist
Pulmonary Function Laboratory
Regional Immunization Center
FAA Examinations
Complete Endoscopy
Audiology Laboratory
Electrolysis

ADMINISTRATOR
James A. Bakken

Sponsored by the
Texas Radiological Society

RADIOLOGICAL CASE of the MONTH

JOHN JAMISON, MD; MELVYN H. SCHREIBER, MD



Each of the films (from four different patients) displayed above demonstrates the same lesion. In A, the stomach and duodenum are seen; in B and C, the distal part of the gastric antrum and descending duodenum; and in D, only the descending duodenum.

POSTBULBAR DUODENAL ULCER: The four cases represent different examples of postbulbar duodenal ulcer. In A, the lesion is on the superior-lateral aspect of the first part of the duodenum. In B, C, and D it is on the medial aspect of the descending duodenum.

Peptic ulcer disease involving the postbulbar area of the duodenum is relatively less common than peptic ulcer disease involving the duodenal bulb. According to the literature the frequency of postbulbar duodenal ulcers ranges from 5 to 25% of all duodenal ulcers.[1] The majority of postbulbar ulcers are located in the descending portion of the duodenum from the superior to the inferior flexure. Symptoms usually are vague, but massive bleeding may occur.

The presence of ulcers distal to the bulb always should raise the suspicion of the Zollinger-Ellison (Z-E) syndrome. In a series of 14 cases of this syndrome, six patients had ulcers located beyond the bulb.[2] The greater the distance of the ulcers from the bulb, the greater the likelihood of the Z-E syndrome.[3] Multiple peptic ulcers in the stomach, bulb, or other parts of the duodenum or jejunum also should raise the suspicion of Z-E syndrome. In these cases, dilatation of the duodenal bulb and the remainder of the duodenum is often impressive. The presence of peptic ulcers in the jejunum in patients who have not had gastric resection is strongly suggestive of the Z-E syndrome.[2]

In a series of 20 patients with postbulbar duodenal ulcers, 15 were men and 5 were women, ranging in age from 30 to 79 years.[1] The predominant clinical finding was loss of blood. (Ulcers located beyond the duodenal bulb rarely perforate but tend to penetrate into adjacent, highly vascularized organs with subsequent bleeding.) There was also upper abdominal pain to the right as well as to the left, either localized or girdle-like, and pseudoangina pectoris. Occasionally, the pain was referred to the lower abdomen and especially to the back, with colic and radiation upward to the shoulders and arms. Ten of the patients had symptoms of pancreatitis, occasionally combined with ulcer symptoms; three of these ten patients were diabetics.

Roentgenographic findings consist of an ulcer niche, especially at the medial circumference of the C-loop of the duodenum (B, C, and D in the figure). The craters range from minute to quite large and have variable shapes. Several indirect signs may be present, including stenosis and incisuras, especially from the lateral circumference (again see B, C, and D). Narrowing may occur due to edema in the acute stage and to scar formation in the chronic stage. Rugal thickening occurs with loss of the normal mucosal pattern, and altered tonicity may produce poststenotic dilatation of the duodenum. Occasionally, a large dilated duodenal bulb may be present.

To be considered in the differential diagnosis are inflammatory and malignant conditions of the bile ducts and pancreas, duodenitis, carcinoma and sarcoma of the duodenum, duodenal diverticula, and peridiverticulitis.

Medical treatment is the same as for ulcers of the duodenal bulb. Surgery is indicated for intractable cases or for penetration and bleeding.

REFERENCES

1. Christoforidis, A J, and Nelson, S W: Radiological Manifestations of Ulcerogenic Tumors of the Pancreas, JAMA 198:511 (Oct 31) 1966.

2. Christoforidis, A J, and Nelson, S W: Seminars in Roentgenology 3:254 (July) 1968.

3. Wehling, H: Radiologe 6:274 (July) 1966.

Drs. Jamison and Schreiber, Department of Radiology, The University of Texas Medical Branch, Galveston, Tex 77550.

★

Specialized Service

IN

PROFESSIONAL LIABILITY INSURANCE

is a high mark of distinction

THE

MEDICAL PROTECTIVE COMPANY

FORT WAYNE, INDIANA

Professional Protection Exclusively since 1899

AUSTIN OFFICE: Robert F. Reiman, Representative
3201 Clearview, Austin 78703 Telephone: 512-472-9603
DALLAS OFFICE: Gayle Nelson and Arthur F. Ennis, Jr., Representatives
816 Medical Arts Building, Dallas 75201 Telephone: 214-742-4980
HOUSTON OFFICE: Richard B. Ross and William A. Orsburn, Representative
1525 Hermann Professional Bldg., Houston 77025 Telephone: 713-523-1127

Turner's Clinical & X-Ray Laboratories

Medical Center

El Paso, Texas

Telephone 532-4689

☆

SURGICAL PATHOLOGY
CLINICAL PATHOLOGY
RADIOLOGY

☆

GEORGE TURNER, M.D.
JEANNE TURNER BOWMAN, M.D.
DAVID LIBMAN, M.D.

The Martin X-Ray and Radium Clinic

3501 Gaston Ave. Dallas, Texas

ADJOINING
GASTON EPISCOPAL HOSPITAL

For X-ray diagnosis and the X-ray and radium treatment of cancer and other conditions suitable for radiation therapy.

Chas. L. Martin, M.D. James A. Martin, M.D.

Not just the tough cases...

Depend on Candeptin® (candicidin) as the agent of first choice in all Candida cases.

Symptoms subside in 48 to 72 hours!
Itching, burning, discharge, and malodor disappear rapidly... patient's embarrassment, too.

Avoids the disappointment of "the cure that didn't take."
CANDEPTIN is "cidal" as well as "static," it is 100 times more potent *in vitro* than nystatin,[2] and it has achieved culture-confirmed cure rates of 90% and more[3] (even in notoriously difficult-to-treat pregnant patients)![1,3,4]

And two weeks does it.
Usually, CANDEPTIN cures in a single 14-day course of therapy.[3]

the fortnight fungicide

Candeptin®

candicidin

Vaginal Tablets/Ointment

Formula: CANDEPTIN Vaginal Ointment contains a dispersion of candicidin powder equivalent to 0.6 mg per gm. or 0.06% candicidin activity in U.S.P. petrolatum. 3 mg. of candicidin is contained in 5 gm. of ointment or one applicatorful. CANDEPTIN Vaginal Tablets contain candicidin powder equivalent to 3 mg. (0.3%) candicidin activity dispersed in starch, lactose and magnesium stearate.

Indications: Vaginal moniliasis due to *Candida albicans* and other Candida species.

Contraindications: Patient sensitivity to any of the components. During pregnancy manual tablet insertion may be preferred since the use of the ointment applicator or tablet inserter may be contraindicated.

Caution: Clinical reports of sensitization or temporary irritation with CANDEPTIN Vaginal Ointment or Vaginal Tablets have been extremely rare. To avoid reinfection, it is recommended that the patient refrain from sexual intercourse during treatment or the husband wear a condom.

Dosage: One vaginal applicatorful of CANDEPTIN Ointment or one Vaginal Tablet is inserted high in the vagina, twice a day, in the morning and at bedtime, for 14 days. Treatment may be repeated if symptoms persist or reappear.

Dosage forms: CANDEPTIN Vaginal Ointment is supplied in 75 gm. tubes with applicator (14-day regimen requires 2 tubes). CANDEPTIN Vaginal Tablets are packaged in boxes of 28, in foil, with inserter—enough for a full course of treatment. Store under refrigeration.

Federal law prohibits dispensing without prescription. CANDEPTIN is a registered trade-mark of Julius Schmid, Inc.

References: 1. Olsen, J. R.: Journal-Lancet *85*:287 (July) 1965. 2. Lechevalier, H. Antibiotics Annual 1959-1960, New York, Antibiotica, Inc., 1960, pp. 614-618. 3. Giorlando, S. W., Torres, J. F., and Muscillo, G. Am. J. Obst. & Gynec. *90* 370 (Oct. 1) 1964. 4. Friedel, H. J.: Maryland M. J. *15*:36 (Feb.) 1966.

Julius Schmid Pharmaceuticals
423 West 55th Street
New York, N.Y. 10019

Ec-
on-
omy!

Dicarbosil®
ANTACID

Your ulcer patients and others will appreciate it. Specify DICARBOSIL 144's—144 tablets in 12 rolls.

ARCH LABORATORIES
319 South Fourth Street, St. Louis, Missouri 63102

T. ROWE PRICE GROWTH STOCK FUND, INC.

Est. 1950

A NO-LOAD FUND

Investing in stocks carefully selected for long term growth possibilities

Individuals & institutions are invited to request free prospectus

NO SALES CHARGE

T. Rowe Price Growth Stock Fund, Inc.
One Charles Center, Dept. F-1
Baltimore, Md. 21201 Phone (301) 539-1992

Name _____

Address _____

_____ Zip _____

CLINICOPATHOLOGIC CONFERENCE

This 31-year-old white woman had been diabetic for 29 years. She was hospitalized five times during the past year because of renal failure, nephrotic syndrome, recurrent pleural and pericardial effusions, and angina pectoris. Some of the biochemical abnormalities as related to the various vascular anatomic lesions and the peculiarities of the nephrotic syndrome in diabetes mellitus are discussed.

CASE PRESENTATION: *Dr. Frank:* This 31-year-old white woman, a juvenile diabetic since age 22 months, had been admitted to Parkland Memorial Hospital five times in the past year for control of her diabetes mellitus, chronic renal failure, nephrotic syndrome, recurrent pleural and pericardial effusions, and angina pectoris.

Her first admission was for observation for possible concussion following a head injury; gastroenteritis, and diabetes. Kimmelstiel-Wilson disease and nephrotic syndrome were also diagnosed at this time. A 24-hour urine specimen contained 11 gm of protein.

Her medical history revealed numerous admissions at other hospitals for frequent episodes of ketoacidosis. Her diabetes was always difficult to control, and usually required both NPH and regular insulin. She changed her residence frequently and never received close follow-up care.

Her second admission was for ketoacidosis. Laboratory values were: blood urea nitrogen (BUN) 75 mg/100 ml; serum creatinine, 5.3 mg/100 ml; creatinine clearance, 12 cc/min; cardiac output, 4.73 liters/min; total serum protein, 7.6 gm/100 ml; albumin, 2.9 gm/100 ml; venous pressure, 9.5 cm H_2O; circulation time, 11 seconds; 24-hour urine protein, 6.4 gm; hemoglobin, 8 gm/100 ml; and hematocrit, 25%. A right pleural effusion seen on the initial roentgenograms resolved without treatment.

Her third admission was again for nephrotic syndrome and progressive pedal edema. Her chest roentgenogram showed no effusion. The electrocardiogram (ECG) showed ST-T changes suggesting coronary artery disease. Laboratory work included: 24-hour urine protein, 9.4 gm; total serum protein, 5.2 gm/100 ml/ albumin, 2.4 gm/100 ml; venous pressure, 12 cm H_2O; circulation time, 12 seconds; hemoglobin, 7.1 gm/100 ml; hematocrit, 22.7%, serum potassium, normal; BUN, 88 mg/100 ml; calcium, 7.9 mg/100 ml; cholesterol, 398 mg/100 ml; and serum triglycerides, 87 mg/100 ml. Lipoprotein electrophoresis showed a dense beta band. She was discharged on a regimen of digitoxin, 0.1 mg/day; ethacrynic acid, 50 mg/day; Potassium Triplex, 5 cc three times a day; and NPH insulin, 30 units/day. By the time of discharge she had lost 6 lb via diuresis, with clinical improvement.

Three days after discharge, bilateral pleural effusions with cardiomegaly developed. The patient became increasingly dyspneic and was readmitted 18 days later having gained 7.7 lb. In addition to the pleural effusion she had pitting edema (3+) and ascites. Her optic fundi showed old waxy exudates and flame-shaped hemorrhages. Auscultation of the heart revealed a loud S_3 and an intermittent left anterior fourth heart sound with a grade 2/6 systolic ejection murmur at the left sternal border. There was no friction rub. There was no hepatosplenomegaly. The patient had difficulty emptying her bladder but did not require catheterization. She was still anemic with a hemoglobin of 7.2 gm/100 ml and hematocrit of 22.9%. Her total serum iron was 35 μg/100 ml and her total iron binding capacity was 270 μg/100 ml. Urinalysis showed a specific gravity of 1.016 and

Bruce D. Fallis, MD
Stuart Frank, MD
George C. Curry, MD
Marvin D. Siperstein, MD
Norman W. Carter, MD
Lawrence S. Cohen, MD
Donald W. Seldin, MD
Edwin H. Eigenbrodt, MD, Guest Editor

albumin 100 mg/100 ml with negative sugar, acetone, and microscopic findings. Stool examinations for occult blood were negative. The serum electrolytes were normal and a serum acetone was negative. Other laboratory work was: BUN, 77 mg/100 ml; creatinine, 8.1 mg/100 ml; total serum protein, 6.4 gm/100 ml; albumin, 2.3 gm/100 ml; 24-hour urine protein, 5.2 gm; and circulation time, 16 seconds. Blood pool scan showed a pericardial effusion. Two liters of pleural fluid were removed and contained 9 mg/100 ml protein, 98 mg/100 ml sugar, and was negative for acid-fast bacilli and routine cultures. A pleural biopsy specimen contained only muscle. Repeat intermediate PPD test was negative. Several days later a faint pericardial friction rub was present for 12 hours but a paradoxical pulse never developed. Pleuritic chest pain was relieved by intercostal nerve blocks. She lost 23 lb in six days with 960 mg oral Lasix. She required increased insulin and was discharged on a regimen of 45 units NPH insulin daily, Shohls' solution, digitoxin, and an 1,800-calorie, 40 gm high-biologic-value protein diet. She was treated several times for nausea, vomiting, and edema in the emergency room.

Her last admission was for identical problems. A summation cardiac gallop rhythm was present and her liver was palpated 6 cm below the right costal margin. A chest roentgenogram showed bilateral pleural effusions and pulmonary edema. Her laboratory findings were essentially unchanged except the serum creatinine had risen to 9.5 mg/100 ml. She was again treated with 960 mg oral Lasix and lost 8 lb, mainly by diarrhea, with symptomatic improvement and disappearance of the cardiac gallop rhythm and the pleural effusions. The ECG was unchanged. She was discharged to a nursing home on a regimen of Lasix, 80 mg three times a day, digitoxin, Shohl's solution, and 25 units NPH insulin. She had a progressive downhill course, and pneumonia developed in the right middle and right lower lobes of the lung, but the patient was not rehospitalized. One month later she was brought to the emergency room in coma and died five minutes later.

Radiological Findings: *Dr. Curry:* The initial films obtained over the first four months of the year the patient was followed showed the heart, lungs, and pulmonary vasculature to be completely normal.

The next chest film showed evidence of left heart failure with slight increase in heart size, bilateral pleural effusion, and interstitial pulmonary edema. A slightly prominent azygos vein, not previously seen, suggested early right heart failure. There was also slight dilatation of the right inferior pulmonary artery, which is evidence of acute pulmonary hypertension secondary to left heart failure. Dramatic clearing occurred over a three-day interval.

Subsequent chest roentgenograms showed recurring episodes of right and left heart failure progressing in severity, including several instances of alveolar pulmonary edema.

The final study showed an alveolar infiltrate in the right lower lobe which differed from the patient's usual pattern of alveolar pulmonary edema, and therefore most likely represented superimposed pneumonia.

Clinical Discussion: *Dr. Siperstein:* This still relatively young juvenile diabetic, having had her disease for some 29 years, showed the progression of vascular problems that are typical in such a patient. After some 28 years of being relatively asymptomatic from a vascular standpoint, this woman rapidly developed almost all of the typical vascular manifestations of diabetes. This is what we see in the diabetic—either juvenile or adult—who has had his disease for some 20 years. At least 75% of patients with diabetes for 20 years will have vascular complications.

This young woman had renal complications

of diabetes, certainly the most severe of the several vascular manifestations of her diabetes. She had definite premature coronary heart disease. She may or may not have had diabetic neuropathy; the only clue we have is that she had some difficulty emptying her bladder; and she certainly had typical diabetic retinopathy.

I would like to discuss the basis of these vascular complications and the patient's lipid abnormalities.

The evidence is increasingly convincing that the underlying problem in the development of vascular disease of diabetes—certainly the vascular disease afflicting the kidneys—is a thickening of the capillary basement membranes. During the past four or five years, the once controversial question of whether basement membrane thickening (or basement membrane-like thickening) is responsible for diabetic renal disease, has been resolved. The major factor in the pathologic as well as the clinical problems of diabetic renal disease is a thickening of this collagenous protein that surrounds every capillary in the body.[1,2] In almost every genetic diabetic there is thickening of the basement membranes of the capillaries supplying the muscle;[3] and we would expect to find such proliferative changes in this patient at autopsy.

She did have Kimmelstiel-Wilson syndrome, or we may have thought so until some of the discussion this morning. Kimmelstiel-Wilson syndrome is strictly defined as "edema, albuminuria, a rising BUN (ie, renal failure), and an increase in blood pressure." We are told, surprisingly, that despite this patient's high BUN level, she did not have hypertension. But, an overt nephrotic syndrome did develop.

The usual diabetic progression from the normal to the nephrotic state is simply minor albuminuria progressing, with or without hypoalbuminemia, to edema and then going on to massive albuminuria and then to hypoalbuminemia. At this stage we know that the patient's edema results from oncotic forces, producing the extravasation of fluid and, ultimately, sodium and fluid retention.

The question which is not so easily answered is why these patients become hyperlipemic.

Most patients with diabetic nephrotic syndrome become hyperlipemic—the blood triglyceride level is elevated. This patient had significant hypercholesterolemia (398 mg/100 ml) but a normal triglyceride value (87 mg/100 ml). This is somewhat unusual, but not unheard of. As these patients are being followed —from earliest evidence of albuminuria through hypoalbuminemia—it is clear that there is a sequence of events in which the serum albumin slowly decreases, at which point the liver starts to put out increased quantities of globulin. In this case, as early as we have a measurement, the globulin levels were about 4.7 gm/100 ml; clearly the globulin production was increased. With increased globulin production there is an increase in serum beta lipoproteins, which are themselves globulins, as well as in the cholesterol, which they carry. We know that the liver was putting out more beta globulin in this patient, because there was a dense beta lipoprotein band on electrophoresis. But in such patients, so long as the serum albumin remains only moderately low (above 2 gm/100 ml) the serum triglyceride may remain normal, the plasma may remain clear, and only the cholesterol may be elevated as the first step in the development of the lipid abnormalities of the nephrotic syndrome. With time, when the albumin level drops below 2 gm/100 ml, beta globulins increase even more and there is elevation in triglyceride to over 400 mg/100 ml and the plasma becomes visibly turbid. Thus, in well-advanced nephrotic syndrome, we see the typical hypertriglyceridemia and hypercholesterolemia.

What is the pathologic significance of these lipids in this type of disease? This patient was a diabetic who undoubtedly had coronary disease. She had angina and ECG changes. Why does a diabetic develop coronary disease? The answer isn't always so apparent as in this patient who had hypercholesterolemia. Most diabetics in our clinic have normal cholesterol levels unless they are put on a high saturated fat diet, as the American Diabetes Association diet suggests; then they, like you and me, will develop hypercholesterolemia. But, barring iatrogenic hypercholesterolemia, most diabetics have normal cholesterol levels so long as their serum albumin is normal.[4] It seems much more attractive, at least to me, to explain the predisposition to coronary disease in a diabetic—in this case in a young woman who normally should be resist-

ant to coronary disease—as an extension of the same microangiopathy which a moment ago we evoked as the cause of the other vascular complications of diabetes. It is likely that microangiopathic involvement of the vasa vasorum, which is only partly responsible for the nutrition of the intima of the coronary vessel, may compromise oxygenation of this structure. Whenever the intima of any vessel is subjected to anoxia, atherosclerosis will result at that site. In addition this patient, at least when she was first seen, had significant hypercholesterolemia as an added factor in her premature atherosclerosis.

It has long been argued that patients with the nephrotic syndrome with resultant hyperlipemia do not develop premature atherosclerosis. Recently, this view has been challenged by Berlyne[5] who documented that at autopsy, patients with the nephrotic syndrome show severe atherosclerosis. Regardless of its etiology, then, the hypercholesterolemia of the nephrotic syndrome is not a benign condition from the standpoint of the coronary vessels; and where possible it should be treated as are other types of hypercholesterolemia and hyperlipemia of endogenous origin. In such cases, it probably is justifiable to try a drug such as Atromid-S, which may offer a means of lowering triglyceride and cholesterol levels in patients with hypertriglyceridemia.

Finally, there were two somewhat surprising aspects of this woman's course. Her BUN level was elevated but her blood pressure was normal, which suggests perhaps an infiltrative lesion; classically one thinks of multiple myeloma. Also, the problem of pleural effusion obviously bothered the ward physicians. Pleural and pericardial effusions are not typical for this degree of hypoalbuminemia, and one wants to invoke, or at least rule out, other causes, of pleural-pericardial effusion. I am sure that tuberculosis was seriously considered. The patient probably did have a myocardial infarction and perhaps cardiac failure, but the evidence for failure is hardly overwhelming. Clearly there was a uremic factor which could account for this picture; and with a patient who has this degree of edema with vascular disease, one always thinks of pulmonary embolization. Therefore, I think it is unlikely that we will account for the pleural-pericardial effusion on the basis of simple diabetic nephrotic syndrome, and I suspect we will find that one of these other causes was responsible for these effusions.

Dr. Carter: Glomerular sclerosis, an eventual constant finding in diabetes, usually has a prolonged course of renal insufficiency and almost invariably is associated with hypertension. Not all such patients develop the nephrotic syndrome. Probably all have proteinuria, and from 10 to 15% do have the nephrotic syndrome.[6-8]

We have made some observations in diabetics with Kimmelstiel-Wilson syndrome, and I should like to contrast their nephrotic syndrome with idiopathic nephrosis or the nephrosis of chronic glomerulonephritis.

In chronic glomerulonephritis or idiopathic nephrosis, there is a tendency for the proteinuria to increase until finally it reaches a value from 4 to 5 gm per day, at which time many of the patients begin to lose the ability to maintain a normal serum albumin concentration. The main point is that the loss of protein into the urine is continuous; day to day variations may be evident, but without specific therapy the loss of protein into the urine is relentless. For this reason, the nephrotic syndrome continues.

In contrast, some of the patients with diabetes have a different course; I think this has been confusing and perhaps has given rise to the reports of a rather low incidence of nephrotic syndrome in diabetes. To put it another way, I think that if we look and evaluate the data of the patient more carefully, we would find that the incidence of nephrotic syndrome in diabetics is considerably higher than that generally given. What seems to happen is something like this: The patient with Kimmelstiel-Wilson syndrome will spill modest amounts of protein, perhaps in the range of 2 to as little as .5 gm of protein per day. Then, for unknown reasons, there is a sudden increase in excretion of protein into the urine. This increase, if you can document it, is great. In one example we have, it was 21 gm per day. This is associated with a rapid fall in the serum albumin concentration, which is the ultimate stimulus for the kidney to increase sodium reabsorption, and thus edema ensues.

Now, just as surprisingly and again for un-

known reasons, this massive excretion appears to shut off, just as if you had turned the valve. In cases where we have traced the course, the period of massive protein loss varied from four to seven days. In the patient who lost 21 gm per day the high loss continued for five days, then it suddenly dropped to only 3.8 gm.

The loss of albumin appears to stimulate the liver to increase albumin production. Thus, when the daily urinary excretion of protein suddenly changes from a high value, such as 21 gm, to 4 gm, the liver rapidly reconstitutes serum albumin concentration. In some cases, this reconstitution exceeds the kidney's ability to deliver a salt load, for example, edema. Thus, venous congestion is likely to occur, manifested by dyspnea and roentgenographic evidence of pulmonary congestion with cardiac dilatation. If this set of circumstances does take place with any regularity, then it is conceivable that you might see the patient in a venous congestive state or with congestive heart failure and miss the point that either may have developed through a particular form of the nephrotic syndrome.

An interesting point, and one for which we do not yet have adequate documentation, concerns the serum cholesterol concentration. As Dr. Siperstein has noted, a fall in serum oncotic pressure results in an increased serum lipid (including cholesterol) concentration. Apparently this can occur rapidly. It seems that the high cholesterol concentration is maintained for several days after the serum albumin concentration has returned to a more or less normal value. Perhaps then a high serum cholesterol concentration associated with edema and a low normal serum albumin concentration in a diabetic is evidence for an immediately preceding nephrotic syndrome.

With respect to this patient there is, as is the usual case, insufficient data to establish that she had an intermittent nephrotic syndrome. Admittedly, the early measured proteins in the urine were high. We should like to know whether or not they fell quickly to low levels. Later in her course I believe she had a much lower protein excretion; but the renal disease had advanced, and quite frequently and perhaps characteristically, massive proteinuria tends to subside as the renal insufficiency increases. Thus, we can't be absolutely certain whether or not she had an intermittent type. However, Dr. Siperstein's point about the high cholesterol associated with a normal or fairly respectable albumin concentration could conceivably be evidence for an intermittent type of nephrosis.

If we assume that she was having intermittent nephrosis, then her pleural effusion might well have been a result of the nephrotic syndrome. On the other hand, pericardial effusion is not due to decreased albumin concentration. This is not seen. The pericardial effusion with a friction rub, then, must be due to something else. It is conceivable that the patient's renal failure was severe enough to produce uremic pericarditis. I am not terribly happy with that point of view, and would strongly suggest that in a similar situation, you should make every effort to diagnose some other cause for the pericardial effusion. If you don't find any, then I suppose you can call it uremic, but I don't believe you can call it nephrotic under any circumstance.

I will mention only one other thing. This patient's creatinine level was relentlessly rising, but apparently she was given a low-protein diet, supposedly of high biologic quality, and the BUN was fairly well maintained at reasonably low levels. You must remember that most of our renal patients now will manifest this, if they stick to their diet. It is important to note this, because it means that you must not only evaluate the BUN with respect to how well they are staying on their diet, but you must measure the creatinine and evaluate it as to what is happening to renal function. In this case, despite the relative maintenance of a not-too-high BUN, the creatinine level was rising as renal disease progressed.

Dr. Cohen: I can only endorse and stress the importance of Dr. Siperstein's postulation that this lady had arteriosclerotic heart disease. In an individual who has had diabetes for 30 years it is the rule, and indeed it would be the exception for her not to have severe arteriosclerotic heart disease.

This is particularly important in diabetics. Not only do they have a compromised coronary circulation, but concomitant with that, because of diabetic nephropathy, they are virtually always anemic. The combination of chronic ane-

mia (hematocrits of 22 to 25%) superimposed upon a diminished coronary vascular delivery system, is an especially malignant form of arteriosclerotic heart disease. When we have a patient with coronary vascular disease of the usual type with hematocrit of 20%, we would be quite concerned. I think we sometimes lose that concern in patients with diabetes. Yet, it is a concern which is well founded. The coronary circulation under the best of circumstances in a normal person with normal vessels can extract about 75% of the oxygen which is delivered to it. It is a unique vascular bed in that regard, since resting muscle extracts 20% and brain extracts 15%. If the coronary system is compromised with arteriosclerotic heart disease and diabetic vasculitis and, in addition, only half the amount of available oxygen is delivered to it because of a hemoglobin carrying capacity which is one-half of normal, the result is considerable stress even at rest. It cannot help but lead to chronic ischemia and fibrosis.

I think that this patient probably was in heart failure, and perhaps we can speculate that a venous pressure of 12 cm of water is not normal. In terms of her circulation time, she had a hematocrit of about 22%. I dare say that, for her, this circulation time may have been insufficient. Were she not in failure, there is a possibility that the circulation time would have been even less.

I would consider the possibility of chronic digitalis intoxication. She was taking digitoxin, 0.1 mg a day. She had renal failure, and her course was punctuated by nausea and vomiting in the month before her final admission. On one admission late in her course she did have diarrhea. These symptoms certainly could be a reflection of digitalis intoxication. I think that when a patient has diabetes and nephropathy and is also taking digitoxin, one should consider lowering the dose to one-half of the usual dose.

Pulmonary emboli must be considered. The patient had pleuritic chest pain. A pericardial friction rub is not uncommon in pulmonary emboli if the pleuropericardial surface is involved. It would not be surprising to find pulmonary emboli at autopsy.

Another cause for her death may have been an embolic episode to her brain from old mural thrombosis. I do think she had arteriosclerotic heart disease, and if she was comatose but not in diabetic coma on admission, I think central nervous system coma has to be considered.

Dr. Seldin: Arteriosclerotic heart disease in diabetes takes two forms: one is the large vessel disease which leads to the dramatic myocardial infarction; the other is a small, peppery-type vascular occlusion that leads to cardiomyopathy.

This patient apparently had no dramatic episodes clinically suggestive of a large myocardial infarction. This by no means excludes such an event, but we have no positive evidence for it.

She also seems to have had, for a long time, intermittent episodes suggestive of pulmonary edema in the absence of cardiac enlargement.

This concurrence of pulmonary edema and a normal or near normal size heart is interesting and important, since the treatment is determined largely by the cause of the phenomenon. If, for example, the cause is a major myocardial infarction developing with such speed that major peripheral edema and cardiac dilatation have not had time to develop, you are essentially treating myocardial infarction with congestive heart failure. I think that such a sequence of events is unlikely.

On the other hand, it is possible that her congestive state had a basis other than primary myocardial failure. One possible sequence is the sudden cessation of albuminuria in a patient with the nephrotic syndrome, resulting in a rapid reconstitution of the serum albumin. Sodium excretion does not accelerate rapidly because of renal insufficiency. In consequence, the sudden expansion of the plasma volume may result in pulmonary congestion. Dr. Carter has mentioned this possibility. The presence of acidosis would enormously enhance the possibility of congestion under such circumstances, since acidosis causes venoconstriction and also depresses the ventricular response curve. In addition to sudden expansion of the plasma volume and acidosis, anemia could lead to a congestive state. This patient was suffering from all three of these disorders. Possibly they combined to induce a congestive state, especially as there may have been underlying heart

Fig 1. Gross photograph of a transverse section through the lateral section of the left ventricle of the heart. The myocardium has a mottled appearance because of multiple infarcts in various stages of healing. Several thickened epicardial vessels are visible.

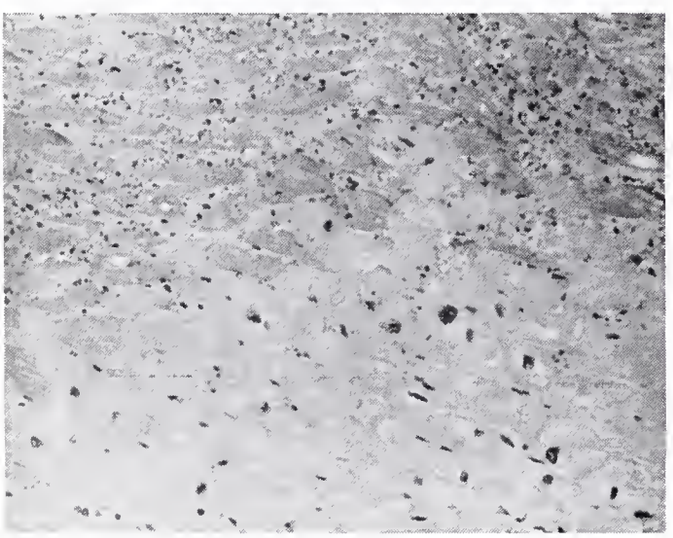


Fig 2. High-power photomicrograph of cardiac left ventricular muscle showing fresh infarction in upper portion of photograph. The granular material surrounding the infarcted cells represents disintegrated leukocytes.

disease secondary to small-vessel lesions of the vasculature of the heart.

Treatment of this disorder is exceedingly complicated. Patients in renal failure tolerate blood poorly; rapid correction of anemia may precipitate pulmonary edema. For this reason, in patients with renal failure, severe anemia should not be corrected by blood transfusions unless it is apparent that the anemia is responsible for clear-cut clinical disturbances.

Finally, it is possible that this patient had myocardial failure requiring the use of digitalis. I believe that diffuse myocardial disease was in the background, but it seems likely that additional factors were superimposed.

I want to re-emphasize several important points. An edematous state does not cause fibrin deposition in the pleura. The pleurisy, therefore, must have resulted from some process other than systemic edema formation. A good possibility is inflammation secondary to the pleural biopsy.

A pericardial effusion does not result from renal salt retention per se, as Dr. Carter mentioned. The fact that a faint pericardial friction rub was detected within several days indicates that there must have been some inflammatory process in the pericardium. Uremic pericarditis is a relatively good candidate.

Finally, I want to emphasize one last point which is often a source of considerable confusion. At times this patient had a phenomenal hyperglobulinemia. In the nephrotic syndrome; overall hyperglobulinemia is usually associated with a lowering of the gamma globulin. An electrophoretic pattern was done although the results have not been recorded. Unless the patient had an infection, I would assume that the gamma globulin was low or at least normal rather than high. The elevated total globulin, as Dr. Siperstein mentioned, is usually due to other large globulin molecules. If hypergammaglobulinemia is present in the nephrotic syndrome and there is no evidence of infection, lupus erythematosus or amyloidosis should be suspected.

With regard to use of diuretics, this patient was, among other things, in advanced renal failure throughout. For example, during an early admission, her creatinine clearance was 12 cc/minute. Ethacrynic acid is a dangerous drug for such patients, particularly if given intravenously. It has been associated with several instances of nerve deafness and never should be used in severe renal failure. Furosemide is much safer under such circumstances.

This was used later in fairly large doses, 1 gm/day. In the presence of renal failure, this could have been responsible for the short burst of diarrhea.

Pathological Findings: *Dr. Fallis:* At the time of postmortem examination, this 5 ft 3 inch white woman was quite slender and wasted, weighing 110 lb. She was pale, but had the dirty grayish-brown pigmentation characteristic of long-standing uremia. Anasarca was present—generalized subcutaneous edema and effusions in the various body cavities. In the right and left pleural cavities there were, respectively, 800 and 700 ml of fluid.

The pericardial sac contained 100 ml of fluid, and the peritoneal cavity contained 1 liter of fluid. There was moderate, generalized arteriosclerosis involving particularly the smaller muscular arteries. In a woman of this age, in the absence of diabetes, you would anticipate either completely normal arteries or, at the most, minimal changes such as lipidosis. This woman had definite and moderate arteriosclerosis throughout the arteries in the body.

Arteriosclerosis in the diabetic not only occurs at an unusually early age and to an unusually severe degree, but also extends well beyond the major vessels which are characteristically involved in the nondiabetic. For example, in the coronary arteries of a nondiabetic elderly man, the atherosclerotic changes would be most severe from 2 to 6 cm from the origin of the major coronary artery. In a diabetic, changes extend well beyond this range; in this case they extend into the most minute of the epicardial branches. The coronary vessels themselves showed extensive lumenal narrowing from arteriosclerosis.

The myocardium showed scattered, grayish-white, irregularly shaped areas of fibrosis. Sunken purplish areas of granulation tissue represented areas of ischemic damage some weeks old. In other areas there was a distinctly yellowish cast of fresh coagulation necrosis of roughly five days' duration. All these areas represent myocardial infarcts in various stages of healing.

The heart was not enlarged.

The other notable gross change was fibrinous pericarditis, which I ascribed to uremia.

In summary, the heart showed evidence of severe ischemic disease with widespread recent and old myocardial ischemic injury, and uremic pericarditis; there was no evidence of hypertension changes.

The lungs weighed 1,150 gm. There was a

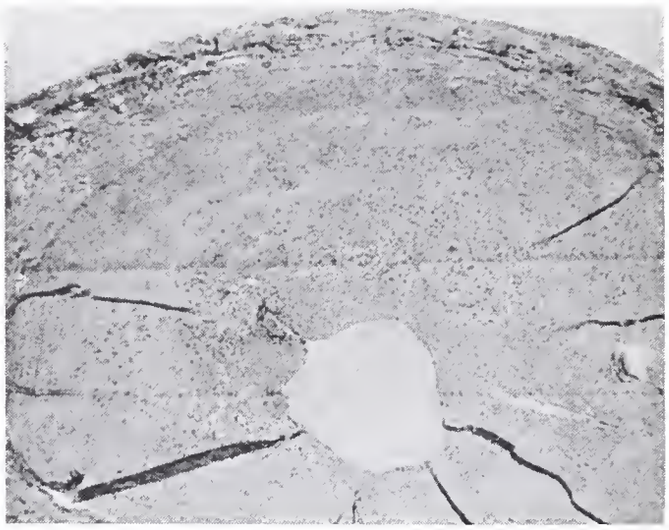


Fig 3. Low-power photomicrograph of coronary artery showing the thickened intima almost occluding lumen. There are no unique features in the atherosclerosis of the diabetic except for the severity in its distribution.

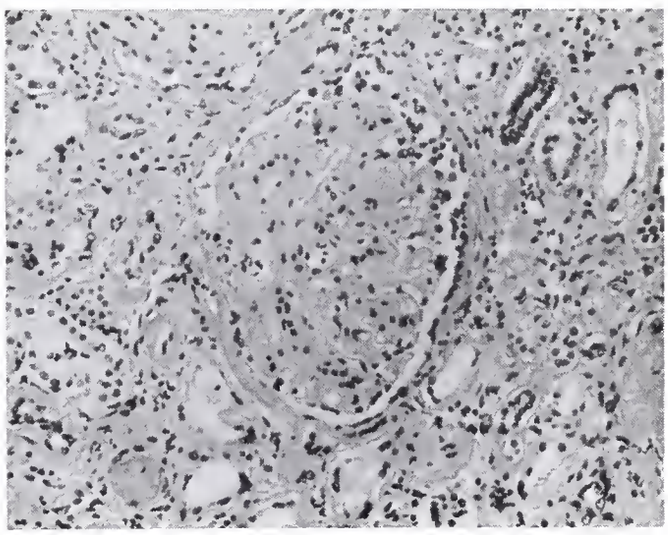


Fig 4. High-power photomicrograph of kidney glomerulus showing tremendous thickening and acellularity of glomerular tufts by basement membrane material producing the nodular hyalinized appearance of Kimmelstiel-Wilson disease.

patchy, uremic, fibrinous pleurisy bilaterally, and the fluid in the pleural cavities contained floating shreds of fibrin. There was also uremic pneumonia. Unfortunately, there were at least three different changes going on in the lung, and they obviously overlap: (1) The changes of chronic passive congestion help substantiate the fact the patient was in congestive heart failure for at least several months; (2) there was uremic pneumonitis; and (3) in the right lower lobe of the lung there was a linear fibrous scar which represents an old and healed pulmonary infarct. Presumably, on one of her admissions she developed venous thrombosis, threw a pulmonary embolus, and had a pulmonary infarct which healed. In the vicinity of this scar there were several fairly fresh lung abscesses, the largest measuring 2.5 cm in diameter. The abscesses were several weeks old and probably dated from the episode approximately one month before she died, when a roentgenogram showed the possibility of bronchopneumonia. The occurrence of the abscesses in the same area of the old pulmonary infarct may be coincidence, or it may be that the linear scar of the infarct, by limiting movement of the lungs, tended to prevent her from coughing out exudate and perhaps predisposed this area to abscess formation.

The liver showed the characteristic nutmeg pattern of chronic passive congestion. There was a 1 cm anemic infarct in the liver, which again reflects the widespread distribution of diabetic vascular disease extending down to small vessels.

The pancreas was small and atrophic, as is sometimes seen in the juvenile diabetic, but on routine staining the islets of Langerhans were unremarkable. We did not stain for special granules, though in cases such as this one, the islets are usually devoid of the beta granules. Small blood vessels in the pancreas showed severe hyaline arteriosclerosis, emphasizing its widespread distribution.

The left and right kidneys weighed 130 and 125 gm respectively. The surface was finely granular, pale, and somewhat yellowish. The yellowish cast represents a leakage through the glomeruli of plasma components including blood lipids. Subsequent reabsorption and storage by the tubules reflects itself grossly in a yellowish, often speckled pattern, particularly in the cortex.

Microscopically, there were far-advanced changes of Kimmelstiel-Wilson disease. There was severe hyaline thickening of the arterioles, and the glomeruli were severely hyalinized and showed the somewhat lumpy or nodular pattern characteristic of nodular diabetic glomerulosclerosis.

Another change of interest in the kidney were flecks of calcification sufficient to interpret as metastatic calcification. This was found in association with modest enlargements of the various parathyroid glands and with the lesions of secondary hyperparathyroidism within the bones. This is further evidence that the patient had uremia with secondary hyperparathyroidism.

In summary, the patient had almost all the lesions that were discussed clinically. She was a juvenile diabetic with far-advanced diabetic glomerulosclerosis, nephrotic syndrome, and uremia with many secondary changes of uremia. In addition, she had widespread vascular disease, notably coronary disease with healed, healing, and acute myocardial infarcts. Finally, bronchopneumonia developed and left several lung abscesses, so that she showed not only the vascular complications of diabetes, but to a limited degree, their susceptibility to infection.

REFERENCES

1. Farquhar, M G, et al: Diabetic Glomerulosclerosis: Electron and Light Microscopic Studies, Amer J Path 35:721 (July-Aug) 1959.

2. Angiopathy in Prediabetes in a Non-Genetic Diabetes, in: Diabetes, proceedings of the Sixth Congress of the International Diabetes Federation, Stockholm, (July 30-Aug 4) 1967, Amsterdam, Excerpta Medica Foundation, 1967, pp 293-326.

3. Siperstein, M D, et al: Studies of Muscle Capillary Basement Membranes in Normal Subjects, Diabetic, and Prediabetic Patients, J Clin Invest 47:1973 (Sept) 1968.

4. Peters, J P, and Van Slyke, D D, Eds: Quantitative Clinical Chemistry, vol 1, 1946, p 509.

5. Berlyne, G M, and Mallick, N P: Ischaemic Heart-disease as a Complication of Nephrotic Syndrome, Lancet 2:399 1969.

6. Henderson, L L, et al: Intercapillary Glomerulosclerosis, Amer J Med 3:131 (Aug) 1947.

7. Mann, G V, et al: Clinical Manifestations of Intercapillary Glomerulosclerosis in Diabetes Mellitus, Amer J Med 7:3 (July) 1949.

8. Lambie, A T, and MacFarlane, A: A Clinico-Pathological Study of Diabetic Glomerulosclerosis, Quart J Med 24:125 (April) 1955.

Drs. Fallis and Eigenbrodt, Department of Pathology; Dr. Curry, Department of Radiology; Drs. Siperstein, Carter, Cohen, and Seldin, Department of Internal Medicine, University of Texas (Southwestern) Medical School, 5323 Harry Hines Boulevard, Dallas, Tex 75235.

Dr. Frank, Parkland Memorial Hospital, 5201 Harry Hines Boulevard, Dallas, Tex 75235.

PROTEIN CONTENT / 7 oz. Serving*

Bean with Bacon	6.8	Green Pea with Ham (Frozen)	7.6
Beef	8.0	Hot Dog Bean	8.4
Chicken Broth	5.5	Pepper Pot	6.1
Chicken 'N Dumplings	5.8	Split Pea with Ham	10.2
Chili Beef	6.2	Vegetable Beef	5.0
Green Pea	6.9	Vegetable with Beef (Frozen)	5.4

When protein is the focal point in your patients' special diets, Campbell's Soups can be a convenient supplementary source of that essential nutrient.

* From "Nutritive Composition of Campbell's Products" which gives values of important nutritive constituents of all Campbell's Products. For your copy, write to Campbell Soup Company, Dept. 365, Camden, New Jersey 08101.

There's a soup for almost every patient and diet ..for every meal and, it's made by Campbell

Pro-Banthine® Helps...

propantheline bromide

...REVEAL the ulcer

...HEAL the ulcer

The efficiency of Pro-Banthine—its favorable balance of therapeutic and secondary actions—has been thoroughly tested and observed. This quality has been demonstrated surgically, roentgenographically, cinegastroscopically and, above all, clinically.

When physicians needed to relax the restless duodenum for the recently refined technic of hypotonic duodenography they logically turned to Pro-Banthine.

For years Pro-Banthine has been the most widely used anticholinergic medication for calming the gastrointestinal tract—for suppressing secretion, prolonging the action of antacids and providing the proper environment for healing peptic ulcers.

These established therapeutic actions make Pro-Banthine particularly useful in:

- peptic ulcer
- gastritis
- diverticulitis
- irritable colon
- biliary dyskinesia
- functional hypermotility

We wish to thank Drs. Marcia K. Bilbao, Louis H. Frische, Josef Rösch and Charles T. Dotter for this exceptionally graphic example of hypotonic duodenography.

Contraindications: Glaucoma, severe cardiac disease.

Precautions: Since varying degrees of urinary hesitancy may occur in elderly men with prostatic hypertrophy, this should be watched for in such patients until they have gained some experience with the drug. Although never reported, theoretically a curare-like action may occur with possible loss of voluntary muscle control. Such patients should receive prompt and continuing artificial respiration until the drug effect has been exhausted.

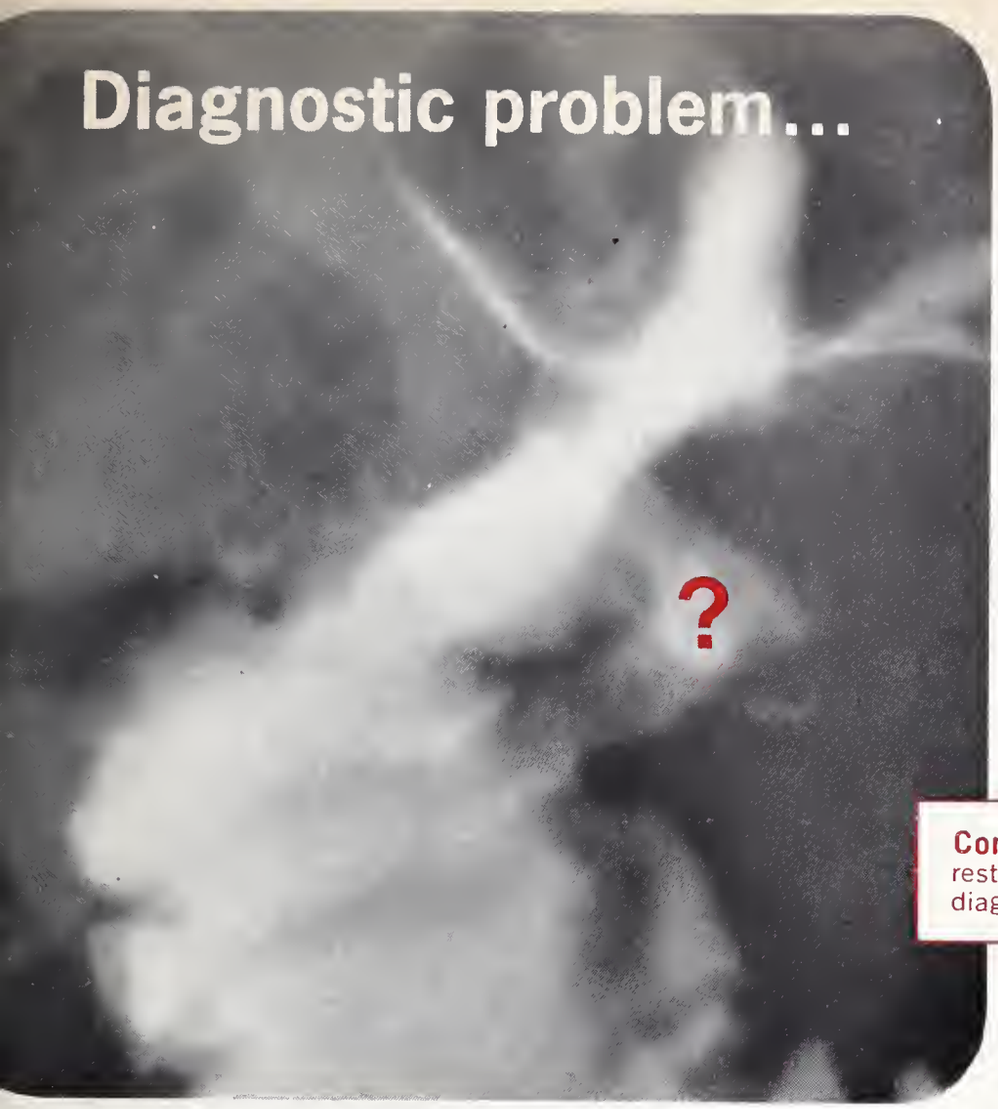
Side Effects: The more common side effects, in order of incidence, are xerostomia, mydriasis, hesitancy of urination and gastric fullness.

Dosage: The maximal dosage tolerated without excessive side effects is usually the most effective. For most adult patients this will be four to six 15-mg. tablets daily in divided doses. In severe conditions as many as two 15-mg. tablets four to six times daily may be required. Pro-Banthine (brand of propantheline bromide) is supplied as tablets of 15 mg., as prolonged-acting tablets of 30 mg. and, for parenteral use, as serum-type vials of 30 mg. The parenteral dose should be adjusted to the patient's requirement and may be up to 30 mg. or more every six hours, intramuscularly or intravenously.

982

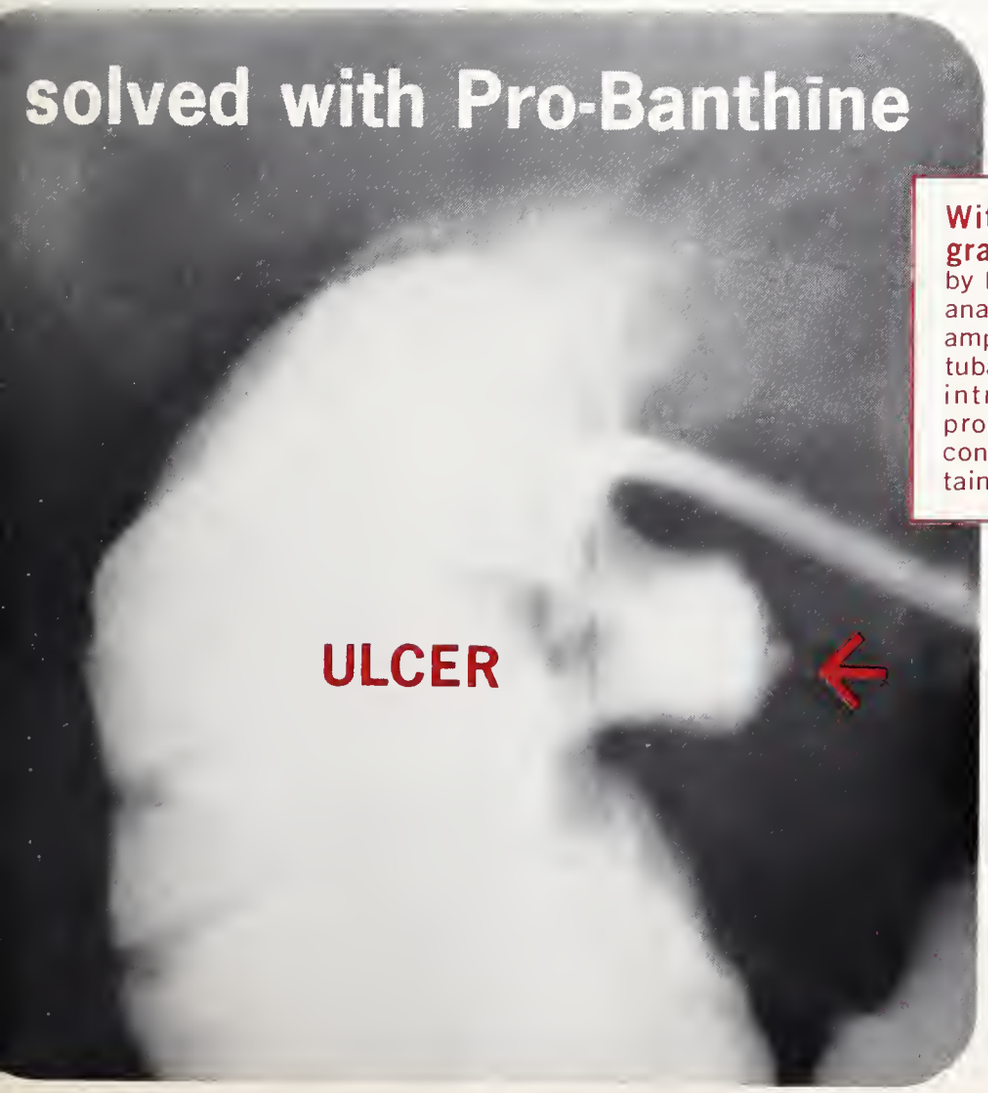
SEARLE *Research in the Service of Medicine*

Diagnostic problem...



Conventional x-rays of the restless duodenum are often diagnostically indefinite.

solved with Pro-Banthine



With hypotonic duodenography duodenal calm induced by Pro-Banthine permits clear anatomic appraisal. In this example the duodenum was intubated. Pro-Banthine, 60 mg. intramuscularly, produced prompt aperistalsis. Double contrast visualization was obtained with barium and air.

Nose clear as a whistle

(THANKS TO DIMETAPP®)

Dimetapp Extentabs® does an outstanding job of helping to clear up the stuffiness, drip and congestion of colds and upper respiratory allergies and infections. Each Extentab keeps working up to 12 hours. And for most patients drowsiness or overstimulation is unlikely. Try Dimetapp. It clearly works.

FOR UPPER RESPIRATORY ALLERGIES AND INFECTIONS

Dimetapp Extentabs®

Dimetane® (brompheniramine maleate), 12 mg.; phenylephrine HCl, 15 mg.; phenylpropanolamine HCl, 15 mg.

UP TO 12 HOURS CLEAR BREATHING ON ONE TABLET

Indications: Dimetapp is indicated for symptomatic relief of the allergic manifestations of respiratory illnesses, such as the common cold and bronchial asthma, seasonal allergies, sinusitis, rhinitis, conjunctivitis, and otitis.
Contraindications: Hypersensitivity to antihistamines. Not recommended for use during pregnancy.
Precautions: Until patient's response has been determined, he should be cautioned against engaging in operations requiring alertness. Administer with care to patients with cardiac or peripheral vascular diseases or hypertension.
Side Effects: Hypersensitivity reactions including skin rashes, urticaria, hypotension and thrombocytopenia, have been reported on rare occasions. Drowsiness, lassitude, nausea, giddiness, dryness of the mouth, mydriasis, increased irritability or excitement may be encountered.
Dosage: 1 Extentab morning and evening.
Supplied: Bottles of 100 and 500.

A.H. ROBINS COMPANY
RICHMOND, VA. 23220

A·H·ROBINS

TEXAS MEDICAL ASSOCIATION
ORIENT ADVENTURE

Two fun-filled weeks in exotic and colorful Japan and Hong Kong. Our complete Orient Adventure costs much less than round trip tourist air fare, yet includes direct 707 private jet flights, deluxe hotels, gourmet meals, all the freedom of individual travel, plus many other exclusive features. The Orient Adventure is departing from Dallas and Houston on August 24 and August 30, 1970.

Space is strictly limited on this exciting adventure. To confirm reservations a $100 deposit per person is required. Join us. Send your deposit now to

Texas Medical Association
1801 North Lamar Blvd.
Austin, Texas 78701

$899.00

RETURN THIS COUPON NOW!

SEND TO: Texas Medical Association
1801 North Lamar Blvd.
Austin, Texas 78701

Enclosed is my check for $_____ ($100 per person)

NAME _____

ADDRESS _____

CITY _____ STATE _____

ZIP _____ PHONE _____

WE'LL BE GLAD TO SEE YOU

Stop by the

TEXAS MEDICAL ASSOCIATION GROUP INSURANCE BOOTH

during the TMA Annual Session, Fairmont Hotel, Dallas, April 30-May 2

If you have any questions or need information about your Group Plans, we will be happy to assist you.

Underwritten By

THE PRUDENTIAL
SOUTHWESTERN HOME OFFICE

INSURANCE COMPANY OF AMERICA
HOUSTON, TEXAS

NEWS

Laredo Schools Schedule Drug Program

The Laredo Independent School District has recently initiated a program aimed at teaching its students about the proper use of and the dangers involved in the improper use of drugs and narcotics.

The development of a curriculum guide for the program was made possible through the approval of Proposal 9-G-067, submitted by the Laredo Independent School District to the US Office of Education through the US Department of Health, Education, and Welfare office in Dallas. Dr. Harold Haswell, director of the Dallas Office of Education, termed the Laredo drug education program the only one of its kind in the entire United States; and he has commended the school system for its attack in the present drug war and has stated that the scope of the curriculum guide is so advanced that his office will distribute it nationally.

The entire program was developed under the guidance and leadership of Vidal M. Trevino, assistant superintendent in charge of curriculum for the Laredo public schools. He served as chairman of a committee of educators from the school system and ancillary, including medical, agencies which developed a sequential, conceptual, and multidisciplinary program to be incorporated directly into the existing curriculum at all levels—grades one through twelve. The committee developed units per grade level and subject matter related to drugs (English, mathematics, social studies, science, biology, chemistry, and health and physical education) in an effort to present factual, basic information that would ultimately influence the student's total development.

A field-testing period which involves 800 elementary school students; 2,100 junior high school students; and 1,700 high school students began March 9 and will continue through the end of the present school year. Then members of the coordinating committee on drug abuse will spend the summer months rewriting the guide, injecting into it the feedback received from students and teachers and deleting that which was found to be unsuitable. By September, 1970, the Laredo public school system will expose all of its approximately 20,500 students to a program designed by local teachers who are familiar with the students and with their community's particular needs and peculiarities.

An initial grant of $9,000 from HEW enabled the program to become a reality which will focus attention on learning from within the classroom about the pressing factors and the present community issues confronting today's society. The program will also focus attention on the student and on how he can improve that society as well as present a factual approach to the problem of drug abuse.

Dallas Directors Make Administrative Changes

The board of directors of the Dallas County Medical Society has recently announced two new administrative appointments.

Mrs. Laurine Abernethy, administrative secretary to the executive officer of the society for 23 years, was promoted to administrative assistant. Among her assignments will be serving as assistant managing editor of the *Dallas Medical Journal*.

Robert L. Heath, son of the society's executive officer, Millard J. Heath, has been named advertising manager of the journal, in addition to his duties as assistant executive officer of the medical society.

Physician Wins Prize For Niece's Photograph

Weslaco general practitioner Dr. James A. Kendall recently won his choice of a three-week trip to South America or $4,000 in the International Newspaper Photo Contest, sponsored in South Texas by the Corpus Christi *Caller-Times*.

Dr. Kendall chose the money because he could not leave his family or medical practice for such a long vacation.

His prize-winning entry was a color photograph of his niece, Gaylyn Kendall of Houston and was taken when Gaylyn was watching her uncle and grandfather hang a new porch swing just outside the kitchen window of her grandparents' home in Corpus Christi. He used a Nikon 35 mm camera with Photomic Tn 50 mm F 1.4 lens.

Dr. Kendall learned photography as a Boy Scout and was the photographer for his high school's annual. It is only one of his hobbies now, however; for he is also a sports car bug, participates in auto crosses, and finds time for deer hunting.

Safety Program Urges Texans to 'Drive Friendly'

An all-out effort entitled "Drive Friendly" and designed to improve traffic safety in Texas has been launched by Governor Preston Smith.

The first coordinated traffic safety program ever to operate in Texas, "Drive Friendly" was originated after a record 3,500 deaths and 250,000 injuries, at a cost of nearly $1 billion, were recorded last year on Texas streets and highways. Nearly half of these cases involved a drinking driver.

Aimed at all citizens of this state who drive motor vehicles, the slogan simply means the following:

—Operating your vehicle as a responsible citizen.
—Obeying all traffic laws.
—Respecting state and local police officers who patrol streets and highways for our benefit.
—Being generous with your right of way. If in doubt, give it to the other driver. It's not worth dying over.
—Keeping your vehicle in good operating condition.
—Not driving while in an unfit condition—particularly while drinking.

Over 400,000 "Drive Friendly" dashboard, window, and bumper stickers are already in use in Texas. They appear on state vehicles, driver education cars, and school buses; and business firms are using them on company vehicles, billing statements, insurance policies, new car papers, and under letter signatures. All correspondence from the Governor's Office carries a small "Drive Friendly" sticker under the name of the signer.

Stickers may be obtained at a nominal cost by writing "Drive Friendly," Governor's Office, Austin 78711.

DALLAS

SOUTHWESTERN SOPHISTICATION

A giant plaster model of a human ear, measuring five feet in height, is one of many intriguing exhibits at the Dallas Health and Science Museum and Planetarium.

Vital, vibrant, and cosmopolitan, Dallas is a shining, modern city where the warmth of Southwestern hospitality tempers the hurry-up pace of twentieth century activity.

This sprawling metropolis, which provides exciting stores and shops, a choice of excellent restaurants and hotels, and so many things to see and do that Dallasites often "vacation" in their own city, will host the 1970 Texas Medical Association's 103rd Annual Session. Texas physicians who attend the April 30-May 3 meetings should be prepared not only to absorb valuable medical information and insight, but also to enjoy the glamour and excitement of the "City with the Charm of Yesterday and the Spirit of Tomorrow."

As the youngest of the 20 largest American cities, the Dallas of today may boast of many accomplishments —economic, educational, social, and cultural—during a relatively brief span in the life of a city. Yet, its vigorous growth and development have marred neither its aura of refinement, polish, and good taste, nor its friendly "home town" appeal.

Looking Back: The history of this young giant traces back to 1841, when John Neely Bryan set up a trading post beside the Trinity River and sold powder, lead, and whiskey to settlers in the Republic of Texas. The first log cabin ever built in Dallas was the home of the city's founder and is still nestled in a corner of the lawn at the rapidly growing county government complex. Named for a friend of Bryan's, who many historians believe was George Mifflin Dallas, Vice-President of the United States under President James K. Polk, Dallas succeeded in the 1850's in becoming a stop on a stage coach route. However, its real development dates from the arrival of the first railroad in 1872. The town later developed as a cotton market and since then has become the financial and commercial center of the Southwest, with a metropolitan area population of more than a million.

Cultural Facilities: Also traditionally the cultural capital of the Southwest, Dallas supports a major symphony orchestra conducted by Donald Johanos, one of only three directors of major symphonies who are American born and trained; the Dallas Theater Center, the only theater designed by Frank Lloyd Wright; and the Dallas Summer Musicals, a 12-week season of musical shows and operettas which annually attract top stars from Broadway and Hollywood. The Metropolitan Opera Company brings stellar casts and its orchestra, chorus, and ballet to Dallas each spring; and the Dallas Civic Opera is one of the four leading opera companies in the United States. The Dallas Museum of Fine Arts displays a permanent collection of 2,400 objects covering all media and periods, with emphasis on American and Southwestern painters and sculptors; and art exhibitions and a circulating picture collection are offered by the Dallas Public Library.

State Fair Site: Dallas is also the home of the fabulous State Fair of Texas, the largest state fair in America, whose attendance tops 2,500,000 during its 16-day run each October. The yearly extravaganza presents lavish entertainment, fashion shows, contests, special events, youth activities, carnival attractions, exhibits, and livestock and poultry judging. Touring musical and ice shows, college and professional football, and the Pan-American Livestock Exposition are among principal features of the fair.

Open the year round, the 187-acre fairgrounds are also the site of an unusual Civic Center, which includes the Museum of Fine Arts; the Dallas Aquarium, second largest inland aquarium and one of the four largest in the country; the Museum of Natural History, with permanent dioramas of Southwestern wild life and exhibits of fossils, minerals, and gems; the Dallas Health and Science Museum, with more than 40 electronic and three-dimensional displays of the human body, nu-

trition, disease prevention, and the physical sciences; and the Texas Hall of State, serving as a shrine to Texas heroes. Also in Fair Park are the Dallas Garden Center, a horticultural education facility with a 500-seat auditorium, botanical collection, and seven acres of Southwestern gardens; and the Southwestern Historical Wax Museum, featuring life-like replicas of famous historical figures, Western characters, and sports heroes. Some of the people and scenes depicted include Davy Crockett and Jim Bowie at the Alamo; Stephen F. Austin, the father of Texas; Roy Bean's court; Billy the Kid; Geronimo; Frank and Jesse James; Pancho Villa; Gun Fight at OK Corral; Sam Houston; Will Rogers; President John F. Kennedy's arrival at Dallas Love Field; President Johnson taking the oath of office in Dallas; Lee Harvey Oswald; General MacArthur; and Mickey Mantle. The Owens Fine Arts Center at Southern Methodist University includes an art building, sculpture court and garden, the Bob Hope Theater (donated by the comedian), and a display of the Algur H. Meadows collection of oil paintings, including many Spanish old masters.

A Gourmet's Delight: Cultured tastes in dining will also be satisfied in Dallas, where lovers of fine food may look forward to the cosmopolitan cuisine and aesthetic adventures to be experienced in the city's famous restaurants. Texas physicians can enjoy a delicious meal while viewing a current stage hit at either The Country Dinner Playhouse or the Windmill Dinner Theater, eat a hearty meal at one of the country's finest and best-known steak houses, order Oriental delights atop a skyscraper overlooking the city lights, or sit on the floor and savor a genuine Japanese feast. They will find superior pasta, Wiener schnitzel, French dishes, Kosher delicacies, Indian curry, Polynesian rum drinks, Mexican tacos, or luxuriant desserts. A list of restaurants that offer such mouth-watering fares might include the following: Alexander's, Chateaubriand, Brennan's, Dominique, Mario's, Mr. Peppe, Old Warsaw, continental cuisine; Ports O' Call, Luau, Trader Vic's, polynesian food; Il Sorrento, Parrino's, Sammy's Town House, Italian dishes; Casa Dominguez, Mexico City, Pedro's, Pancho's, Mexican food; La Tunisia, Middle Eastern fare; Sakura Japanese Restaurant, House of Gong, Oriental menus; The Torch, Greek food; Little Bit of Sweden, smorgasbord; Alpine Inn, Schnitzel Haus, Blue Front Restaurant, German food; and Town and Country Restaurant, Southern Kitchen, Vick's Restaurant, American food. Choice steaks are served at Arthur's, Cattlemen's, Pastory's, The Beefeater Inn, Wood N Rail, and Statler Steak House; and barbeque is the specialty at The Rib. The Bounty, Chantly's, Zuider Zee, The Wharf, and Jay's Marine Grill offer the best in seafood.

A shrine honoring the heroes from the colorful past of the Lone Star State, the Texas Hall of State faces the beautiful main esplanade on the grounds of the State Fair of Texas.

The 34-story first phase of a 10-acre, $140 million complex in downtown Dallas, One Main Place houses numerous offices and a plaza outlined by shops and restaurants.

The Club Circuit: Dallas night life sets a brisk pace, swinging with a lively tempo at clubs providing almost any atmosphere from formal and elegant to casual and hip, with music ranging from hard rock to the romantic sounds of the mariachi music from south of the border. In addition to floor shows, house orchestras, and resident acts, some private clubs book big entertainment names. Some of the most popular clubs might include the Cipango Club, 21 Turtle Club, Club Village, Black Garter Club and Mayfair Room at the Executive Inn, Music Box, Regents Room and Nero's Nook at the Hyatt House, Venetian Room at the Fairmont Hotel, 20th Century Club and King's Club at the Hotel Adolphus, Lance Rentzel's Pearl Street Warehouse, Rafters Club, Rommie's, The Levee, Soul City, and The Haunted House.

Athletic Attractions: On the sports scene Dallas' famous Cotton Bowl hosts many of the big-time football games in both professional and college ranks. It is the home of the NFL Dallas Cowboys and the Southern Methodist University Mustangs, the site of the New Year's Day Classic pitting the Southwest Conference football champion against a nationally-ranked opponent. and the neutral ground on which The University of Texas and the University of Oklahoma football teams meet in a classic duel each fall during the State Fair of Texas. Dallas also supports the American Basketball Association Chaparrals, the National Hockey League Black Hawks, and the Dallas-Fort Worth Spurs professional baseball team. Invitational golf and tennis tournaments, boxing and track meets, and sports car races round out a full sports calendar. The Samuell Grand Recreational Center Tennis Courts, the Dallas Gun Club, and the Great Southwest Golf Club will host athletic activities during TMA's Annual Session.

Browse or Buy: Dallas is as well known for its fine department stores and specialty shops as it is for its well-dressed women—and the two cannot be separated. Alertness to fashion trends and the latest developments in customer services have earned this excellent reputation for its retail stores, one of the foremost of which is Neiman-Marcus, a specialty store which is internationally known for its quality merchandise. Other fine department stores include Sanger-Harris and Titche-Goettinger. The slogan "shopping at North Park (where Neiman's and Titche's suburban stores are located) is like anything else that isn't like anything else in the world" is a fit description of one of the nation's largest indoor mall shopping centers. Buildings, merchandise, art, and landscaping have been blended to create a city within a city at North Park. Another popular place to shop, Highland Park Shopping Center, was the second planned shopping center in the entire country. It was built in 1930 and is architecturally designed to resemble a large Spanish mission. The Quadrangle is one of Dallas' newer and most charming shopping areas, featuring exclusive specialty and import shops, quaint restaurants, and flower-filled courtyards. Colorful Mexican gift shops as well as "the tortilla factory" may be found in "Little Mexico" along McKinney Avenue; and a few blocks out Cedar Springs Road from downtown is "Antique Row."

Buildings of Interest: Several buildings in Dallas offer the sightseer a worthwhile experience. From observation decks atop Southland Center and the First National Bank Building TMA members may enjoy dramatic and magnificent views of the city. Visibility on a clear day is more than 50 miles. Telescopes are situated on both decks, and both have enclosed portions with snack bars and souvenir centers. A unique "Chapel in the Sky" is located on the same level at Southland Center.

The four great buildings composing the Dallas Market Center, including the Home Furnishings Mart, Trade Mart, Market Hall, and Apparel Mart, provide their own phenomena. The Fashion Arts Museum, only one of its kind in the United States, is located in the Apparel Mart; and the center's International Sculpture Garden contains contemporary works of art from around the world.

The $8 million Dallas Memorial Auditorium is a versatile addition to the city's cultural, convention, and sports facilities. It seats 10,000 people and has more than 110,000 square feet of exhibit space.

Located near the Elm Street viaduct on the western skirts of downtown is the site of the John F. Kennedy Memorial Plaza.

Recreational Features: Many recreational facilities and parks make Dallas a strong candidate for pleasure capital of the Southwest as well. The exciting pages of Texas history come vividly to life for those who visit Six Flags Over Texas, located only a few minutes away

from downtown Dallas in Arlington, midway between Dallas and Fort Worth. The Southwest's most unusual and probably most popular recreational adventure, Six Flags offers more than 75 thrilling rides, unique attractions, and lively shows for the whole family. Texas physicians and their families will want to see: Spain—the exciting Log Flume, Casa Magnetica; France—LaSalle's Riverboat Ride up the mysterious Lavaca River; Mexico—El Ferrocarril Fiesta Train to the land of the Dancing Tamales; Republic of Texas—the Crazy Horse Saloon, fast-gun justice of the Old West; Confederacy—the Confederate Drill Team, Skull Island; and Modern USA—the panoramic Astrolift, Boom Town, the Animal Kingdom and Petting Zoo.

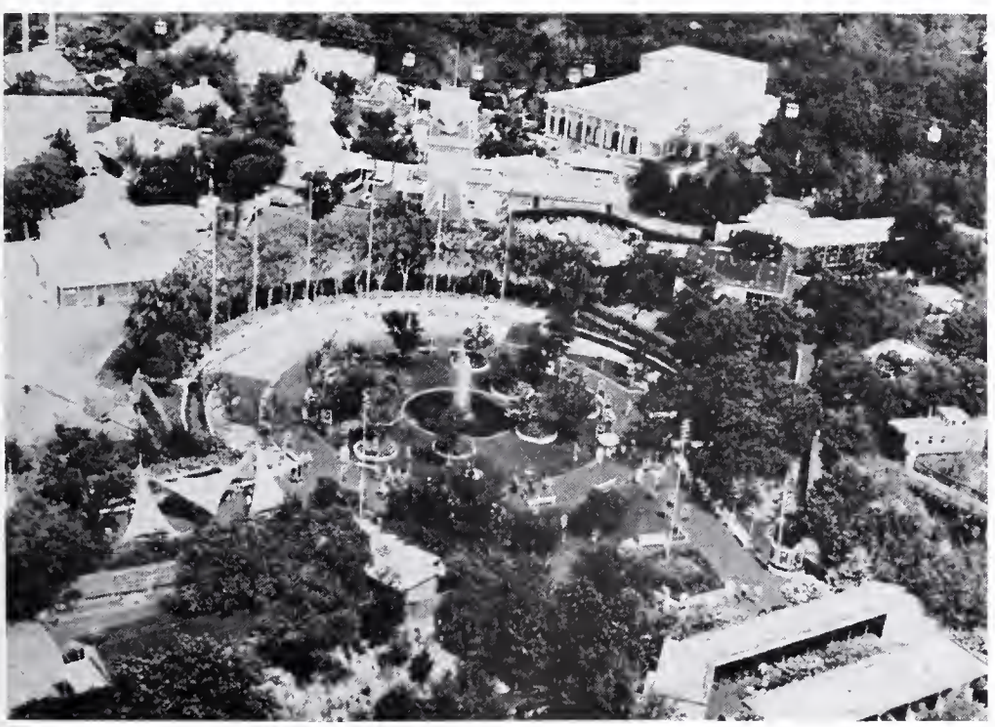
Animals also abound at the Marsalis Park Zoo in Dallas, which rates among the top ten zoos in the nation. It contains more than 1,000 species of animal, bird, and reptile wildlife from all parts of the world in its 51 acres; and it features an exotic rain forest, which is the only one in the world that can be viewed from three different levels.

One of the most beautiful man-made lakes in the United States is Dallas' White Rock Lake, which provides both fishing and boating facilities, including rentals of sailboats and paddle boats. Its banks are dotted with hundreds of picnic tables and fireplaces situated under low willow trees and shady oaks. Overlooking White Rock Lake is a replica of Mount Vernon which is the residence of oil millionaire H. L. Hunt, one of the world's wealthiest men.

Turtle Creek in Highland Park is another spot where nature's beauty and man-made beauty can be enjoyed simultaneously. The vast and colorful array of azaleas blooming along its banks makes the area one of the most lovely to be found in Texas each spring, and some of Texas' oldest and finest homes are located along its curving route. Nearby Lee Park is the site of concerts in the spring and summer; and a bronze statue of Robert E. Lee, dedicated by Franklin Delano Roosevelt, and a replica of Arlington, Lee's home, are located there.

Educational and Medical Facilities: Among the many colleges and universities located in the Dallas metropolitan area are Southern Methodist University, The University of Texas Southwestern Medical School, North Texas State University, Texas Woman's University, Dallas County Junior College, University of Dallas, Bishop College, Baylor University College of Dentistry, Baylor University School of Nursing, Dallas Baptist College, Dallas Christian College, Dallas Theological Seminary and Graduate School of Theology, Dallas Bible College, Christian College of the Southwest, Southwestern Assemblies of God College, and Garland College and Affiliated Schools. Privately

Surrounded by luxury, high-rise apartments and banked by vast beds of azaleas, beautiful Turtle Creek is a favorite spot for those who want to "get away from it all" for awhile.



A fun-filled family adventure through Texas' exciting past begins with the first step through the main gate at Six Flags Over Texas, located in Arlington.

supported institutions also located in the Dallas region are the Graduate Research Center of the Southwest, Wadley Research Institute, and Northwood Institute.

Among the city's medical facilities are Southwest Medical Center, including Parkland Memorial Hospital, Children's Medical Center, the UT Southwestern Medical School, St. Paul Hospital, and Texas Woman's University School of Nursing. Other hospitals include Baylor University Medical Center, Gaston Episcopal Hospital, Methodist Hospital of Dallas, Presbyterian Hospital of Dallas, Texas Scottish Rite Hospital for Crippled Children, Veterans Administration Hospital, Dallas Medical and Surgical Clinic-Hospital, Doctors Hospital, Medical Arts Hospital of Dallas, Memorial Health Center, Timberlawn Sanitarium, and Woodlawn Hospital.

Visitors Welcome: It goes without saying that the facilities and opportunities for enjoyment in Big D are more than adequate for any prospective visitor. Texas Medical Association members, guests, and wives should have no trouble finding a good time wherever they go during this year's Annual Session.

Institute Publishes Journal On Drug Use and Abuse

The National Institute of Mental Health has inaugurated a new publication to facilitate the dissemination and exchange of information in the field of drug dependence.

The new quarterly journal, *Drug Dependence,* is prepared jointly by the institute's division of narcotic addiction and drug abuse and its National Clearinghouse for Mental Health Information to answer a recognized need for a professional publication in this area. The journal will serve scientists of many disciplines, legislators, lawyers, teachers, students, and others. It will present abstracts, original articles by professionals in the field, and an occasional reprint to give historical perspective to the problems of drug abuse.

To be placed on the mailing list for *Drug Dependence,* write to the National Clearinghouse for Mental Health Information, NIMH, 5454 Wisconsin Ave., Chevy Chase, Md. 20015; or buy copies of the journal for 50 cents each from the Superintendent of Documents, US Government Printing Office, Washington, D.C. 20402.

Insurance Company Medical Directors Consider Questions Posed During TMA Winter Conference

"Doctors, Insurers, Patients and Their Beefs"—a down-to-earth discussion of real problems facing this world of individuals—was presented during Texas Medical Association's 1970 Winter Conference in January.

Dr. M. E. Rougraff of Houston, Medical Director of Great Southern Life Insurance Company, moderated the panel session, which featured medical directors of several insurance companies.

Some problems and questions which they reviewed are highlighted in this article, and *Texas Medicine* plans to carry more articles in the future on related questions.

Dr. Kenneth F. Schaefer, vice-president and group medical director of The Prudential Insurance Company of America in Newark, N.J., explained why group insurance contracts where employees are covered by the employer often do not provide sufficient coverage.

1. In group insurance, the insured (patient) is usually paying little or, frequently, no portion of his premium.
2. No standard group contract exists. The contracts vary by company, or by industry, or by whatever group is insured.
3. The contracts are usually the result of bargaining between management and labor, with the latter having increased benefits as its goal and with the former considering the cost of any additional benefit granted.
4. Large insurance companies in the group health field have an objective of a very small percentage of so-called "profit." In the speaker's company the objective was .5%, and other companies have similar objectives.
5. To a great extent each large purchaser of group insurance pays for the cost of its benefits without pooling them with other large companies. Thus, if a large industrial company embraces a paternalistic attitude with respect to health insurance claims, the costs for these benefits could be much higher than in a company which demands strict administration for the same benefits.
6. Augmentation of benefits into more comprehensive contracts is an evolutionary process not ordinarily controlled by insurance companies and may or may not be adequate for the times.
7. Only with cooperation and communication between patients, physicians, and third parties can there be any hope of maintaining the free practice of medicine in a free society.

High Claims

Dr. E. Stuart McLeary, assistant medical director of Connecticut General Life Insurance Company in Hartford, sought to answer what insurers do when a major medical claim is higher than what is considered usual, customary, and reasonable. For a number of good reasons, he said, not all of the claims that are questioned after a computer analysis of a doctor's usual charge for a procedure and the range of usual charges are actually found to be excessive. If the claim does exceed the usual and customary screen, however, the following steps are taken:

1. Referral to a specially trained person for further development and payment.
2. Referral to a physician for additional development such as discussions with the physician, check of hospital records, etc.
3. If the insurer and the physician are unable to resolve the question, the county medical society review committee is asked for a judgment.

Different Approaches

Dr. Robert G. Wood, medical director of The Equitable Life Assurance Society in New York City, pointed out the differences between the way the clinician appraises the health of his patient and the consideration of a life insurance applicant by a medical director. According to Dr. Wood, differences occur because each has a different responsibility. A clinician is oriented to the recognition of the absence or presence of disease, identification of the need or lack of need for treatment, and providing appropriate therapeutic measures. However, the responsibility of a medical underwriter is to evaluate the mortality risk of each applicant, a procedure which involves reviewing secondhand information and then categorizing the person in terms of his anticipated mortality. Dr. Wood said that this dichotomy can be divided into three subdichotomies: mortality risk versus life expectancy, standardized versus individualized observations, and

finality of decision versus revision of prognosis. He added that three areas of work done by the life insurance physician that are commonly misunderstood by clinicians include the insurer's use of death rates instead of life expectancy, his need to obtain information which has mortality significance and will be consistent when reported by large numbers of clinicians, and the absence of an opportunity for him to reevaluate the risk at a later date.

Description Important

Medical director of Blue Cross-Blue Shield of Texas, Dr. Doyle W. Ferguson of Dallas, pointed out the importance of providing a description of the services rendered instead of merely the physician's diagnosis. He said that only by an adequate and correct description may the proper benefits on any policy be paid; and he stressed the importance of transmitting this information on the original claim, since doing so will cut down further correspondence and further delay in payment of the claim. He emphasized to his colleagues that all third party payers wish to pay claims as nearly correctly and as quickly as is possible in accordance with the information submitted by physicians.

Confidential Information

Dr. Richard C. Shaw, medical director of Connecticut Mutual Life Insurance Company in Hartford, faced with the question whether home office insurance medical departments can be trusted to protect confidential information received from the records of other physicians' patients, gave an emphatically affirmative answer. Any concern that exists about how confidential medical information is handled usually revolves around three major points, he said, including the possibility that the agent may have access to the information, that nonmedical home office personnel may use the information irresponsibly, or that the applicant may be given the contents of the report. He said that almost all companies make provision for physicians' reports to go directly to the home office so that the agent never sees the reports; and he added that, even if adverse action is taken on an application, the home office merely informs the agent that the action was necessary because of confidential information. He went on to say that the fear that irresponsible home office personnel will have access to confidential information is more apparent than real, and he assured physicians that in the process of underwriting an application probably no more than one or two persons other than the doctor or lay underwriter see the report and that they certainly do not have time to look carefully at the contents of individual reports. He also assured that at no time does the home office divulge to the applicant anything in the physician's report. He explained the insurer's strong feeling that he should never interfere with the doctor-patient relationship.

Paper Work

Dr. Daniel J. Sullivan, associate medical director of Metropolitan Life Insurance Company in New York City, responded to one question that troubles individuals: Is it true that an insurance company will write to every physician whose name appears on an insurance applicant's medical history, no matter when or for what reason he was consulted? Dr. Sullivan pointed out that unnecessary correspondence represents lost time and cost to the insurer as well as to the physician and that the medical director constantly attempts by education and reevaluation in cooperation with appropriate staff members of his company to reduce and even eliminate these requests. Positive actions already in use or being considered to reduce paper work for the physician, according to Dr. Sullivan, include: (1) standard forms for all companies in order that the physician will be familiar with the forms and not have to waste time reading a variety of separate forms with separate requirements; (2) use by the insurer of automatic telephone answering equipment which receives collect calls and from which the physician's report is transcribed and he is paid; (3) supplemental health statements in which a second approach to the doctor is avoided in selected cases by the use of the company's personnel to enlarge upon information already received without troubling the doctor a second time (this system is not used where confidentiality would be breached); (4) the use of specially trained personnel to go to the doctor's office and transcribe, interview, or photocopy records at the doctor's discretion. There are also in use or being considered steps to reduce the load on physicians who examine applicants for insurance companies. They include pay-yourself systems to reduce correspondence and delay in payment for service; various combinations of automated examinations to reduce the nuisance-type examination of applicants, and a standard form of application by all insurers.

PERSONALS

Associate dean of The University of Texas Southwestern Medical School at Dallas, **Dr. Philip O. B. Montgomery, Jr.**, has been named special assistant to the deputy chancellor of the UT system; and his first assignment will be to assist in the planning and development of the new UT Medical School at Houston. He will also continue to serve in his position at Southwestern.

Dr. Thomas E. Williams, Jr., assistant professor of pediatrics and pathology and director of the section of pediatric hematology-oncology at The University of Texas Medical School at San Antonio, has been awarded a second-year advanced clinical fellowship in the amount of $8,000 for the period July 1, 1970, to June 30, 1971, by the board of directors of the American Cancer Society.

The Texas Society of Pathologists recently elected the following officers for 1970: **Dr. Jack P. Abbott,** Houston, president; **Dr. Jack L. Smith,** Beaumont, president-elect and ASCP councilor; **Dr. Gwyn H. Harwell,** Longview, vice-president; and **Dr. James C. Stinson,** Temple, secretary-treasurer.

New president of The University of Texas Southwestern Medical School at Dallas Alumni Association is **Dr. Elgin W. Ware, Jr.**, of Dallas.

Director of the Regional Medical Programs Service for the US Department of Health, Education, and Welfare in Washington, D.C., **Dr. Stanley W. Olson,** will become the second president of Southwest Foundation for Research and Education in San Antonio, effective June 1.

Dr. Russell L. Deter of El Paso has been appointed a member of the Texas Council of the National Council on Crime and Delinquency.

The following Texas physicians were recently granted fellowships in the American College of Cardiology: **Dr. Maurice Adams, Dr. Ben F. Mitchel, Dr. Harold C. Urschel,** and **Dr. William Shapiro,** all of Dallas; **Dr. James K. Alexander, Dr. David K. Brooks, Dr. Faber F. McMullen, Jr., Dr. George P. Noon,** and **Dr. Efrain Garcia-Gonzalez,** all of Houston; **Dr. Richard W. Ernst** of Fort Worth; **Dr. Myron B. Zinn, Dr. Raymond G. Armstrong, Dr. C. William Hall,** and **Dr. Colette M. Kohler,** all of San Antonio; **Dr. Luis A. Leon-Sotomayor** and **Dr. Quang X. Nghiem,** both of Galveston; and **Dr. Kenwyn G. Nelson** of El Paso.

THE KILLGORE CHILDREN'S PSYCHIATRIC CENTER AND HOSPITAL, INC.

Amarillo, Texas

DESIGNED FOR CHILDREN UNDER 18 WITH MENTAL AND EMOTIONAL DISORDERS

Inpatient, Outpatient, Partial Hospitalization Services

Diagnostic and treatment programs based on a dynamic approach

All forms of therapy except ECT

Rehabilitation in the form of special learning units available if case requires

Located in the sunny, dry and cool atmosphere of the Northern Texas Panhandle

Licensed by the Texas Department of Mental Health-Mental Retardation

Member of the Amarillo Regional Mental Health-Mental Retardation Center

Associated with several universities for graduate programs in mental health

For Information: Address your communications to —

Jaime Quintanilla, M.D., F.A.P.A., Medical Director

Killgore Children's Psychiatric Center and Hospital, Inc.

1200 Wallace Boulevard, Amarillo, Texas 79106

Ophthalmological Information, Lay and Professional Films and Tapes Available

Symposium on surgery of the ocular adnexa, Transactions of the New Orleans Academy of Ophthalmology, 245 pp., illus., St. Louis, The C. V. Mosby Co., 1966, $16.

A COMPILATION of the lectures from the symposium on surgery of the ocular adnexa given at the 14th Annual Session of the New Orleans Academy of Ophthalmology, Feb. 14-19, 1965, this book is written by outstanding ophthalmologists in the fields of their various subjects. The authors discuss the pathogenesis and diagnosis of each condition included and describe the treatment that they have found most satisfactory by their personal experience. Differences of opinion are brought out in the Round Table Discussions included in the back of the book.

MEMORIAL LIBRARY STAFF.

The **Practice of Refraction,** ed. 8, Stewart Duke-Elder, 329 pp., illus., St. Louis, The C. V. Mosby Co., 1969, $11.75.

ACCORDING TO the preface, "The purpose of this book is to present in a manner suitable for the student and the practitioner the essential principles of the theory and practice of the correction of defects in muscles. A simple and essentially nonmathematical form of presentation has been adopted, wherein all that is necessary for the clinical routine of refraction is described and explained without burdening the reader with extensive mathematical proof. The book is thus clinical rather than theoretical, and its object is essentially practical, and while theoretical matters are dealt with sufficiently in words rather than formulae, no attempt has been made to enter into the mathematical foundations of the subject."

The subject of refraction is covered well in this book, which includes a section that might be termed "refraction pearls." Details about types of ophthalmic lenses are covered better than in previous editions, but any prescribing refractionist should have more practical knowledge about the lenses available today than is contained herein. References for such study are given in the preface. A section on clinical methods at the end of the book seems inadequate. A reader with no previous experience in the field would have difficulty in learning refraction unless he were guided through the book by an instructor and could hear supplemental lectures on practical points.

Although this edition is an improvement over former ones, it seems that more practical books on refraction are yet to be written. However, the book is one of the best basic texts now available and should be included in every ophthalmologist's library.

JAMES L. MIMS, JR., M.D.,
San Antonio.

Library Offers Loan Of New Films, Tapes

Several new films and tapes are now available on loan from the Texas Medical Association Memorial Library.

"A Storm—A Strife" is a 16mm sound-color film, 28 minutes long, which emphasizes the importance of cooperation between the physician and the clergyman in order to serve best the "whole" person. It is recommended for use in medical society programming but may also be used for civic and church groups.

Emphasizing the role of the team physician in helping to minimize athletic injuries is "The Team Physician." Bud Wilkinson appears as the narrator in this 16 mm sound-color film which also runs for 28 minutes.

A 15-minute-long sound-color film entitled "What Time Is It Now?" is aimed at today's youth and shows the results of drinking without mature judgment. It examines the various reasons why young people begin to drink.

Two new professional films include "F. A. Detection of Enteropathogenic *Escherichia Coli,*" a 16mm sound-color film running 14 minutes, and "Cineangiographic Diagnosis of Coronary Artery Disease," a black and white film lasting 28 minutes. The first film encourages the use of the fluorescent antibody (F.A.) technique as a rapid means of detecting enteropathogenic *Escherichia coli* and to emphasize the danger of infantile diarrhea. The second film, edited by Dr. F. Mason Jones, Jr., describes the common forms of coronary artery diseases, using cinefluorography.

Audio-Digest tapes on the following subjects are available on 5¼-inch reels: anesthesiology, internal medicine, general practice, obstetrics and gynecology, ophthalmology, otolaryngology, pediatrics, and surgery.

Cassette tapes on a few subjects may also be obtained from Memorial Library. Available topics include AMA News Journal, cardiology, general practice, and internal medicine.

A new film catalog of the Memorial Library, including lay and professional films, has been available since April 1, 1970. Write to Memorial Library, Texas Medical Association, 1801 N. Lamar Blvd., Austin 78701, to request a copy of the catalog.

IN THE TIME OF YOUR LIFE . . .

LIVE

Editor's Note: "In the time of your life . . . LIVE" are the first words from the prologue of William Saroyan's play, *The Time of Your Life,* one of several directed by Dr. Pete Palasota in Abilene. And according to Dr. Palasota's wife, Venie, they have special meaning when applied to her husband. Perhaps the following account of Dr. Palasota's varied activities in music and the theater, written from the unique viewpoint of his wife, will explain why.

By MRS. PETE PALASOTA

As he rehearses with the Abilene Philharmonic Orchestra, Dr. Palasota tries out a special reed he made for his oboe.

Dr. Pete Palasota lives every moment to the hilt! His philosophy—creating, doing—is nourished by giving of himself and of his many talents to his profession, to his community, and to his fellow man.

A fellow of the American Psychiatric Association and president of its Texas District Branch, Dr. Palasota has a busy practice in Abilene and holds gubernatorial citations for his work in mental health and mental retardation and for his work with the blind.

Although Texas physicians may have seen Pete's name as a member of state advisory boards or as chairman or member of TMA committees, they probably do not know that he is also president of the Abilene Philharmonic Association this season and has played first chair oboe and English horn in the Abilene orchestra for the past 12 years. His contribution to the orchestra results from a true musician's knowledge of music and control of breath and from a special reed which he fashions himself.

Music has long been part of Pete's life. His studies began on the violin at the age of seven. By the time he reached junior high, he was playing oboe in the Houston Symphony orchestra under Conductor Ernst Hoffman and was offered a scholarship to Eastman School of Music. He attended Sam Houston State College on a music scholarship but earned his degree in chemistry and math. During medical school and residency in Galveston he helped finance his education by playing drums, bass fiddle, or whatever instrument was needed for local bands; and he still enjoys sitting in with a jazz band or college group. Within only one week during last December, he conducted symphony rehearsal in the absence of Conductor George Yaeger, rehearsed one night and performed one night with a Hardin Simmons University group, then rehearsed and played in Handel's *Messiah,* which was presented at First Baptist Church in Abilene.

But music and medicine have not absorbed all of Dr. Palasota's creative ability. Pete has served on the board of the Abilene Community Theater for several years and has been vice-president in charge of production for the past four years. His interest in drama has not been limited to administrative work either. He has acted, directed, and even written for ACT. As "Big Daddy" in *Cat on a Hot Tin Roof,* he was chosen Actor of the Year. He sang and danced "Albert" in *Bye Bye Birdie* and "Marryin' Sam" in *Li'l Abner.* Fired by his love of music and theater, he collaborated with Dr. Macon Sumerlin to write, then direct, a musical comedy about the Ranger oil strike. *Derrick Town,* complete with a realistic 1919 wooden oil rig plus a gusher for a finale, stirred up such lively interest in West Texas that the show "hit the road," playing in several area cities.

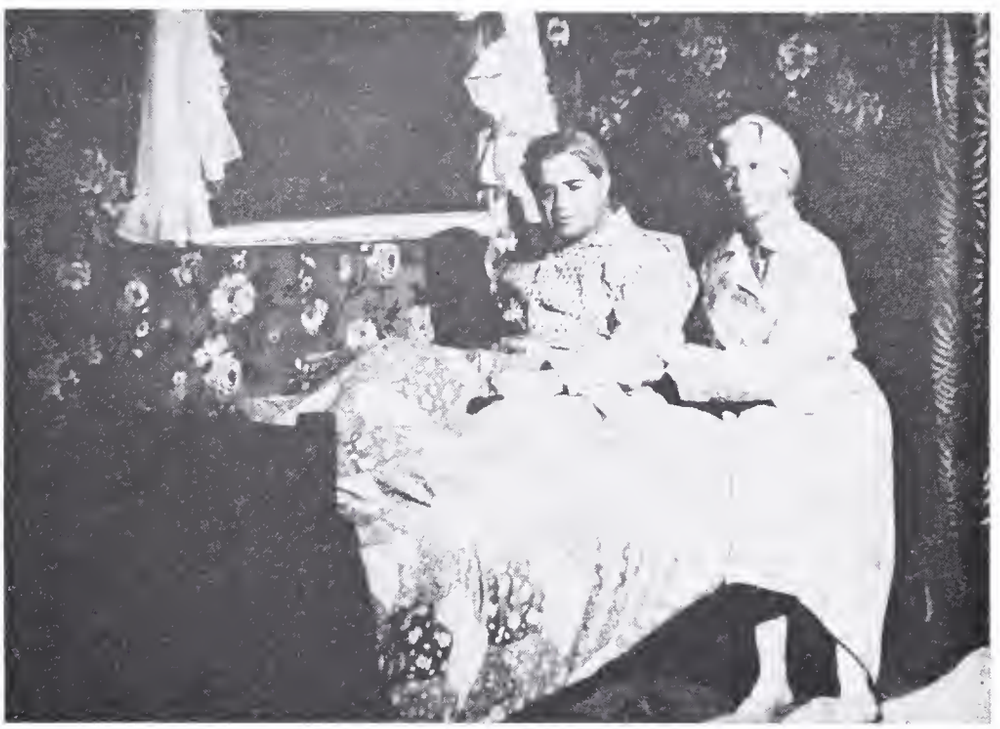
Doctor-musician Palasota became an actor when ACT, like most community theaters, needed money and decided to stage an old fashioned "meller-dramer," a surefire crowd pleaser. The 1959 production of *Dirty Work at the Crossroads,* with Pete as the villain, was a hit. We not only sold $35 worth of donated peanuts, but also paid off the mortgage on the theater building; and, despite his nightly pelting with peanuts, Pete loved every minute of it. When teased by his colleagues, he quipped, "Just think of all the hostility my patients were able to release!"

Pete's acting credits since then are wide in range. He was a hilarious "Brock," the rough gangster in *Born Yesterday,* although he almost choked on the big cigar which the script demanded. Having played "Willy Stark," wiley southern politician, in Robert Penn Warren's *All the King's Men,* he has also performed as the comic Jewish father in *Come Blow Your Horn* and as the crusty "Animal" in *Stalag 17.*

Yet, "Willy Loman" in Arthur Miller's *Death of a Salesman* was his most challenging role. What a show! A professional director, an experienced cast, and the insight Pete's psychiatric knowledge afforded (and his talent) produced a strong and moving interpretation. Each night as the final lights dimmed, then faded completely, the audience sat quietly in the darkened theater. Silence, broken only by a few throats being cleared, hung for one—two—three minutes; then applause burst forth and climaxed with the crowning tribute of standing ovation. Although Abilene audiences seem to prefer light comedy, *Death* was held over.

In 1963 ACT produced it first musical, *The Fantasticks.* Pete directed this one but stepped in one week before opening to portray the girl's father. Later performed by our cast in four

For his portrayal of "Big Daddy" in *Cat on a Hot Tin Roof*, Dr. Palasota was chosen Actor of the Year in Abilene.



Dr. and Mrs. Palasota, cast as Willy and Linda Loman in *Death of a Salesman*, play their "most moving and challenging roles."

other cities, this musical whetted Pete's appetite for musical comedy.

"Sit down, you're rockin' th' boat." On opening night of *Guys and Dolls* in 1965, a strong tenor rang out these final words of a song; and the audience interrupted the show with its applause. During the three-week run of the musical, the show was stopped at this point every night until Pete, as "Nicely-Nicely," finally acknowledged his performance with a slight bow, a broad grin, and a twinkle in his eye.

Now, to those who regard theater as a "fun thing"—you're right. It is fun and rewarding; however, like everything of merit, it's hard work as well. Most community theater groups rehearse about a hundred hours on stage, not to mention the time spent at home learning lines, studying the play, etc., before each opening. The last week is a real back-breaker; but on opening night, if the performance was "right," there is a special exhilaration. The finger of life has touched, punched, probed, or tickled (depending on the play) both performer and spectator. The actor sighs, "It's worth the work." And it is.

Pete has long been an active advocate of theater, music, and art for children. Each year he plays five or six youth concerts, which are cosponsored by the Junior League of Abilene and the Philharmonic Association. Another joint effort—this time, ACT and Junior League—produced Abilene Experimental Children's Theater. The first production in 1968 opened in a city-donated building. The musical version of *Little Red Riding Hood*, with adults performing the roles, played to thousands of children in nine performances. Pete created a ferociously funny "Big Bad Wolf" and doubled as the heroic wood cutter.

For teen-agers and college students home for the summer, ACT's annual summer musical was created. For the past three years, vacation time has been spent in rehearsal with 50 or 60 youngsters. The generation gap has never interfered with the admiration and respect which these young adults show "Dr. Pete."

"What does Pete do in his *spare* time?" has been a long-standing laugh-line of friends during intermission of a concert or in the lobby at ACT productions. Well, I can tell you. He studies, reads, teaches oboe, composes and arranges music, makes oboe reeds, occasionally practices oboe, plays golf, and, miraculously, has time for patients, friends, and family.

During the years we've lived in Abilene, Pete has also continued to study music. He has manufactured time to study piano theory, composition, and voice and is presently furthering his training in conducting with George Yaeger. He also squeezes in an hour weekly to teach oboe to two youngsters—not ours. Our "children," Tom and Karen, are both grown and happily married; and they share our interest in music and drama. In fact, a few times we were all on stage together.

Pete reads at home for research and relaxation. His music room, all of our bookshelves, and our bedroom are over-run with medical journals and periodicals; books and plays by literary giants and by promising new authors; musical scores; and volumes of history, biography, and poetry. Here I must confess that some of the clutter is mine; for we both love music and have shared leads in many plays, and we both write. Pete composes musical comedy and is writing one on Napoleon, while simultaneously researching Pancho Villa, Peter the Hermit, Garibaldi, plus a medical musical.

My husband's active credo—create, do, contribute—and his boundless energy and diversity set a sizzling tempo, so it's a good thing that I do share all of his interests. It's the only way I can see him!

PAMPHLETS

According to a new leaflet issued by The Arthritis Foundation, aspirin, the "best single medicine for most people with arthritis," is widely misunderstood, misused, and misrepresented. Entitled *The Truth about Aspirin for Arthritis,* the publication is an attempt to set the record straight for arthritis sufferers and their families, according to foundation medical director Dr. William E. Reynolds. What aspirin can and cannot do for arthritis, how much to take and how often, what side effects can develop, what brands to choose, and how advertising may be misleading are among the questions discussed. Copies of the pamphlet may be obtained at no cost from local Arthritis Foundation chapters or from The Arthritis Foundation, Box 2525, New York, New York 10001.

Directors of health and welfare agencies hold the greatest responsibility for program innovation in their agencies; and the pamphlet *Program Innovations in Community Agencies* outlines and explains the characteristics of such directors. The pamphlet was published by the Hogg Foundation for Mental Health, which has headquarters at The University of Texas at Austin.

Of nine conditions found to be necessary for innovative planning by Dr. Howard Kaplan of Baylor College of Medicine in a study of 42 community agencies in the Harris County area, five relate directly to the director. A director's professional training, flexible personality, full acceptance of responsibility, awareness of alternative programs, and discretionary judgment all have an important effect on the agency's planning, according to Dr. Kaplan, associate professor of sociology and head of the sociological research section in the department of psychiatry at Baylor.

Single copies of the pamphlet are available on request from the Hogg Foundation, The University of Texas, University Station, Austin 78712.

The American Medical Association has released a pamphlet of value to medical societies in their public relations programs. *The American Medical Association . . . Guardian of the Nation's Health Since 1847* reviews the AMA's scientific meetings, publications, library and record services, medical student and school scholarships and grants, ethics, drugs, mental health, health manpower recruitment activities, Volunteer Physicians for Viet Nam, the Viet Nam Medical School Project, the organization of the new department of health care, proposing and drafting legislative bills, and the innovative proposals of the AMA Committee on Health Care of the Poor. Other areas covered include alcoholism and drug dependence, health care costs, malnutrition, pollution, sex education, and voluntary health insurance coverage. Copies are available without cost from Program Services Department, AMA, 535 N. Dearborn St., Chicago 60610.

An additional 70,000 medical technologists will be needed, according to present estimates, in the next five years for work in private, public health, or hospital laboratories and in blood banks, pharmaceutical houses, and doctors' offices. What they actually do, the training they need, and what opportunities are open are discussed in *Wanted: Medical Technologists* by Elizabeth Ogg. The publication summarizes the activities of a community hospital laboratory, a private laboratory, a public health laboratory, and an industrial laboratory. It also discusses opportunities for the medical technologist in teaching and in research and gives specific qualifications necessary for such positions. This new Public Affairs pamphlet is available for 25 cents from the Public Affairs Committee, 381 Park Ave. S, New York 10016.

Recent Deaths

Dr. E. D. Sprott, Jr.

Dr. Edward Daniel Sprott, Jr., 61, died Feb. 11, 1970, at his home in Beaumont. He was a general practitioner and was known for his leadership in civic affairs.

Past president and lifetime member of the National Association for the Advancement of Colored People, Dr. Sprott owned and operated the Sprott Clinic in association with his brother, Dr. Maxie C. Sprott. He set a precedent in 1960 when he became the first Negro to seek a City Council seat in Beaumont, and in 1967 he sought a place on the Beaumont school board. He was a Mason and a member of Jefferson County Medical Society, Texas Medical Association, American Medical Association, Association of Military Surgeons of the US, Phi Beta Sigma scholarship fraternity, St. James United Methodist Church, and Jefferson County Democrats Club.

DR. SPROTT

Born Nov. 12, 1908, in Beaumont, Dr. Sprott was the son of E. D. and Myrtle Mills Sprott. He was graduated from Wiley College in Marshall, Tex., in 1929 with a bachelor of science degree; and he received his MD degree in 1935 from Meharry Medical College in Nashville, Tenn. He interned at George W. Hubbard Hospital of the Meharry Medical College in Nashville in 1935-1936; and he did postgraduate work in venereal disease control at Howard University College of Medicine in Washington, D.C., and at the University of Pennsylvania Medical School at Philadelphia. In 1936 he was commissioned a first lieutenant in the US Army Medical Corps Reserve.

Dr. Sprott is survived by his wife, the former Ernestine Eileen Clark, of Beaumont; two sons, Edward D. Sprott, III, and Thomas W. Sprott, both of Beaumont; two daughters, Mrs. Nancy Jo Phillips of San Francisco, Calif., and Mrs. Antoinette Alexander of Tulsa, Okla.; four sisters, Mrs. Mildred White and Mrs. Myrtle Deplanter, both of Beaumont, Mrs. Waurine Anthony of Chicago, and Mrs. Lorraine Whittier of San Antonio; two brothers, Dr. Maxie C. Sprott and Oliver W. Sprott, both of Beaumont; and five grandchildren.

Dr. F. A. McKee, Jr.

Dr. France Austin McKee, Jr., 44, was fatally wounded March 6, 1970, during what authorities believe may have been an attempted burglary at his home in Fort Worth. He was found shot in the chest.

The son of France A. and Marie Antonio McKee, Dr. McKee was born Feb. 27, 1926, in Fort Worth. He was graduated from Texas Christian University in 1949 with a BA degree; and he

DR. McKEE

received his MD degree in 1953 from The University of Texas Southwestern Medical School at Dallas. He interned at St. Joseph Hospital in Fort Worth in 1953-1954, and he served a residency in surgery at Veterans Administration Hospital in Dallas from 1954 to 1958. From 1944 to 1946 he served in the US Army Air Force in the South Pacific.

Certified by the American Board of Surgery and a fellow of the American College of Surgeons, Dr. McKee was chief of surgery at St. Joseph Hospital. He was a member of Theta Kappa Psi medical fraternity, Tarrant County Medical Society, Texas Medical Association, and American Medical Association; and he belonged to St. Christopher Episcopal Church.

Dr. McKee is survived by two daughters, Toni and Kimi McKee; his mother; and a sister, Mrs. Clint Humphrys, all of Fort Worth.

Dr. B. E. Park

A past president of the Dallas County Medical Society and councilor of the 14th District of the Texas Medical Association, Dr. Barton E. Park died Feb. 27, 1970. He was 64.

Dr. Park had also served as vice-president of TMA in 1959-1960 and had been a delegate to the Association for a number of years. He was a member of American Medical Association, American College of Surgeons, International College of Surgeons, Southwestern Surgical Congress, Dallas Society of General Surgeons, and Dallas Southern Clinical Society. He was chief of surgery at Methodist Hospital of Dallas for many years and had served as president of the hospital's medical staff. A former member of the Oak Cliff Kiwanis Club, he was also a long time member of Kessler Park United Methodist Church and was a 32nd degree Mason and a Shriner.

Born Sept. 12, 1905, in Clarksville, Tex., Dr. Park was the son of D. D. and Margie Alice Payne Park. He was graduated from Baylor University in Waco with an AB degree; and he received his MD degree in 1929 from Baylor College of Medicine, then located in Dallas. He interned and served a residency at Methodist Hospital of Dallas and began private practice in Dallas in 1931, specializing in general surgery. During World War II he served as a lieutenant colonel in the US Army Medical Corps.

Surviving Dr. Park are his wife of Dallas, the former Helen Hobson; a daughter, Mrs. K. D. Holliman of Cleburne; a sister, Mrs. Howard E. Taylor of Garland; and a granddaughter.

Dr. R. W. Payne

Dr. Ross William Payne, 65, died Feb. 24, 1970, at his home in Honey Grove, Tex., following a year's illness. He was a general practitioner.

Born Sept. 11, 1904, in Paris, Tex., Dr. Payne was the son of the late Dr. George W. and Addie Hastings Payne. He attended The University of Texas at Austin and was graduated from Baylor College of Medicine, then located in Dallas, in 1933 with an MD degree. He interned at St. Joseph Hospital in Fort Worth in 1933-1934 and practiced medicine in Roxton, Tex., in 1935-1936; in Clarksville, Tex., from 1936 to 1964; and in Marshall, Tex., in 1964-1965, before moving to Honey Grove in 1965.

A charter member of the Clarksville Kiwanis Club, Dr. Payne served 10 years on the Clarksville school board and was its president for four years. He was examining physician for the Clarksville draft board and was instrumental in the organization of that city's Industrial Foundation. For 26 years he served as a Texas and Pacific Railroad local surgeon and as house surgeon for one year. He was a member of the First Christian Church in Honey Grove, the Texas Medical Association, and the American Medical Association; and he was a former president of the Red River County Medical Society. He was listed in Who's Who in the South and Southwest from 1961 through 1963.

Surviving Dr. Payne are his wife, the former Jewel Thomas, of Honey Grove; two sons, Richard W. Payne of Houston and John Ross Payne of Austin; one daughter, Mrs. Mary Burris of Honey Grove; two brothers, Hubert Payne of Longview and George Wilburn Payne of Levelland; two sisters, Mrs. J. C. Beville of Clarksville and Mrs. R. H. Casstevens of Fort Worth; and six grandchildren.

Dr. E. L. Loftis

Dallas dermatologist for many years Dr. Earl L. Loftis died Feb. 2, 1970, in Dallas. He was 70.

Born Oct. 14, 1899, in Mena, Ark., Dr. Loftis was the son of Charles L. and Brook Wimberly Loftis. He was graduated from Clarendon Junior College in Clarendon, Tex.; attended The University of Texas at Austin; and received his MD degree in 1925 from Baylor College of Medicine, then located in Dallas. He served internship and residency at Parkland Memorial Hospital in Dallas from 1925 to 1927, and he began his private practice in Dallas in 1927. He did postgraduate study in dermatology from 1937 to 1939 at Columbia University College of Physicians and Surgeons, Bellevue Hospital Center, and New York Post-Graduate Medical School and Hospital, all in New York City. From 1942 to 1945 he served in the US Navy and attained the rank of commander.

A member of Highland Park United Methodist Church in Dallas, Dr. Loftis belonged to Dallas County Medical Society, Texas Medical Association, American Medical Association, American Academy of Dermatology, Inc., Dallas Southern Clinical Society, and Dallas

DR. PARK

DR. PAYNE

DR. LOFTIS

Dermatological Society and was a past president of Texas Dermatological Society. He was certified by the American Board of Dermatology in 1946. He was also a member of Phi Chi fraternity and of the Lancers Club and the Knife and Fork Club in Dallas.

Dr. Loftis is survived by his wife, the former Olive Martin Webb; a daughter, Mrs. Robert B. Wightman of Houston; a brother, Ray Loftis of Paducah, Tex.; three sisters, Mrs. Marie Burton and Mrs. Ike Myers, both of Houston, and Mrs. Pete Kinney of Childress; and five grandchildren.

Dr. E. Mendenhall

Dr. Elliott Mendenhall of Dallas, Chairman Emeritus of the Board of Trustees of Texas Medical Association, died Feb. 3, 1970. He had served nine and a half years as a member of the Board of Trustees.

A member and past president of the Dallas County Medical Society, Dallas Southern Clinical Society, Texas Tuberculosis Association, Texas chapter of the American College of Chest Physicians, and Texas chapter of the American Thoracic Society, Dr. Mendenhall was also a member of the American Medical Association, the Dallas Academy of Internal Medicine, and the executive committee of the National Tuberculosis Association. He was a past chairman of the TMA Committee on Tuberculosis and had served on various councils and other committees.

An Army veteran of World War I, Dr. Mendenhall was a member and deacon of Highland Baptist Church and was former chairman of deacons. He established and taught the church's couples' class and served as chairman of the long-range planning committee. He was a member of the Dallas Baptist College board of trustees and chairman of its Christian education committee, and the school's Science Lecture Hall was named in his honor. He was also past president of the Dallas YMCA, Dallas YMCA Men's Club, and Dallas Kiwanis Club. He was a member of the Dallas Historical Society and served on the Community Guidance Service board of directors. In 1930 he received the Junior Chamber of Commerce award for "most noteworthy service to the city."

Born in Plano, Tex., Dr. Mendenhall was the son of Dr. James N. and Effie Routh Mendenhall. He received his AB degree from Baylor University in Waco and attended Baylor College of Medicine, then located in Dallas. He was graduated with an MD degree from Jefferson Medical College of Philadelphia. He interned at Baylor Hospital, now Baylor University Medical Center; and he became the first director of Dallas public school health. Early in his practice he did postgraduate work at the University of Oklahoma School of Medicine at Oklahoma City and at Jefferson Medical College of Philadelphia. He began specializing in pulmonary diseases, and he served a residency at the McKnight State Tuberculosis Hospital from 1931 to 1933. He had been a member of the staffs at Baylor University Medical Center, Parkland Memorial Hospital, and Methodist Hospital of Dallas; former chief of staff at Woodlawn Hospital; and instructor in tuberculosis at St. Paul Hospital School of Nursing. At the time of his death he was clinical associate professor of internal medicine at The University of Texas Southwestern Medical School at Dallas.

Survivors include his wife, the former Ruth Collins; a son, Dr. Elliott Mendenhall, Jr., of Abilene; a daughter, Mrs. John W. O'Banion of Snyder; two sisters, Miss Pauline Mendenhall and Miss Bertha Mendenhall; and two brothers, J. Stanley Mendenhall and James N. Mendenhall, all of Dallas.

Memorials may be given to the Elliott Mendenhall Memorial Premedical Scholarship Fund, Dallas Baptist College.

DR. MENDENHALL

Dr. J. B. Divine

Graham, Tex., general practitioner, Dr. James Blaine Divine, 61, died Feb. 5, 1970, in a Graham hospital after a long illness.

The son of Mike and Maria Ogilvy Divine, Dr. Divine was born Dec. 21, 1908, in Dadeville, Mo. He was graduated from the University of California at Berkeley in 1935 with a BA degree, and he received his MD degree in 1939 from the University of California School of Medicine in San Francisco. He interned at Emanuel Hospital in Portland, Ore., from 1938 to 1939; and he served a residency in medicine and surgery at that hospital in 1939-1940. He had practiced in Graham for more than 25 years.

A member of American Medical Association, Texas Medical Association, and Wichita-Young-Archer Counties Medical Society. Dr. Divine was a former secretary of what used to be the Young-Jack-Archer Counties Medical Society.

Surviving Dr. Divine are his wife, the former Mildred Patty; a daughter, Mrs. Doug Dowdle of Graham; two sons, Jimmy, serving in the US Navy in Hawaii, and Mike, a student at The University of Texas at Arlington; his mother, Mrs. M. Divine; two sisters, Mrs. J. M. Graham and Mrs. W. B. Fultz, all of Graham; and a grandson.

Dr. P. C. Murphey

Dr. Paul C. Murphey, 80, long time Waco surgeon, died Jan. 31, 1970, at a Waco hospital. He had suffered a heart attack.

The son of James Lee and Annie Coleman Murphey, Dr. Murphey was born Dec. 4, 1889, in Athens, Tex. He attended Baylor University in Waco and was graduated from Baylor College of Medicine, then located in Dallas, in 1911 with an MD degree. He interned at Providence Hospital in Waco and practiced medicine briefly in Hubbard, Tex. He later did postgraduate study in Chicago; Cleveland, Ohio; Rochester, Minn.; St. Louis; Kansas City, Mo.; and New Orleans. Except for serving two years in the US Army Medical Corps during World War I, he had practiced in Waco since 1912.

Dr. Murphey twice had served as president of the McLennan County Medical Society and also had served as its secretary. He was elected to honorary membership in Texas Medical Association in 1967; and he belonged to American Medical Association, Southern Medical Association, and Texas Surgical Society. He was a former

DR. MURPHEY

chief of staff at Providence Hospital and was a past president of the medical staffs at Providence and Hillcrest Baptist hospitals. He taught in the Providence Hospital School of Nursing for 15 years. A Mason and a school trustee from 1934 to 1940, he was a member of Columbus Avenue Baptist Church and of the Waco Rotary Club for 26 years. He was active in ranching and in raising purebred Hereford cattle and was a member of American Hereford Association, Texas State Hereford Association, and Heart of Texas Hereford Association.

Surviving Dr. Murphey are his wife, the former Cora Tilley, of Waco; a son, Paul C. Murphey, Jr., of Meridian, Tex.; a daughter, Mrs. Joe W. Kendrick of Waco; a sister, Mrs. W. C. Torrence of Waco; five grandchildren; and two great-grandchildren.

Dr. J. L. Otto

Dr. John L. Otto, 59, Warmoth Professor in the department of neurology and psychiatry at The University of Texas Medical Branch, died Jan. 23, 1970, in a Galveston hospital. At the time of his death, he was president of the UT Medical Branch Alumni Association, a delegate from Texas to the American Medical Association, and a member of the AMA Council on Mental Health.

Born in El Paso on Nov. 23, 1910, Dr. Otto was the son of John Leroy and Esther May Moody Otto. He received his premedical training at Texas College of Mines, now The University of Texas at El Paso, and was graduated from the UT Medical Branch at Galveston in 1937 with an MD degree. After serving an internship at St. Vincent Charity Hospital in Cleveland, Ohio, from 1937 to 1938, he returned to Galveston's John Sealy Hospital as the Medical Branch's second neuropsychiatry resident. He later did postgraduate study at the Columbia University College of Physicians and Surgeons at New York City. In 1941 he joined the faculty at the UT Medical Branch and was appointed Warmoth Professor of Neurology in 1966. He was also vice-chairman of the school's department of neurology and psychiatry and was consulting psychiatrist for various hospitals and companies.

DR. OTTO

Dr. Otto had served as vice-councilor from the Eighth District to the Texas Medical Association, president of the Texas District Branch of the American Psychiatric Association, secretary and president of the Texas Neuropsychiatric Association, president of the Western Institute of Epilepsy, president of the Galveston County Medical Society, councilor of Alpha Nu chapter of Phi Rho Sigma fraternity, and director and vice-president of the eighth district of the Postgraduate Medical Assembly of South Texas. The author of numerous scientific articles was also chief of staff of John Sealy Hospital at Galveston and member of Central Neuropsychiatric Association, American Psychiatric Association, American Academy of Neurology, Southern Medical Association, and American League Against Epilepsy. He belonged to Trinity Episcopal Church in Galveston.

Surviving Dr. Otto are his wife, the former Rose Lee McDowell; his mother, Mrs. May Clawson of El Paso; a brother, Elmo Ridley of Escalon, Calif.; and a sister, Mrs. Ella Ray Hedrick of El Paso.

Dr. W. A. Goodrich

Dr. William Ashly Goodrich, 73, long time Huntsville physician, died Jan. 26, 1970, in Huntsville. He suffered a heart attack.

The son of Hayes J. and Harriet Ann Eastwood Goodrich, Dr. Goodrich was born Oct. 2, 1896, in Davidson County, Tenn. He received his MD degree in 1924 from Vanderbilt University School of Medicine in Nashville, Tenn., and then moved to Pinedale, Tex., where he was physician for Texas Longleaf Lumber Co. He also maintained a part-time office in Oakhurst in connection with the lumber company before moving to Huntsville. He was physician for Boettcher Lumber Co. in Huntsville until the firm closed its plant last year.

A Shriner and a member of Wesley Memorial Methodist Church in Huntsville, Dr. Goodrich was a former president and secretary of Walker-Madison-Trinity Counties Medical Society. He also belonged to Texas Medical Association and American Medical Association.

Survivors include his wife, the former Ruth Allen; a son, William Ashly Goodrich, Jr., of Baytown; a daughter, Mrs. John S. Eager of Tulsa, Okla.; and two brothers, Enoch J. Goodrich of Nashville, Tenn., and James Houston Goodrich of Donelson, Tenn.

Dr. C. J. Parnell, Jr.

Dr. Claude John Parnell, Jr., Kingsville physician, died Jan. 18, 1970, in a Kleberg County hospital after a brief illness. He was 39.

Born in Johnson City, Tenn., on March 1, 1930, Dr. Parnell was the son of Claude J. and Mary Jones Parnell. He grew up in Corpus Christi and attended Del Mar College there. He was graduated from The University of Texas at Austin in 1952 with a BA degree, and he received his MD degree in 1956 from the UT Medical Branch at Galveston. He interned at Jefferson Davis Hospital in Houston in 1956-1957, and he served a residency in internal medicine at Hermann Hospital in Houston in 1957-1958. Before moving to Kingsville in 1959 he had practiced medicine for nine months in Sinton, Tex.

Dr. Parnell was a member of Kleberg-Kenedy Counties Medical Society, Texas Medical Association, American Medical Association, American Academy of General Practice, and Alpha Kappa Kappa medical fraternity. He was a Mason and a member of Knights Templar of Texas; and he belonged to the Presbyterian Church.

Survivors include his wife, the former Jane Salter; his father, C. J. Parnell of Corpus Christi; and a brother, Joseph W. Parnell of Dallas.

Dr. L. R. Gaddis

Dr. Leo Rees Gaddis, El Paso general practitioner, died Jan. 15, 1970, in El Paso as a result of cerebral thrombosis. He was 86.

The son of William and Emma Waltmire Gaddis, Dr. Gaddis was born Feb. 4, 1883, in Tremont, Ill. He attended

DR. GADDIS

Miami University at Oxford, Ohio; and was graduated from Western Reserve University School of Medicine at Cleveland, Ohio, in 1912 with an MD degree. He interned at Huron Road Hospital in Cleveland. He later practiced medicine there and in Michigan and New Mexico before moving to El Paso in 1941, where he practiced until his retirement in 1967.

A member of El Paso County Medical Society and American Medical Association, Dr. Gaddis was elected to inactive membership in Texas Medical Association in 1968. He also belonged to American Association of Railway Surgeons and was a member of Beta Theta Pi social fraternity.

Dr. Gaddis was preceded in death by his wife, the former Flora Burnham Miller. He is survived by his sons, Dr. William R. Gaddis of El Paso and Burnham Miller of Dallas; a daughter, Doris Roberts of San Francisco, Calif.; and a brother, Byron Gaddis of Kent, Ohio.

Dr. W. B. Adams

Dr. Walter B. Adams, 82, a resident of Wichita Falls for the past 42 years and of Burkburnett for 15 years, died Dec. 22, 1969, in a Wichita Falls hospital. He was a founder of the Adams Clinic Hospital in Wichita Falls, which he operated with his son, Dr. Walter B. Adams, Jr.

The son of John L. and Nancy Collins Adams, Dr. Adams was born Jan. 12, 1887, in Decatur, Tex. He attended Southwestern State College in Weatherford, Okla.; Epworth University in Oklahoma City; and the University of the South in Sewanee, Tenn. He was graduated from the University of Oklahoma School of Medicine at Oklahoma City with an MD degree in 1911. From 1911 to 1913 he interned at St. Anthony Hospital in Oklahoma City. He attended the Chicago, Eye, Ear, Nose, and Throat Hospital from 1925 to 1926 for postgraduate work and became an eye, ear, nose, and throat specialist after 20 years of general practice. He moved to Wichita Falls in 1927 from Burkburnett, where he had practiced surgery and general medicine. In the early 1920's he had served as mayor of Burkburnett. From 1940 to 1946 he served in the Texas State Guard.

DR. ADAMS

President of Texas Air-Medics Association in 1964-1965, Dr. Adams was a member of Wichita-Young-Archer Counties Medical Society, Texas Medical Association, and American Medical Association. He served on the board of directors of Wichita General Hospital and belonged to the Episcopal Church. He was a member of Burkburnett Masonic Lodge and the Maskat Temple Shrine in Wichita Falls, where he recently received recognition as a 50-year member. He was also a 32nd degree Scottish Rite Mason and a member of the Dallas Consistory. He was a stockholder in Fowler Oil Co., which ushered in the Burkburnett oil boom; and he was responsible for building the first ice plant and the first sewer system in Burkburnett.

Surviving Dr. Adams are his wife, the former Hallee V. Mansfield; his son, Dr. Walter B. Adams, Jr., of Wichita Falls; five sisters, Mrs. Ida Soapes of Wichita Falls, Mrs. Gertrude Mitchell of Throckmorton, Tex., Mrs. Howard Cook of Fort Worth, Mrs. James B. Davis of Foss, Okla., and Mrs. Betty Colson of Nampa, Idaho.

Dr. J. E. Tatum

President of the Denton County Medical Society, Dr. James E. Tatum, Denton general practitioner, was killed Sept. 27, 1969, in a glider crash near Sanger, Tex. He was 38.

Born Nov. 15, 1930, in Fort Worth, Dr. Tatum was the son of J. E. and Eda Brown Tatum. He was graduated from North Texas State University in 1951 and received his MD degree in 1955 from The University of Texas Southwestern Medical School at Dallas. He interned at John Peter Smith Hospital in Fort Worth and practiced medicine from 1956 to 1957 at Throckmorton, Tex., where he also served as Throckmorton County Health Officer. From 1957 to 1959 he served as an OB-GYN ward officer with the US Army in Europe. Upon discharge from the army, he resumed his medical practice in Denton.

Dr. Tatum was a member of Texas Medical Association, American Medical Association, and American Academy of General Practice. He belonged to the First Methodist Church in Denton and to the Sanger Soaring Association.

Survivors include his wife, the former Lois Rutledge, of Denton; four sons, Larry, Keith, Ross, and David, all of Denton; and his parents of Fort Worth.

Dr. P. G. Thode

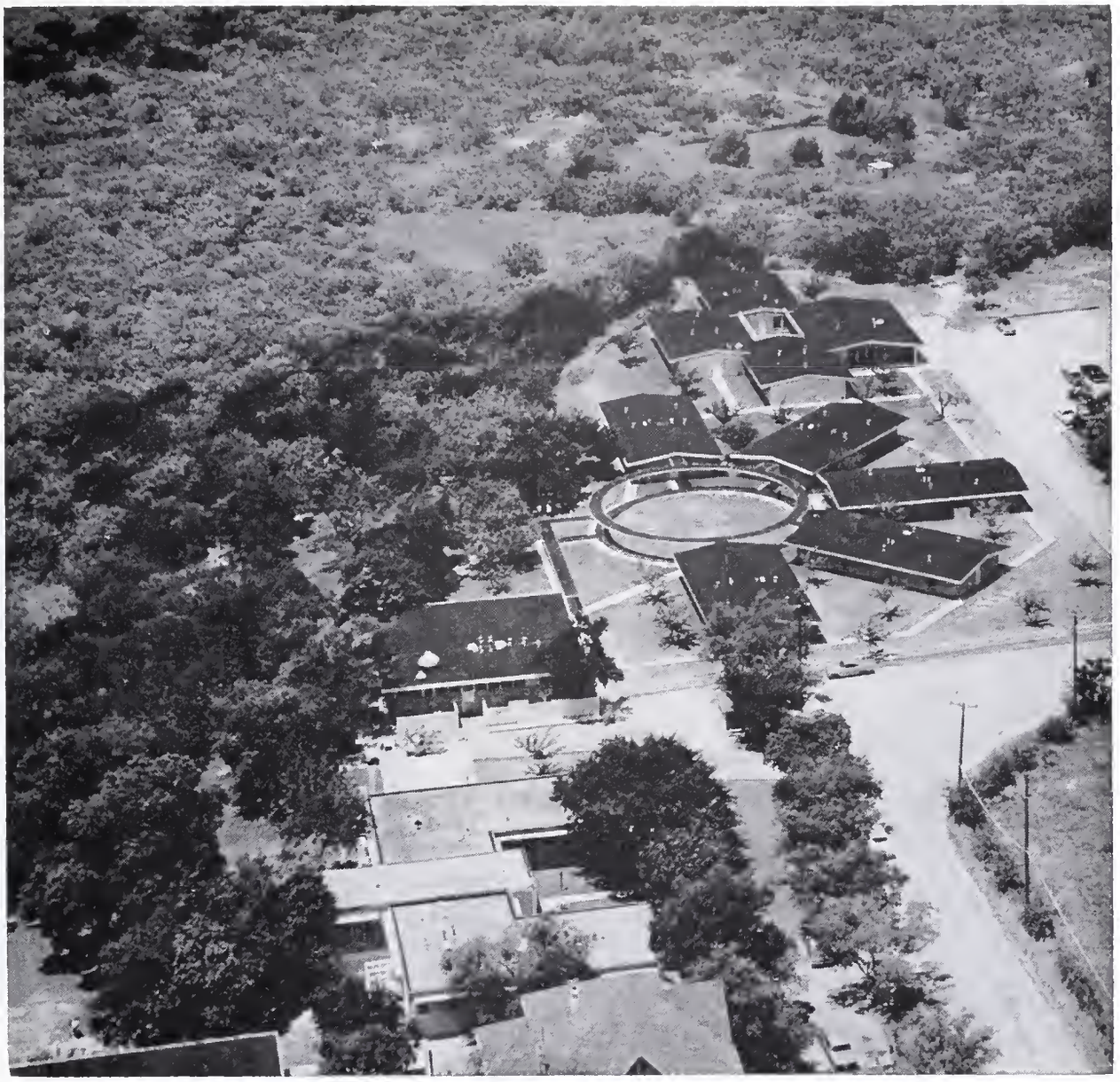
Dr. Paul G. Thode, 59, Harlingen physician specializing in pulmonary diseases, died Aug. 13, 1969, at his home in Harlingen.

The son of William N. and Frieda Prasse Thode, Dr. Thode was born Aug. 8, 1910, in Chicago. He received a bachelor of science degree in 1932 from the University of Illinois, and he was graduated in 1934 with an MD degree from the University of Illinois College of Medicine at Chicago. He interned at Oak Park Hospital in Oak Park, Ill., from 1933 to 1934; and he practiced medicine in Chicago from 1935 to 1941. He then served with the US Indian Service until 1947; and he was a resident in tuberculosis at Sunny Acres Cuyahoga County Tuberculosis Hospital in Cleveland, Ohio, in 1946. From 1947 to 1950 he practiced medicine in association with the Veterans Administration in New Mexico; and he practiced in Temple, Tex., and in Livermore, Calif., VA hospitals before moving to Harlingen in 1967.

The former president of the American Academy of Tuberculosis Physicians was a member of American Medical Association, Texas Medical Association, Cameron-Willacy Counties Medical Society, American Thoracic Society, American College of Chest Physicians, and Laennec's Society. He was a charter member of the Association of Military Surgeons of the United States. He belonged to the Protestant Church and was the author of a medical article published in *Diseases of the Chest.*

Surviving Dr. Thode are his wife, the former Emmalou D. Ray; a son, Paul D. Thode of Redding, Calif.; a daughter, Barbara Forsstrom of El Cerrito, Calif.; his mother; and a sister, Meta Newson, both of Durham, N.C.

DR. THODE



BEVERLY HILLS HOSPITAL
BEVERLY HILLS CLINIC

PSYCHIATRY
INPATIENT — OUTPATIENT

Multiple-approach treatment of thinking disorders. Established diagnostic procedures available. Secluded in-town location convenient to the medical community.

Psychiatry

Joseph L. Knapp, M.D. — Fred H. Jordan, M.D.
Jackson H. Speegle, M.D. — Joseph H. Lindsay, M.D.
Jack R. Tomlinson, M.D.

Psychology

Traudl E. Jordan-Diener, Ph.D. — R. A. Mitchell, M.S. — David K. Fooshee, M.S.

1353 North Westmoreland Avenue — Dallas, Texas 75211 — 214 331-8331

WICHITA FALLS CLINIC-HOSPITAL

GENERAL SURGERY
W. E. Crump, M.D., F.A.C.S.
James T. Lee, M.D.
Charles H. Wilson, M.D., F.A.C.S.

ORTHOPEDIC SURGERY
Jack E. Maxfield, M.D., F.A.C.S.
Clyde W. Parsons, M.D.
Mark E. Huff, Jr., M.D.

ORAL SURGERY
R. A. Mitchell, D.D.S.
Larry J. Cason, D.D.S.

RADIOACTIVE ISOTOPES
Claude D. Wilson, M.D., D.A.B.R.
Joe D. Steed, M.D., D.A.B.R.
Julian H. Acker, M.D.
David D. Salmon, M.D., D.A.B.R.

PEDIATRICS
George W. Slaughter, III, M.D., F.A.A.P.
Joseph Bilder, Jr., M.D.

LABORATORIES
Claude D. Wilson, M.D., D.A.B.R., Radiology
Joe D. Steed, M.D., D.A.B.R., Radiology
David D. Salmon, M.D., D.A.B.R., Radiology

MEDICINE
W. B. Whiting, M.D., Cardiology
R. F. Knox, M.D., Endocrinology
P. K. Smith, M.D., F.A.C.P., Diagnosis & Internal Medicine
I. L. Humphrey, Jr., M.D., Diagnosis & Internal Medicine
Julian H. Acker, M.D., Diagnosis & Internal Medicine
Preston McCall, M.D., Diagnosis & Internal Medicine
Julian C. Sleeper, M.D., Cardiology
Eugene Jackson, M.D., Diagnosis & Internal Medicine

GENERAL PRACTICE
J. B. Hathorn, Jr., M.D.
Melvin Horany, M.D.
John E. Worthen, Jr., M.D.

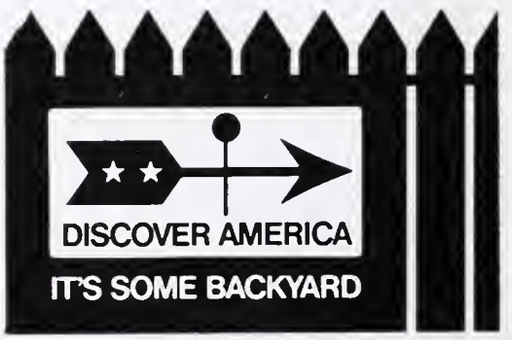
UROLOGY
Owen C. Berg, M.D., F.A.C.S.

OBSTETRICS AND GYNECOLOGY
W. L. Parker, M.D., F.A.C.S.
Warren T. Kable, M.D.
Frank J. Lee, M.D.

ADMINISTRATIVE OFFICER
Bertha McNeill, Administrator
Jesse E. Dobbs, Jr., Asst. Administrator

HOMESTEAD
CHILD PLACEMENT AGENCY
and
HOMESTEAD MATERNITY HOME
1250 W. Rosedale
335-5942 336-7905
Fort Worth, Texas

Licensed Adoption Service and Private, Confidential maternity care provided unwed expectant mothers. Obstetrical services by a Diplomate of THE AMERICAN BOARD. Also pediatric care furnished by a licentiate of THE AMERICAN BOARD.



HIGHLAND HOSPITAL

ASHEVILLE, NORTH CAROLINA
Founded 1904
A DIVISION OF THE DEPARTMENT OF PSYCHIATRY OF DUKE UNIVERSITY
Accredited by the Joint Commission on Accreditation and Certified for Medicare

Complete facilities for evaluation and intensive treatment of psychiatric patients, including individual psychotherapy, group therapy, psychodrama, electro-convulsive therapy, Indoklon convulsive therapy, drugs, social service work with families, family therapy, and an extensive and well organized activities program, including occupational therapy, art therapy, music therapy, athletic activities and games, recreational activities and outings. The treatment program of each patient is carefully supervised in order that the therapeutic needs of each patient may be realized.

High school facilities for a limited number of appropriate patients are now available on grounds. The School Program is fully integrated into the hospital treatment program and is accredited through the Asheville School System.

Complete modern facilities with 85 acres of landscaped and wooded grounds in the City of Asheville.

Brochures and information on financial arrangements available
Contact: (1) Mrs. Elizabeth Harkins, ACSW, Coordinator of Admissions
or
(2) Samuel N. Workman, M.D.
Chief of Clinical Services
(3) Charles W. Neville, Jr., M.D.
Assistant Professor of Psychiatry and Medical Director
Area Code 704 - 254-3201

for the problem drinker

Berocca®

TABLETS
high potency B-complex and C
for nutritional support

AVAILABLE ONLY ON Rx

contains water-soluble vitamins only

b.i.d. dosage

good patient acceptance

no odor, and virtually no aftertaste

Each Berocca Tablet contains:

Thiamine mononitrate	15 mg
Riboflavin	15 mg
Pyridoxine HCl	5 mg
Niacinamide	100 mg
Calcium pantothenate	20 mg
Cyanocobalamin	5 mcg
Folic acid	0.5 mg
Ascorbic acid	500 mg

Usual dosage is one tablet b.i.d.

Indications: Nutritional supplementation in conditions in which water-soluble vitamins are required prophylactically or therapeutically.

Warning: Not intended for treatment of pernicious anemia or other primary or secondary anemias. Neurologic involvement may develop or progress, despite temporary remission of anemia, in patients with pernicious anemia who receive more than 0.1 mg of folic acid per day and who are inadequately treated with vitamin B_{12}.

Dosage: 1 or 2 tablets daily, as indicated by clinical need.

Available: In bottles of 100.

ROCHE

Roche
LABORATORIES

Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

Mead Johnson–pharmaceuticals created for your specialized clinical needs

when your patients need continuous potassium supplementation...

they need the proved effectiveness and safety of

K-LYTE®

Each effervescent tablet supplies: 2.5 Gm. potassium bicarbonate (25 mEq. elemental potassium), 2.1 Gm. citric acid, cyclamic acid

Three clinical studies* confirm the effectiveness of good tasting K-Lyte as a source of supplemental potassium to increase low levels of serum potassium and to maintain normal levels. Patients were on continuous diuretic therapy and salt-restricted diets. K-Lyte dosage was one tablet b.i.d.

Serum Potassium Levels (in mEq./L)

Number of patients	Mean initial value	Mean final value
14	3.23	4.83
16	3.50	4.40
25	4.52	4.47

K-Lyte can offer effective potassium supplementation without the gastrointestinal complications sometimes associated with potassium chloride tablets and thiazide-potassium chloride combination therapy. Effervescent K-Lyte is taken in solution, speeding up absorption to avoid these hazards.

Composition: Each tablet contains potassium bicarbonate (2.5 Gm.), citric acid (2.1 Gm.), cyclamic acid, artificial flavor and color.
Contraindications: When renal function is impaired, or if the patient has Addison's disease, potassium supplementation should not ordinarily be instituted.
Precautions: Should not be used in patients with low urinary output unless under the supervision of a physician. In established hypokalemia, attention should be directed toward correction of frequently associated hypochloremic alkalosis and other potential electrolyte disturbances. Patients should be directed to dissolve tablet in stated amount of water to assure against gastrointestinal injury associated with the oral ingestion of concentrated potassium salt preparations.
Side Effects: While nausea has been reported in an occasional patient, K-Lyte produces no serious side effects when given in recommended doses to patients with normal renal function and urinary output. Potassium intoxication causes listlessness, mental confusion, tingling of the extremities and other symptoms associated with a high concentration of potassium in the serum.
Administration and Dosage: K-Lyte effervescent tablets must be dissolved in 3 to 4 ounces of water before taking. Adults: 1 tablet 2 to 4 times daily, depending on the requirements of the patient. Two tablets (50 mEq. of elemental potassium) supply the approximate normal adult daily requirement.
How Supplied: Effervescent tablets—boxes of 30 and 250 (orange or lime).

*Reports on file: Medical Research Department, Mead Johnson Laboratories, Evansville, Indiana 47721

©1970 MEAD JOHNSON & COMPANY • EVANSVILLE, INDIANA 47721 71770

Mead Johnson LABORATORIES

the world
is beautiful.

urge your patients
to have
regular checkups

so they can
live
to enjoy it.

american
cancer
society®

This space provided by the publisher as a public service.

vacation in a vial: the spasm reactors in your practice deserve

"the Donnatal® Effect"

	each tablet, capsule or 5 cc. of elixir (23% alcohol)	each Donnatal No. 2	each Extentab®
hyoscyamine sulfate	0.1037 mg.	0.1037 mg.	0.3111 mg.
atropine sulfate	0.0194 mg.	0.0194 mg.	0.0582 mg.
hyoscine hydrobromide	0.0065 mg.	0.0065 mg.	0.0195 mg.
phenobarbital	(¼ gr.) 16.2 mg.	(½ gr.) 32.4 mg.	(¾ gr.) 48.6 mg.
(Warning: may be habit forming)			

Brief Summary. Blurring of vision, dry mouth, difficult urination, and flushing or dryness of the skin may occur on higher dosage levels, rarely on usual dosage. Administer with caution to patients with incipient glaucoma or urinary bladder neck obstruction. Contraindicated in acute glaucoma, advanced renal or hepatic disease or a hypersensitivity to any of the ingredients.

A. H. ROBINS COMPANY, RICHMOND, VIRGINIA 23220

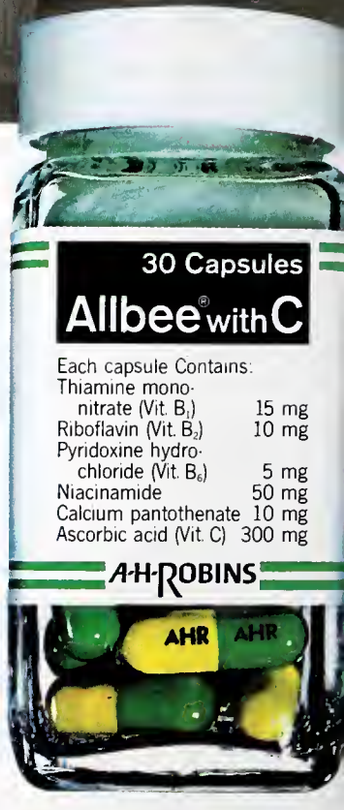
A·H·ROBINS

TWO WAYS TO PROVIDE A DAILY THERAPEUTIC SUPPLY OF VITAMIN C:

50 KUMQUATS OR ONE ALLBEE® WITH C

Your patient would have to eat 1,500 kumquats a month, about 50 a day, to get as much Vitamin C as is contained in just one bottle of 30 Allbee with C capsules (taken one capsule daily). Allbee with C is a lot easier to come by too. Unlike kumquats, it's always in season. In addition, each capsule provides full therapeutic amounts of the B-complex vitamins. The handy bottle of 30 gives your patient a month's supply at a very reasonable price. Economy size of 100 also available. At pharmacies on your prescription or recommendation.

A. H. Robins Company, Richmond, Va. 23220



The treatment of

impotence

in the American male is complex.
The concept of chemotherapy plus the physician's psychological support is confirmed as effective therapy.

NEW CLINICAL STUDY

The Treatment of Impotence
with Methyltestosterone Thyroid
(100 patients—Double Blind Study)
T. Jakobovits
Fertility and Sterility, January 1970
Official Journal of the
American Fertility Society

Android®

(thyroid-androgen) tablets

Double-Blind Study and Type of Patient: 100 patients suffering from undifferentiated impotence. Examination revealed the patients were within the average range of 17-Ketosteroid excretion and protein bound iodine. Except for fatigue in some patients all were in good health. Study was for one month in duration. Each patient received one tablet 3 times daily.

Results: Of the patients receiving the active medication (Android) a favourable response was seen in 78%. This compares with 40% with those on placebo. 80% of the patients treated with the active ingredients showed relief in fatigue compared with 42% of those receiving the placebo. Although psychotherapy is indicated in patients suffering from functional impotence the concomitant role of chemotherapy (Android) cannot be disputed.

Contraindications—Methyltestosterone is not to be used in malignancy of reproductive organs in male, coronary heart disease. Thyroid is not to be used in heart disease, hypertension unless the metabolic rate is low.

References: 1. Montesano, P., and Evangelista, I. Methyltestosterone-thyroid treatment of sexual impotence. Clin Med 12:69, 1966. **2. Dublin, M. F.** Treatment of impotence with methyltestosterone-thyroid compound. West Med 5:67, 1964. **3. Titeff, A. S.** Methyltestosterone-thyroid in treating impotence. Gen Prac 25:6, 1962. **4. Heilman, L., Bradlow, H. L., Zumoff, B., Fukushima, D. K., and Gallagher, T. F.** Thyroid-androgen interrelations and the hypocholesteremic effect of androsterone. J Clin Endocr 19:936, 1959. **5. Farris, E. J., and Colton, S. W.** Effects of L-thyroxine and liothyronine on spermatogenesis. J Urol 79:863, 1958. **6. Osol, A., and Farrar, G. E.** United States Dispensatory (ed. 25). Lippincott, Philadelphia, 1955, p. 1432. **7. Wershub, L. P.** Sexual Impotence in the Male. Thomas, Springfield, Ill., 1959, pp. 79-99.

REFER TO PDR

Choice of 4 strengths:

Android

Each yellow tablet contains:
Methyl Testosterone ..2.5 mg.
Thyroid Ext. (1/6 gr.) ..10 mg.
Glutamic Acid .....50 mg.
Thiamine HCL .....10 mg.
Dose: 1 tablet 3 times daily.
Available:
Bottles of 100, 500, 1000.

Android-HP
HIGH POTENCY

Each red tablet contains:
Methyl Testosterone ..5.0 mg.
Thyroid Ext. (½ gr.) ...30 mg.
Glutamic Acid .....50 mg.
Thiamine HCL .....10 mg.
Dose: 1 tablet 3 times daily.
Available:
Bottles of 100, 500, 1000.

Android-X
EXTRA HIGH POTENCY

Each orange tablet contains:
Methyl Testosterone .12.5 mg.
Thyroid Ext. (1 gr.) ....64 mg.
Glutamic Acid .....50 mg.
Thiamine HCL .....10 mg.
Dose: 1 or 2 tablets daily.
Available:
Bottles of 60, 500.

Android-Plus
WITH HIGH POTENCY B-COMPLEX AND VITAMIN C

Each white tablet contains:
Methyl Testosterone ..2.5 mg.
Thyroid Ext. (¼ gr.) ...15 mg.
Ascorbic Acid (Vit. C) .250 mg.
Thiamine HCL .....25 mg.
Glutamic Acid .....100 mg.
Pyridoxine HCL .....5 mg.
Niacinamide .....75 mg.
Calcium Pantothenate .10 mg.
Vitamin B-12 .....2.5 mcg.
Riboflavin .....5 mg.
Dose: 2 tablets daily.
Available: Bottles of 60, 500.

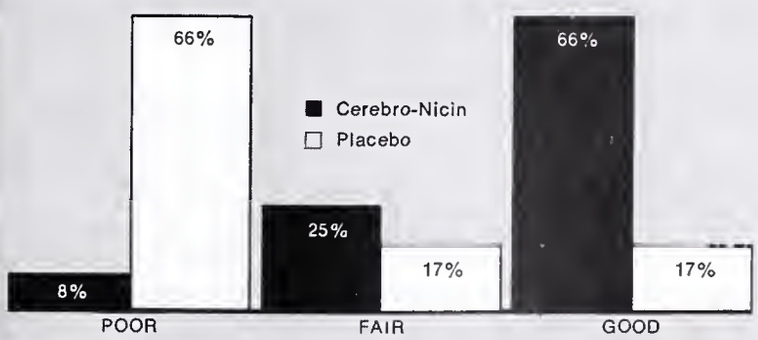
Write for literature and samples: BROWN THE BROWN PHARMACEUTICAL CO., INC. 2500 West 6th Street, Los Angeles, California 90057
A SUBSIDIARY OF ASSOCIATED CARE ENTERPRISES, INC.

For the treatment of the aging patient

Cerebro-Nicin®

capsules/elixir

A Gentle Cerebral Stimulant and Vasodilator



CEREBRO-NICIN® New double-blind study* shows how effectively senility can be forestalled. Four times as many aging patients showed striking improvement.

*A Double-Blind Study of Cerebro-Nicin, Therapy for the Geriatric Patient, R. Goldberg Jrnl,. of the Amer. Ger. Soc. June, 1964

Available in a tasty wine base elixir and capsules

Each Cerebro-Nicin capsule contains:

Pentylenetetrazole	100 mg.
Nicotinic Acid	100 mg.
Ascorbic Acid	100 mg.
Thiamine HCl	25 mg.
l-Glutamic Acid	50 mg.
Niacinamide	5 mg.
Riboflavin	2 mg.
Pyridoxine	3 mg.

DOSAGE: One capsule t.i.d. or as prescribed by physician.
AVAILABLE: Bottles of 100, 500, 1000 capsules.
Also elixir 8 oz. bottles.
CONTRAINDICATIONS: There are no known contraindications to Pentylenetetrazole although caution should be exercised when treating patients with a low convulsive threshold.
Most persons experience a flushing or tingling sensation after taking a higher potency niacin-containing compound. As a secondary reaction some will complain of nausea and other sensations of discomfort. This reaction is transient and is rarely a cause of discontinuance of the drug if the patient is forewarned to expect the reaction.

REFER TO PDR

Write for literature and samples...

BROWN THE BROWN PHARMACEUTICAL CO.
2500 W. 6th St., Los Angeles, Calif. 90057
Write for Product Catalog

Starlite Village Clinic

Center Point, Texas

Ph.: ME 4-2426

- - - A specialized clinic dedicated to the physical, mental, and spiritual treatment of men and women suffering from alcoholic and similar disturbances.

F. E. Seale, M.D.
Medical Director

Bland Seale
Administrator

RADIOLOGY ASSOCIATES OF FORT WORTH

John S. Alexander, M.D., M.A.C.R.
Robert J. Atcheson, M.D., M.A.C.R.
Douglas E. Bibby, M.D., F.A.C.R.
James W. Buice, M.D., F.A.C.R.
Richard C. Gasser, M.D., M.A.C.R.
James A. Holland, M.D., M.A.C.R.
Paul W. Mathews, Jr., M.D., M.A.C.R.
Preston W. Nash, M.D., M.A.C.R.
Rolland F. Oakes, M.D., M.A.C.R.
Norman L. Presley, M.D., M.A.C.R.
Sanford Reitman, M.D., M.A.C.R.
Gomer W. Roberts, M.D., M.A.C.R.
Herman C. Sehested, M.D., F.A.C.R.
Glenn A. Stokdyk, M.D., M.A.C.R.
C. H. Tseng, M.D., M.A.C.R.
Claude Williams, M.D., M.A.C.R.

DIPLOMATES OF THE AMERICAN BOARD OF RADIOLOGY

Offices:

100 Medical Tower Bldg. — 336-8681
1217 West Cannon — 336-8627
900 W. Randol Mill Rd., Arlington, Texas 76010 — 277-7681

TRAVIS CLINIC ASSOCIATION AND THE NAN TRAVIS MEMORIAL HOSPITAL

JACKSONVILLE, TEXAS

STAFF

General Surgery:
L. L. Travis, M.D.
J. S. O'Hare, M.D.
R. K. Willms, M.D.

Orthopedic Surgery:
E. L. Mahon, Jr., M.D.

Urology:
H. F. Rives, M.D.

Pathology:
Harbert Davenport, Jr., M.D.

Internal Medicine:
J. T. Boyd, M.D.
F. H. Verheyden, M.D.
J. T. Scogin, M.D.
J. H. Pesnell, M.D.
Mary A. Bone, M.D.

Obstetrics and Gynecology:
J. C. Rucker, M.D.
J. D. Crawford, M.D.

Ophthalmology:
Fred Haberle, M.D.

Pediatrics:
M. L. Gray, M.D.

Radiology and Radioactive Isotopes:
L. W. Ralston, M.D.

William J. Fowler
Administrator of Nan Travis Memorial Hospital

J. G. Casey
Business Manager of Travis Clinic

MEDICAL ARTS CLINIC

Box 841
Corsicana, Texas

PEDIATRICS
JOHN W. GRIFFIN, M.D., F.A.A.P.*
JAMES E. SPEIER, M.D.
INTERNAL MEDICINE
ROBERT D. BONE, M.D., F.A.C.P.*
JAMES F. WITTEN, M.D., F.A.C.P.*
CHARLES I. BILTZ, M.D.*
OBSTETRICS & GYNECOLOGY
KELLY PAUL BURKHART, M.D., F.A.C.O.G.*
DERMATOLOGY
JOSEPH M. GLICKSMAN, M.D.
BUSINESS MANAGER
OWEN G. ELLIOTT, M.G.M.A.
SURGERY
LOUIS E. GIBSON, M.D., F.A.C.S.*
E. SCOTT MIDDLETON, M.D.
OPHTHALMOLOGY
ROBERT D. MERTZ, M.D., F.A.A.O.O.*
EAR, NOSE, THROAT
PHILLIP M. AWTREY, M.D.,* F.A.A.O.O.
DENTISTRY
ROBERT A. LANG, D.D.S.

*Diplomate of the American Board

PHYSICIANS' DIRECTORY

Allergy

DRS. FEIN AND KAMIN
Allergy and Immunology

Bernard T. Fein, M.D., F.A.C.A.
Fellow
American Academy of Allergy

Peter B. Kamin, M.D., F.A.A.P.
Diplomate
Sub-Board Pediatric Allergy

216 Medical Prof. Bldg.
CA 6-7671

San Antonio, Texas
CA 7-6331

HOUSTON ALLERGY CLINIC
CLINICAL ALLERGY AND IMMUNOLOGY
RICHARD L. ETTER, M.D., F.A.C.A., F.A.A.A.
RICHARD H. JACKSON, M.D., F.A.C.A.
WARREN J. RAYMER, M.D., F.A.C.A.
RAMON GARRIDO, M.D.
(Certified American Board of Pediatrics)
Suite 156, Hermann Professional Building
6410 Fannin St., Houston, Texas 77025
JA 6-3281

V. E. FRIEDEWALD, M.D., F.A.C.P.
Diplomate American Boards of Internal Medicine and Allergy
ALLERGY

2203 West Tennessee Midland, Texas 79701
MU 2-5385

McGOVERN ALLERGY CLINIC
Diagnosis and Treatment of Allergic Diseases
John P. McGovern, M.D. Theodore J. Haywood, M.D.
Orville C. Thomas, M.D. Joseph T. Queng, M.D.
Charles D. Haunschild, M.D. James A. Murray, M.D.
*Hermann Gregory, M.D.
Certified American Boards of Pediatrics and Allergy
6655 Travis Street Houston, Texas 77025 JA 8-5591
*Military Leave of Absence

HARRIS HOSEN, M.D., F.A.A.Pd.
Clinical Allergy and Immunology

2649 Procter Street Port Arthur, Texas

ALLERGY CLINIC
Saul Grossman, M.D., F.A.C.A.
Allergy-Dermatology
W. A. Crozier, M.D., F.A.C.A.
Allergy-Immunology
TU 2-3487

2530 Morgan Corpus Christi, Texas

STUART A. MASON, M.D.
Allergic Diseases

921 Eighth Avenue Fort Worth, Texas 76104

Phone: 336-1574 If no answer: 924-4231

Cardiovascular Disease

GUS SCHREIBER, M.D., F.A.C.P., F.C.C.P., F.A.C.C.
CARDIOLOGY
Director, Direct Dial Electrocardiographic Laboratorys
Elective Cardioversion for the Tachycardias and for Auricular Fibrillation Performed at Your Hospital with My Portable Synchronized Defibrillator.
Reception and Colsultative Interpretation of Telephoned Electrocardiographs from any System 24 Hours per Day.
Rental-Maintenance of Matching ECG-Transmitter-Tape Recording Equipment which by Compression of the Data Reduces "On Line" Time.

1430 Medical Arts Building Dallas, Texas 75201

Business Office Telephone with 24-Hour Radio-Page 214-748-3715
Office ECG Telephone and Relay Station: 214-748-4118
Home ECG Telephone and Relay Station: 214-352-5504

DIRECTORY RATES & DATA: Space is available to TMA members at $8.00 per column inch and must run six months. New listings are limited to those specialties recognized by the American Medical Association. A discount of 5% is allowed for six month's advance payment. Mail copy to Advertising Assistant, TEXAS MEDICINE, 1801 North Lamar Blvd., Austin, Texas 78701. Deadline is 20th of the month preceding publication month.

Clinics

THE CLINIC-HOSPITAL OF SAN ANGELO
224-234 West Beauregard Avenue
SAN ANGELO, TEXAS

R. M. Finks, M.D., Pediatrics
M. D. Knight, M.D., Surgery
W. H. Brauns, M.D., Internal Medicine
Roy E. Moon, M.D., Obstetrics and Gynecology
Chas. F. Engelking, M.D., Ear, Nose and Throat
R. A. Morse, M.D., Internal Medicine
Ralph R. Chase, M.D., Pediatrics
Tom R. Hunter, M.D., Surgery
Dale W. Hayter, M.D., Ophthalmology
O. Sterling Gillis III, M.D., Obstetrics and Gynecology
Consultant in Pathology—Lloyd R. Hershberger, M.D.
Consultants in Radiology—John E. Ballard, M.D., John G. Bolen, M.D., William T. Gordon, M.D.
Robert P. Gordon, C.P.A., Administrator

THE FORT WORTH CLINIC
1221 West Lancaster Avenue
Fort Worth, Texas

John M. Church, M.D.
T. J. Coleman, M.D.
O. M. Phillips, M.D.
Robert L. Sewell, M.D.
John H. Sewell, M.D.
C. K. Holsapple, M.D.
Wm. L. Asper, Bus. Mgr.

FIFTH AVENUE CLINIC
650 Fifth Avenue
Fort Worth, Texas

MEDICINE
Sidney E. Stout, M.D.
Frank L. Bynum, M.D.
Ed Etier, Jr., M.D.

GENERAL PRACTICE
Donald S. Gibbs, M.D.

RADIOLOGY
Otto H. Grunow, M.D.

THOMAS-SPANN CLINIC
& THOMAS-SPANN HOSPITAL, INC.
1546 S. Brownlee Corpus Christi, Texas 78404
Telephone 884-3861

SURGERY
R. Gayle Spann, M.D., F.A.C.S.
J. Houston Thomas, M.D.
OPHTHALMOLOGY
L. David Wright, M.D., F.A.C.S.
GENERAL PRACTICE
Travis B. Phelps, M.D.
T. D. Harvey, M.D.
H. R. Rose, M.D.
C. L. Vernor, M.D.
ORTHOPEDICS
Carlos M. Yanez, M.D.

INTERNAL MEDICINE
William E. Morris, M.D.
Gerald A. Reeves, M.D.
Pruett Moore, Jr., M.D.
RADIOLOGY
Crysup Sory, M.D.
ADMINISTRATOR
B. J. Clark
DIRECTOR OF NURSES
Clinic - Pat Parker
Hospital - Mrs. Joyce Pettit

RUGELEY AND BLASINGAME CLINIC
Wharton, Texas

2100 North Fulton Street — 713 LE 2-1700

INTERNAL MEDICINE
R. D. Little, M.D.
D. W. Samuelson, M.D.

GENERAL PRACTICE
C. E. Woodson, M.D.

PEDIATRICS
F. W. Kolle, M.D.

NEUROPSYCHIATRY
R. R. Gleason, Jr., M.D.

DERMATOLOGY & SKIN CANCER
J. S. Stell, M.D.

GENERAL & THORACIC SURGERY
R. E. Goelzer, M.D.

GENERAL SURGERY
R. B. Caraway, Jr., M.D.

UROLOGY
H. Z. Fretz, M.D.
C. M. Collins, M.D.

OBSTETRICS & GYNECOLOGY
D. M. Voulgaris, M.D.
H. E. Secor, M.D.

OPHTHALMOLOGY
V.A. Black, M.D.

OTOLARYNGOLOGY
J. L. Holcomb, M.D.

DENTISTRY
C. J. Shumbera, D.D.S.
J. R. Kieler, Jr., D.D.S.

PATHOLOGY—CONSULTANT
H. M. Perches, M.D.

ANESTHESIOLOGY—CONSULTANT
C. G. Spears, M.D.

RADIOLOGY—CONSULTANT
L. D. O'Gorman, M.D.

ADMINISTRATION
C. H. "Ham" Rugeley
Malcolm D. Rugeley

THE CHESTER CLINIC & THE JOHN BUIST CHESTER HOSPITAL
3330 S. Lancaster Rd., Dallas, Texas
376-5411

John B. Chester, M.D., F.A.C.S., Orthopedic Surgery
Gene W. Rogers, M.D., General Surgery
Douglas M. Hardy, M.D., Obstetrics & Gynecology
Ervin R. Miller, M.D., Cardiovascular Diseases
Ralph C. Disch, M.D., F.A.C.S., D.A.B.S., General Surgery
Catherine P. Chester, M.D., Infants and Children
Doyle L. Sharp, M.D., General Surgery
R. M. Flasdick, M.D., Diagnosis and Internal Medicine
Ben E. Moore, B.S., M.D., Pediatrics
A. P. Larson, B.S., M.S., M.D., F.A.C.S., A.A.O.S.
Garrett, W. Maxwell, M.D., General Practice
Amado E. Dominquez, M.D., Diagnosis & Internal Medicine
H. A. Mueller, M.D., Consultant in Radiology
Gerard Noteboom, M.D., Consultant in Pathology
Geneva Bratton, R.N., Superintendent of Nurses
E. B. Morgan, Administrator

LANCASTER OFFICE – LANCASTER, TEXAS
Phone 227-2151

David E. Krebs, M.D., Pediatrics & Medicine
Charles W. Waldrop, M.D., General Practice
Miles W. Davis, M.D., General Practice

COUNTRY CLUB CORNERS OFFICE
7140 Baytree — 224-1181

R. B. Curry, M.D., General Practice
Herbert M. Hinckley, M.D., General Practice

BEELER-MANSKE CLINIC
9th Avenue N. at 5th Street N.
Texas City, Texas 77590
AC 713, WI 8-8521

Obstetrics & Gynecology
G. W. Beeler, M.D.

Internal Medicine
W. T. Matlage, M.D.
C. M. Maruri, M.D.

General Surgery
B. W. Hink, M.D., F.A.C.S.

General Practice
J. H. Cochrane, M.D.
J. W. O'Bryant, M.D.
O. O. Smith, M.D.

Clinic Manager
Stan M. Sheppard

Complete X-ray, Physical Therapy and Laboratory Facilities

MALONE and HOGAN CLINIC
901 Main Street — Phone 267-6361
Big Spring, Texas 79720

Ophthalmology and Otolaryngology
P. W. Malone, M.D., F.A.C.S.
J. W. Tipton, M.D.

General Surgery
J. E. Hogan, M.D., F.A.C.S.
C. B. Marcum, Jr., M.D., F.A.C.S.

Orthopedic Surgery
P. H. Rhymes, M.D.

Internal Medicine
J. H. Burnett, Jr., M.D.
W. A. Riley, M.D.
R. S. Griffin, M.D.
R. T. Torp, M.D.

Obstetrics and Gynecology
M. A. Porter, M.D.

Pediatrics
J. M. Woodall, M.D.
M. W. Talbot, Jr., M.D., F.A.A.P

Radiology
W. R. Cashion, M.D.

Urology
G. F. Dillon, M.D.

Consultants in Pathology
Jarrett E. Williams, M.D.
B. B. Trotter, M.D.

Business Manager
R. L. Heith

DIAGNOSTIC CLINIC OF HOUSTON
6448 Fannin, Houston, Texas 77025 (713) 526-2051

Internal Medicine and Diagnosis

Cardiovascular Disease
Thomas J. Fatherree
Hugh F. Arnold, M.D.
Hugh H. Hanson, M.D.
Michael B. Raine, M.D.
Michael A. Modelski, M.D.
Sigmund W. Friedland, M.D.

Endocrinology and Metabolic Diseases
H. Leland Kaplan, M.D.
Thomas G. Vandivier, M.D.
Charles H. Gregory, M.D.
R. Frederick Gregory, M.D.

Endocrinology, Metabolic Diseases and Director of Clinical Research
Raymond L. Gregory, M.D.

Geriatrics
Frederick G. Dorsey, M.D.

Gastroenterology
Dolph L. Curb, M.D.
W. Tom Arnold, M.D.
Belton G. Griffin, M.D.
Frederick R. Lummis, Jr., M.D.
Dean C. Solcher, M.D.

Hematology
Edmund N. Gouldin, M.D.
George W. Conrad, Jr., M.D.

Hypertension and Renal Diseases
K. Ronald Bingman, M.D.
R. Robert Durrett, M.D.

Infectious Diseases
Lewie L. Travis, Jr., M.D.
Jack L. Reddin, M.D.

Internal Medicine
Jeffrey Zatorski, M.D.

Neurology
Donald J. Russell, M.D.

Oncology
Lester L. Hoaglin, Jr., M.D.
Peter Sullivan, M.D.

Pathology
Jack P. Abbott, M.D.
Paul B. Radelat, M.D.

Pulmonary Disease
William M. Donohue, M.D.
Joel E. Reed, M.D.
Gene R. Lindley, M.D.

Radiology and Nuclear Medicine
William L. Hinds, M.D.
Charles P. Eldridge, Jr., M.D.
David D. Lawrence, M.D.
Charles A. Spain, M.D.

Rheumatology
John E. Norris, M.D.

Administration
C. G. Mercy, Administrator
Robert B. Hall, Assistant Administrator

Laboratory:
Clinical Pathology
Cytology

Nuclear Medicine
Isotope uptake, Gammagram and Therapy

Roentgenology

PROCEDURES:

Bronchoscopy:
Pulmonary Functions

Cardiac Catheterization

Electrocardiography-Phonocardiography

Esophagoscopy

Gastroscopy

Proctosigmoidoscopy

CONSULTATION BY APPOINTMENT

THE LORIMER CLINIC
901 West Leuda Street
Fort Worth, Texas 76104
335-4333

SURGERY
W. S. Lorimer, Jr., M.D., F.A.C.S.
R. J. Turner, III, M.D., F.A.C.S.

INTERNAL MEDICINE
W. W. Moorman, M.D., F.A.C.P.
D. W. Johnston, M.D. F.A.C.P.
Stephen Eppstein, M.D.
A. R. Daniell, M.D.

Mrs. Evelyn Farr, Business Manager

CLINIC OF THE SOUTHWEST
6437 High Star at Hillcroft
Houston, Texas 77036 — PR 4-7671

INTERNAL MEDICINE
William C. Franklin, M.D.
Arthur B. Conde, M.D.

OBSTETRICS & GYNECOLOGY
Joy L. Deere, M.D.
Loren B. Goss, M.D.

PEDIATRICS
John R. Dunn, Jr., M.D.
Blanca S. Azios, M.D.

PHYSICAL THERAPY
Richard D. Tinsley, R.P.T.

GENERAL SURGERY
Harvey B. Koch, M.D.

UROLOGY
Glen E. Lewis, M.D.

DENTISTRY
Burley G. Ingram, D.D.S.

RADIOLOGY
Neil B. Longley, M.D.
Richard E. Schuette, M.D.

BUSINESS MANAGER
C. C. Walker

AS NEAR AS YOUR MAILBOX OR TELEPHONE!

TMA MEMORIAL LIBRARY

1801 North Lamar Blvd.
Austin, Texas 78701
512 477-6704

Colon and Rectal Surgery

MALCOLM McNATT, M.D., F.A.C.S.
Diplomate of the American Board of Colon and Rectal Surgery
Proctology
Colon and Rectal Surgery
710 Medical Arts Bldg. RIverside 2-2858
Dallas, Texas

ALVIN BALDWIN, JR., M.D., F.A.C.S.
Practice Limited to
Diseases and Surgery of the Colon and Rectum
714 Doctors Building 3707 Gaston Avenue
Dallas, Texas
Off. Tel. 824-2573 Res. Tel. 361-4500

HUGH C. WELSH, M.D.
Proctology and Abdominal Surgery
2715 Fannin Street Houston, Texas

J. WADE HARRIS, M.D., F.A.C.S.
JOHN E. COGAN, M.D., F.A.C.S.
Surgery of the Rectum and Colon
406 Hermann Professional Bldg.
Houston, Texas

C. D. L. CROMAR, M.D.
Surgery of the Rectum and Colon
617 South Tatar Street
Pasadena, Texas 77502

Dermatology

ROGER W. MANAR, M.D.
DERMATOLOGY
SUPERFICIAL X-RAY THERAPY
1400 Eighth Street Wichita Falls, Texas

BEDFORD SHELMIRE, M.D.
BEDFORD SHELMIRE, JR., M.D.
DAVID S. SHELMIRE, M.D.
Dermatology
1410 Medical Arts Bldg. Dallas, Texas

DRS. PIPKIN, RESSMANN & RICHARDSON
J. LEWIS PIPKIN, M.D.
ARTHUR C. RESSMANN, M.D.
A. W. RICHARDSON, M.D.
DERMATOLOGY
X-Ray and Radium in The Treatment of Skin Malignancies
714 Medical Arts Bldg. San Antonio, Texas

EVERETT R. SEALE, M.D.
Dermatology
Treatment of Skin Malignancies
1217 Hermann Professional Bldg. Houston, Texas

J. GILMORE BRAU, M.D.
DERMATOLOGY—SYPHILOLOGY
X-RAY and RADIUM THERAPY
Hours 9 to 1 — 3 to 5
3817 Brown Street Dallas, Texas

J. FRANKLIN CAMPBELL, M.D.
EDMUND N. WALSH, M.D.
Dermatology and Syphilology, and Treatment of Skin Cancer
Radium and X-Ray Therapy
1410 Pruitt Street Fort Worth, Texas

Leslie M. Smith, M.D. H. D. Garrett, M.D.
John C. Wilkinson, M.D.
DRS. SMITH, GARRETT & WILKINSON
Dermatology and Syphilology
X-Ray and Radium in the Treatment of Skin Malignancies
Medical Center, 1501 Arizona El Paso, Texas

WALTER B. MANTOOTH, JR., M.D.
JOE M. LEHMAN, M.D.
ROBERT LEHMAN, M.D.
Dermatology, Syphilology, and Cancer of the Skin
3801 19th St., Suite 500 Lubbock, Texas

MARVIN E. CHERNOSKY, M.D.
DERMATOLOGY AND SYPHILOLOGY
703 Hermann Professional Building
Phone JA 6-3733 Houston, Texas

THOMAS L. SHIELDS, M.D.
Dermatology and Syphilology
X-Ray Therapy in the
Treatment of Skin Malignancies
Hours 9 to 1 — 3 to 5
800 Fifth Ave. Fort Worth, Texas

DAVID R. WEAKLEY, M.D., F.A.C.P.
Dermatology
Treatment of Skin Malignancies
8548 Northwest Plaza Drive Dallas, Texas
315 North Shiloh Road Garland, Texas

M. A. (Mac) HAIRSTON, JR., M.D.
DERMATOLOGY
HAIR TRANSPLANTATION & DERMOPLANING
Memorial City Professional Bldg., 902 Frostwood, Suite 184
(Between Memorial & Katy Fwy.)
Phone: 464-6369 Houston, Texas 77024

JOHN B. McMASTER, JR., M.D.
Dermatology
222-2147
Dermabrasion & Chemosurgery
416 M & S Tower San Antonio, Texas 78205

Eye, Ear, Nose, Throat

M. Ray Harrington, M.D. Lloyd F. Ritchey, M.D.
Jack Blum, M.D.
Ophthalmology and Otolaryngology
8215 Westchester
Suite 135
Dallas, Texas

Drs. Canon, Watkins, Anderson, Nalle and Ellsasser
Eye, Ear, Nose and Throat, Broncho-Esophagology and Allergy
R. T. Canon, M.D., F.A.C.S. — M. D. Watkins, M.D., F.A.C.S., A.I.C.S.
Wm. F. Anderson, M.D., DAB Oph., F.A.C.S. — Ernest Nalle, Jr., M.D. DAB Oto., F.A.C.S., F.I.C.S.
M. G. Ellsasser, M.D., DAB Oph.
West Texas Clinic 1312 Main Lubbock, Texas

W. HUBERT SEALE, M.D.
Eye, Ear, Nose & Throat
HUBERT JAMES SEALE, M.D.
Disease & Surgery of the Eye
OR 3-3751
1321 Hickory St. Abilene, Texas

Gastroenterology

JAMES J. GORMAN, M.D., F.A.C.P.
Gastroenterology
Diagnosis Gastroscopy
1111 El Paso National Bank Bldg.
El Paso, Texas 79901

MILFORD O. ROUSE, M.D.
announces limitation of practice to consultation in hospitals. His office is now at Dallas Chamber of Commerce in Community Health Focus program. Records of his patients are with Cecil O. Patterson, M.D., and Daniel Polter, M.D., 1414 Medical Arts Building, Dallas, 742-6144.

CECIL O. PATTERSON, M.D.
GASTROENTEROLOGY, GASTROSCOPY
ESOPHAGOSCOPY
1414 Medical Arts Building
Dallas, Texas
742-6141

DRS. BAILEY, DOUGLAS AND FISHER
3434 Swiss Avenue, Suite 303, Dallas, Texas
Diseases of the Digestive System
Herbert A. Bailey, M.D. F. Clark Douglas, M.D.
John W. Fisher, M.D.

W. CROCKETT CHEARS, JR., M.D.
GASTROENTEROLOGY
GASTROSCOPY & ESOPHAGOSCOPY
1027 Medical Arts Building
Telephone 748-4975 Dallas, Texas

General Surgery

J. PEYTON BARNES, M.D., F.A.C.S.
Surgery
1000 St. Joseph Professional Bldg.
Houston, Texas 77002

L. GONZALEZ CIGARROA, M.D., F.A.C.S.
Diplomate American Board of Surgery
Practice limited to
SURGERY
1502 Logan Ave. Laredo, Texas

BURT B. SMITH, M.D.
SURGERY
Emphasizing Breast, Thyroid and Gastro-Intestinal Surgery
728 Hermann Professional Building
Phone 523-8323 Houston, Texas 77025

ADOLPH F. KAUFFMANN, M.D., F.A.C.S.
Diplomate American Board of Surgery
GENERAL SURGERY
707 Fifth Ave. Fort Worth, Texas
Phone 332-7597

BRYAN V. WILLIAMS, M.D., F.A.C.S.
Diplomate American Board of Surgery
GENERAL SURGERY
1506 St. Joseph Professional Bldg.
Houston, Texas 77002
227-5505

PAUL CARRILLO-RIVERA, M.D., F.A.C.S.
General, Pulmonary, Cardiovascular Surgery
105 University Towers
915-533-2508
1900 N. Oregon St. El Paso, Texas 79902

Internal Medicine

JOHN A. WIGGINS, JR., M.D.
Diseases of the Chest
Bronchoscopy
1105 Pennsylvania Ave. Fort Worth, Texas

HENRY N. GEMOETS, M.D., F.A.C.P., F.C.C.P.
Internal Medicine and Diseases of the Chest and Heart
THOMAS H. GEMOETS, M.D.
Internal Medicine and Diagnosis
1003 Memorial Professional Building
1010 Louisiana Houston, Texas 77002 222-7224

Neurology/Psychiatry

HAUSER CLINIC

Psychiatry, Neurology, and Electroencephalography

Section of Psychiatry
*Abe Hauser, M.D.
*Robert I. Hauser, M.D.
Barry M. Brown, M.D.
*Harris M. Hauser, M.D.

Section of Neurology
*Harris M. Hauser, M.D.
*Gerald Ratinov, M.D.
Robert M. Gordon, M.D.
*Abe Hauser, M.D.

Section of Social Work
Ethel Feinsilver, M.S.

Section of Psychology
Robert Langston, Ph.D.
Consultant
Joanne Borba, M.A.

Administrator
Gordon D. Keller

808 Memorial Professional Building
Houston, Texas 77002
224-5041

*Diplomate, American Board of Psychiatry and Neurology

Perry C. Talkington, M.D.
Charles L. Bloss, M.D.
Howard M. Burkett, M.D.
Jerry M. Lewis, M.D.
James K. Peden, M.D.
Ward G. Dixon, M.D.
Claude L. Jackson, M.D.
E. Clay Griffith, M.D.
Dode M. Hanke, M.D.
Doyle I. Carson, M.D.
Thomas H. Allison, M.D.
Stanley L. Seaton, M.D.
Maurice S. Green, M.D.
Joe W. King, M.D.
Keith H. Johansen, M.D.
Charles G. Markward, M.D.

practice limited to
PSYCHIATRY

4645 Samuell Blvd., Dallas, Texas
Timberlawn Sanitarium
4600 Samuell Blvd., Dallas, Texas
381-7181

STEPHEN WEISZ, M.D.
Practice Limited to
NEUROLOGY and PSYCHIATRY
1637 Medical Arts Bldg. Dallas, Texas
747-5183

ALEX K. MUNSON, M.D.
Child Psychiatry
KERBEY LANE EVALUATION
AND TREATMENT CENTER
3400 Kerbey Lane Austin, Texas 78703
Office Hours by Appointment
AC 512-454-8718

THE FORT WORTH
NEUROPSYCHIATRIC CENTER
*Bernard J. Dolenz, M.D. *Herbert G. Rush, M.D.
1066 W. Magnolia Avenue 336-5469
Fort Worth, Texas 76104
*Diplomates American Board of Psychiatry and Neurology

HOUSTON ASSOCIATES
IN
PSYCHIATRY AND NEUROLOGY
Houston, Texas

C. A. Iannucci, M.D.
Joe C. A. Eckhardt, Jr., M.D.
Alfred H. Vogt, M.D.
George M. Stevens, M.D.
Jules Bohnn, M.D.
Leroy Androes, M.D.
A. R. Martinez, Ph.D.
Ruth Searls, M.S.W.
Diana Sheer, M.S.W.
Dan DeShazo, M.S.W.
Beth Bowman, M.A.

Comprehensive Neuropsychiatric
Evaluation and Treatment
Electroencephalography

1021 Hermann Prof. Bldg. 529-5721
6812 Staffordshire 748-3780

CHAPMAN ISHAM, M.D.
Diplomate American Board of Psychiatry
Child Psychiatry and Marriage Counseling
Hypnotherapy for Smoking and Obesity
3701 21st Street Lubbock, Texas 79410
795-4023

MEDICAL NEUROLOGY AND
ELECTROENCEPHALOGRAPHY
205 Swiss Avenue Medical Building
3434 Swiss

Dallas, Texas 75204 827-3610

Sheff D. Olinger, M.D. Joseph S. Jenike, M.D.
Charles W. Barrier, M.D.

Hours by Appointment Only

Pasadena Neuropsychiatric Clinic Association
Robert E. Hazlewood, M.D. Richard M. Orr, M.D.
Practice Limited
to
Neurology and Psychiatry
Office Hours by Appointment
First Pasadena State Bank Building
1001 E. Southmore, Suite 1103
Pasadena, Texas 77502 Telephone 473-7646

LABORATORY OF ELECTROENCEPHALOGRAPHY
Jean M. B. Moure, M.D.
Diplomate American Board of Electroencephalography
522-1037
275 Hermann Prof. Bldg. Houston, Tex. 77025

Neurological Surgery

JAMES GREENWOOD, JR., M.D.
Neurosurgery
1117 Hermann Professional Bldg., Houston, Texas 77025
Office: 528-5373 Residence: 528-4038

Morris Sanders, M.D. Jack I. Woolf, M.D.
DRS. WOOLF AND SANDERS
Diplomate American Board of Neurological Surgery
Locke Medical Building, 6011 Harry Hines Blvd.
Dallas, Texas 631-1500

JACK STERN, M.D.
GARY C. HUTCHISON, M.D.
Neurological Surgery
Suite 826, Locke Medical Building
6011 Harry Hines Blvd., Dallas, Texas 75235
631-1822

Casey E. Patterson, M.D. Tom M. Nash, M.D.
Charles W. Simpson, M.D. James E. Bland, M.D.
DRS. NASH, PATTERSON & SIMPSON, ASSN.
Neurological Surgery
637-0420
Suite 557 - Locke Medical Building, 6011 Harry Hines Blvd.
Dallas, Texas 75235

ALBERT D'ERRICO, M.D.
Neurological Surgery
3707 Gaston Avenue Dallas, Texas 75246
Telephone 824-2543

RONALD SMITH, M.D.
Neurological Surgery
901 South Lake Fort Worth, Texas
Telephone 336-0551

GLENN R. CHERRY, M.D., F.A.C.S.
R. GORDON LONG, M.D.
Diplomate American Board of Neurological Surgery
712 North Washington
826-7060 Dallas, Texas

ROBT. C. L. ROBERTSON, M.D., F.A.C.S.
JOSEPH W. ROBERTSON, M.D.
Neurological Surgery
2210 Maroneal Houston, Texas 77025
523-3684

WILLIAM J. NELSON, M.D.
Certified by the American Board of Neurological Surgery
Suite 300
University Towers
915-542-0643
1900 N. Oregon St. El Paso, Texas 79902

CHARLES A. BORNE, JR., M.D.
Neurological Surgery
Suite 834, Sealy-Smith Professional Building
Galveston, Texas 77550
200 University Boulevard 713-763-1688

Nuclear Medicine

HERBERT C. ALLEN, JR., M.D.
Practice Limited to
NUCLEAR MEDICINE
526-1501
100 Hermann Professional Bldg.
Houston, Texas 77025

Ophthalmology

HOUSTON EYE ASSOCIATES
1121 Hermann Professional Building
Houston, Texas 77025
Phone 526-7261
(AC 713)
Richard S. Ruiz, M.D., F.A.C.S.
Charles E. Russo, M.D. Robert H. Stewart, M.D.
Malcolm L. Mazow, M.D. Robert B. Wilkins, M.D.

DRS. MURPHY, ALPAR, TAYLOR & HOWELL
OPHTHALMOLOGY
Weldon O. Murphy, M.D.
John J. Alpar, M.D.
Coleman Taylor, M.D.
J. Franklin Howell, Jr., M.D.
Diplomates of the American Board of Ophthalmology
2300 West 7th Avenue Amarillo, Texas

ALBERT VAISER, M.D.
WILLIAM B. SNYDER, M.D.
Diseases and Surgery of the Retina
318 Medical Arts Building
Dallas, Texas 748-0958

LIEVEN J. VAN RIET, M.D.
OPHTHALMOLOGY
Medical Surgical
224-0654
Saint Joseph Professional Building
Houston, Texas 77002

BERT C. BRYAN, M.D.
Surgery and Diseases of the Eye
1314 Medical Arts Building
747-7474 Dallas, Texas 747-2481

W. REX HAWKINS, M.D.
Detachment of the Retina
Diabetic Retinopathy
250 Hermann Professional Building
Houston, Texas 529-6727

Harold E. Caplan, M.D.
Jed Lee Howard, M.D.
R. Larry Brenner, M.D.
Ophthalmology

3320 Plainview	Seabrook Professional Bldg.
Pasadena, Texas	2622 NASA Road 1
713 - 944-5700	Seabrook, Texas
	713 - 877-2571

DAVID R. STAGER, M.D.
PEDIATRIC OPHTHALMOLOGY
8226 Douglas Ave.
Dallas, Texas 75225

ARTHUR M. CLEMENTS, M.D.
Surgery and Diseases of the Eye
(214) 341-3407
Northlake Professional Building
8535 Ferndale Road Dallas, Texas 75238

Orthopedic Surgery

H. H. Beckering, M.D. George Truett James, M.D.
L. Ray Lawson, M.D. Robert D. Vandermeer, M.D.
W. B. CARRELL MEMORIAL CLINIC
2828 Lemmon Ave. Dallas, Texas

FORT WORTH BONE & JOINT CLINIC
918 8th Avenue — Fort Worth, Texas
Louis J. Levy, M.D. Cuvier P. Lipscomb, M.D.
Henry C. McDonald, Jr., M.D. Fred W. Sanders, M.D.

Ralph E. Donnell, M.D. F. Carlton Hodges, M.D.
ORTHOPEDIC ASSOCIATES
Diplomates American Board of Orthopedic Surgery
1133 N. 19th St. Abilene, Texas 79601

HOUSTON ORTHOPEDIC CLINIC
Joseph Barnhart, M.D. Donald T. Lazarz, M.D.
1817 Dryden Road Phone: 529-4389
Houston, Texas

LUBBOCK ORTHOPEDIC SURGERY CLINIC
ROYCE C. LEWIS, JR., M.D.
KENNETH C. SCHOLZ, D.D.S., M.D.
RAY E. SANTOS, M.D.
3702 21st St., Suite 9 806-763-8281
Lubbock, Texas 79410

THE EL PASO
ORTHOPEDIC SURGERY GROUP
Louis W. Breck, M.D. Oren H. Ellis, M.D.
W. Compere Basom, M.D. Wellington J. Pindar, M.D.
Morton H. Leonard, M.D.* Donald A. Shearer, Admstr.
Special attention to surgery of the hand
1220 N. Stanton St. Tel. 533-7465 El Paso, Texas 79902

B. C. HALLEY, JR., M.D.
DAVID R. WEBB, JR., M.D.
Orthopaedic Surgery
3909 Worth at Washington 821-1417
Dallas, Texas 75246

RUSS B. GRAHAM, M.D., F.A.C.S.
3607 Gaston Avenue
Dallas, Texas 75246
ORTHOPEDIC SURGERY
Telephone
824-7883

THE ORTHOPEDIC GROUP OF RICHARDSON
Charles E. Graham, M.D.
M. Gayle Glidewell, M.D.
212 South Cottonwood Suite D
Richardson, Texas 75080
ORTHOPEDIC SURGERY
231-6396

L. LEE LANKFORD, M.D.
Diplomate American Board of Orthopedic Surgery
HAND SURGERY AND
UPPER EXTREMITY RECONSTRUCTIVE
SURGERY
3707 Gaston Ave. Area Code 214
Dallas, Texas 75246 823-5351

THE ARLINGTON ORTHOPEDIC GROUP
H. W. Bendel, Jr., M.D. E. E. Rising, Jr., M.D.
C. Poindexter, M.D.
Diplomates American Board of Orthopaedic Surgery
801 West Randol Mill Road 817 - 261-8284
Arlington, Texas 76010

THE BOSWELL-EVANS ORTHOPAEDIC CLINIC
George M. Boswell, Jr., M.D., F.A.C.S. James P. Evans, M.D.
Lewis R. Thompson, M.D.
Gerald W. Schofield, M.D.
4849 W. Lawther Dr. 348-8300 Dallas, Texas 75218

Otolaryngology

TOM BARR, M.D.
Ear, Nose, and Throat,
Diseases of Larynx, and
Laryngeal Surgery
Medical Arts Building Dallas, Texas

HERBERT H. HARRIS, M.D., F.A.C.S., F.I.C.S.
Oto-Laryngology Broncho-Esophagology
and Laryngeal Surgery
907 Hermann Professional Bldg. Houston, Texas

MARVIN G. SHEPARD, M.D., F.A.C.S.
Practice limited to Otology and Otological Surgery
Medical Tower Building
712 N. Washington
Suite 514
Dallas, Texas Hours By Appt.

W. P. ANTHONY, M.D.
Otology
662 So. Henderson Fort Worth, Texas 76104

DONALD N. MATHESON, M.D., F.A.C.S.
Diplomate American Board of Otolaryngology
800 Fifth Avenue, Phone 336-7133
Fort Worth, Texas

Pathology

MARVIN D. BELL, A.B., M.D.
Clinical Pathology
1109 Medical Arts Bldg. Dallas, Texas

A. B. CAIRNS, M.D.
GERARD NOTEBOOM, M.D.
MARC GARZA, M.D.
RONALD E. BUCHANAN, M.D.
WADE M. BRANNAN, M.D.
Diplomates American Board of Pathology
1105 N. Bishop Methodist Hospital
Dallas, Texas Dallas, Texas

FORT WORTH MEDICAL LABORATORIES
John J. Andujar, M.D.
Dorothy Patras, M.D.
1404 Pennsylvania Ave. (817) 336-7137
P. O. Box 1118 Fort Worth, Texas 76101

BROWN & ASSOCIATES MEDICAL LABORATORY
Tissue Pathology, Exfoliative Cytology, Hematology, Serology, Clinical Chemistry, Bacteriology, Parasitology, Serum Protein Electrophoresis and Hemoglobin Electrophoresis
Wilson G. Brown, M.D. George V. Miller, M.D.
Walter G. Olin, M.D. John R. Thomas, M.D.
S. J. Skinner, M.D. Joe B. Haden, M.D.
Diplomates American Board of Pathology
165 Hermann Professional Bldg., 526-4031
Houston, Texas
"Mailing Containers on Request"
"Office Pickup Service in Houston"

DR. PREUSS PATHOLOGY LABORATORY
Exfoliative Cytology
and Surgical Pathology
FRED S. PREUSS, M.D., F.C.A.P.
3607 Gaston Avenue, Room 305
Dallas, Texas 75226
Telephone: 823-6912
Specimen containers on request

NUCLEAR MEDICINE LABORATORIES OF TEXAS
6411 South Main Street
Texas Medical Center
Houston, Texas 77025
Completely equipped radioisotope laboratory for diagnostic radioactive tests in:
Hematology, Thyroidology, Endocrinology, Gastroenterology, Cardiology, Neurology, Neuro-Surgery, Urology, Ophthalmology and Obstetrics-Gynecology
Herbert C. Allen, Jr., M.D., Director
526-1501

John H. Childers, M.D. E. H. Valentine, M.D.
R. R. Rember, M.D. W. L. Crofford, M.D.
E. P. Jenevein, M.D.
MEDICAL LABORATORY SERVICE OF DALLAS
Clinical Pathology Surgical Pathology
Diagnostic Radioisotopes Exfoliative Cytology
6011 Harry Hines Boulevard Dallas, Texas 75235
637-0210
(Mailing containers available upon request)

PRUITT MEDICAL LABORATORIES
Jack Pruitt, M.D.
Diplomate, American Board of Pathology
Tissue Pathology, Exfoliative Cytology, Clinical Pathology, Medicolegal Consultation.
P. O. Box 160 Lufkin, Texas 75901
Phone 634-4453

WACO CLINICAL PATHOLOGY LABORATORY
K. P. Wittstruck, M.D., F.C.A.P.
Walter Krohn, M.D., F.C.A.P.
Clinical Pathology Exfoliative Cytology
Surgical Pathology Medicolegal Consultation
Mailing containers on request
2112 Washington Avenue 756-7226
P.O. Box 3160 Waco, Texas 76707

GEORGE J. RACE, M.D. AND ASSOCIATES PATHOLOGISTS
George J. Race, M.D., Ph.D. William B. Kingsley, M.D.
Gwendolyn Crass, M.D. Norman G. P. Helgeson, M.D.
Marie L. Shaw, M.D. H. Richard Pascoe, M.D.
Surgical Pathology and Cytology Consultation
421 Medical Tower Building
712 North Washington, Dallas, Texas 75246
Telephone AC 214, 824-1258

Physical Medicine and Rehabilitation

TEXAS REHABILITATION HOSPITAL OF GONZALES
WARM SPRINGS FOUNDATION, INC.
P.O. BOX 58, GONZALES, TEXAS 78629
Facilities for physical restoration.
Physical Therapy, Occupational Therapy, Speech Therapy, Recreational Therapy, School from first grade through twelfth grade.
ROBERT M. IZARD, JR., M.D. Medical Director
LYNN SMITH, SR. Administrator

Plastic Surgery

THOMAS D. CRONIN, M.D., F.A.C.S.
RAYMOND O. BRAUER, M.D.
THOMAS M. BIGGS, M.D.
Diplomates American Board of Plastic Surgery
PLASTIC SURGERY
5419 Caroline Street 523-8131 Houston, Texas 77004

WILLARD C. SELLMAN, JR., M.D.
Plastic, Maxillo-Facial and Hand Surgery
530 Locke Medical Building
6011 Harry Hines Blvd.
Dallas, Texas 75235 637-4770

BROMLEY SMITH FREEMAN, M.D., F.A.C.S.
Diplomate American Boards of Surgery and Plastic Surgery
PLASTIC AND RECONSTRUCTIVE SURGERY
Tumors of the Head and Neck
1810 The Medical Towers — Tel. 529-3579
Houston, Texas 77025 — Res. 782-1628

JOHN B. PATTERSON, M.D., F.A.C.S.
Diplomate American Board
PLASTIC SURGERY
612 Doctors Building — Fort Worth, Texas
336-0356

SIMON FREDRICKS, M.D., F.A.C.S.
Diplomate American Board of Plastic Surgery

Houston Office	*Pasadena Office*
1103 Medical Towers	904½ E. Southmore
Houston, Texas 77025	Pasadena, Texas 77502
523-5575	473-5488

DAVID A. GRANT, M.D., F.A.C.S.
Diplomate American Boards of Surgery and Plastic Surgery
PLASTIC & RECONSTRUCTIVE SURGERY
COSMETIC SURGERY
800 Fifth Avenue
Fort Worth, Texas 76104
335-4751

CARL R. COERS, III, M.D.
Diplomate American Board of Plastic Surgery
PLASTIC, RECONSTRUCTIVE & HAND SURGERY
800 Fifth Avenue
Fort Worth, Texas 76104
335-4751

MARCUS L. FINLEY, M.D., F.A.C.S.
Diplomate American Board of Plastic Surgery
PLASTIC, RECONSTRUCTIVE AND HAND SURGERY
1115A Pennsylvania Avenue
Fort Worth, Texas 76104
Telephone 335-6439

VALENTIN GRACIA, M.D.
F.A.C.S., F.I.C.S., D.A.B.
AESTHETIC SURGERY—BURNS
1001 W. Rosedale — Phone
Fort Worth, Texas 76104 — 336-0446

FRANCIS A. MORRIS, JR., M.D.
WILLIAM E. BARNES, M.D.
Diplomates American Board of Plastic Surgery
Plastic, Reconstructive and Hand Surgery
3100 Red River — 476-9149 — Austin, Texas

Plastic Surgery
JOHN R. HILL, M.D., F.A.C.S.
Diplomate, American Board of Plastic Surgery
Practice limited to Plastic, Reconstructive and Hand Surgery
Medical Center Office: 272 Hermann Prof. Bldg. Houston, Texas 77025 528-2481
Spring Branch Office: 9320 Westview Houston, Texas 77055 528-2481

E. FRANK DUNTON, M.D., F.A.C.S.
Plastic & Reconstructive Surgery and Surgery of the Hand
Telephone 824-7290 — Suite 104, 3434 Swiss Avenue, Dallas, Texas

W. W. SCHUESSLER, M.D., F.A.C.S.
Diplomate of American Board of Plastic Surgery
Plastic, Reconstructive & Maxillo-Facial Surgery
Telephone 533-6362 — Suite 4-C Medical Center, 1501 Arizona Avenue, El Paso, Texas 79902

Radiology

AMARILLO RADIOLOGICAL GROUP
Practice Limited to Radiology
ROYAL WERTZ, M.D., F.A.C.R.
WILBUR Q. BUDD, M.D., D.A.B.R.
800 Rusk Street
Amarillo, Texas 79106 — 373-8324

J. R. MAXFIELD, JR., M.D., M.A.C.R.
JACK G. S. MAXFIELD, M.D., M.A.C.R.
Radiological Center
Including Radioisotopes
2711 Oak Lawn, Dallas — 526-6661

MAURICE C. ARCHER, M.D., M.A.C.R.
MARY L. KILLINGSWORTH, M.D., M.A.C.R.
Diplomates of the American Board of Radiology
800 Fifth Avenue — Doctors Building
Fort Worth, Texas — 332-3401

DRS. CARLSON AND BAREKMAN
Glenn D. Carlson, M.D., F.A.C.R.
William H. Barekman, M.D., D.A.B.R.
Agnes M. Guthrie, M.D., D.A.B.R.
X-RAY DIAGNOSIS
X-RAY AND RADIUM THERAPY
RADIOISOTOPES
1221 Medical Arts Bldg.....741-3621
6011 Harry Hines Blvd.....631-7070
3607 Gaston Ave.....823-9961
DALLAS, TEXAS

Harvey M. Lowry, M.D., F.A.C.R.
James R. Gish, M.D., D.A.B.R.
Edward A. Sheldon, M.D., D.A.B.R.
James P. Wills, M.D.
RADIOLOGY
109 Doctors Bldg. — 838-4543
502 Goodhue Bldg. — 838-2224
Baptist Hospital — 833-6421
Beaumont, Texas

JAMES L. CLIFFORD, M.D., D.A.B.R.
Cobalt 60 Rotational Therapy
X-Ray and Radium Therapy
X-Ray Diagnosis
Radioisotopes
845 Clarksville St. — 784-4624 — Paris, Texas

DOCTORS McCONNELL, RIDINGS AND FULLER
208 Locke Medical Building — Telephone 637-0774
6011 Harry Hines Boulevard
Dallas, Texas 75235
R. W. McConnell, M.D.
Practice Limited to Nuclear Medicine
G. Ray Ridings, M.D.
D. E. Fuller, M.D.
Practice Limited to Radiation Therapy

Thoracic Surgery

Donald L. Paulson, M.D. Harold C. Urschel, Jr., M.D.
DRS. PAULSON AND URSCHEL
Thoracic and Cardiovascular Surgery
3810 Swiss Ave. 824-2503
Dallas, Texas

THORACIC AND CARDIOVASCULAR SURGERY
James O. McBride, M.D., F.A.C.S.
662 South Henderson, Suite A
P. O. Box 1407
Fort Worth, Texas 76102
332-7454 738-4594

Charles T. Meadows, M.D.
Diplomate, American Board of Thoracic Surgery
Thoracic and Cardiovascular Surgery
Broncho-esophagology
The Professional Building
673-8184
1101 North 19th Abilene, Texas

LeROY J. KLEINSASSER, M.D., F.A.C.S.
Diplomate American Board of Surgery &
The Board of Thoracic Surgery
CARDIOVASCULAR and
PERIPHERAL VASCULAR SURGERY
The Doctors Bldg., 3707 Gaston Ave.
Dallas 10, Texas

Robert R. Shaw, M.D. John L. Kee, Jr., M.D.
DRS. SHAW AND KEE
THORACIC SURGERY
The Doctors Building 3707 Gaston Avenue
Dallas, Texas 75246
826-5184

WILLIAM W. TAYLOR, M.D.
Diplomate Board of Thoracic Surgery
Thoracic, Cardiac, and Vascular Surgery
804 Locke Med. Bldg. 6011 Harry Hines Blvd.
Dallas, Texas 75235 637-4833

ALLAN L. GRAHAM, M.D.
Diplomate American Board of Surgery and
Board of Thoracic Surgery
Cardiovascular and Peripheral Vascular Surgery
502 Doctors Building 800 Fifth Avenue
Fort Worth, Texas 332-7879

Use your
Texas Medical Association
Memorial Library
45,000 Bound Volumes 400 Films
1,100 New Journals Each Month
Extensive Reprint Collection
Audio Digest Foundation Tapes
Call or write today!
1801 North Lamar Blvd.
Austin, Texas 78701
AC 512 477-6704

Urology

CECIL M. CRIGLER, M.D., F.A.C.S.
Practice limited to
UROLOGY
1519 Hermann Professional Bldg., Houston, Texas

JO C. ALEXANDER, M.D.
KARL B. KING, M.D. FOSTER FUQUA, M.D.
ELGIN W. WARE, JR., M.D.
GEORGE E. HURT, JR., M.D.
EUGENE R. TODD, M.D.
DONALD E. JOHNSON, M.D.
Urology
3707 Gaston Avenue Dallas, Texas

THE UROLOGY CLINIC
1415 Pennsylvania Ave., Fort Worth, Texas 76104
Dolphus E. Compere, M.D., M.S., F.A.C.S.
Diplomate of American Board of Urology
Grant F. Begley, A.B., M.D.
Diplomate of American Board of Urology
Hugh Lamensdorf, M.D.

H. M. GIBSON, JR., M.D., F.A.C.S.
(Certified by American Board of Urology)
Practice limited to
UROLOGY
512 University Towers Bldg. 1900 North Oregon St.
El Paso, Texas Ph. 532-8130 & 533-4765

MARVIN GREER RAPE, M.D.
Diplomate of American Board of Urology
NEWTON F. McDONALD, M.D.
Diplomate of American Board of Urology
Practice Limited to
UROLOGY
1703 St. Joseph Professional Bldg., 2000 Crawford
Houston, Texas 77002

JOHN B. TRIBLE, M.D.
Practice Limited to
UROLOGY
1209-10 Medical Arts Bldg.
222-7521 Houston, Texas 77002

ERWIN C. WINKEL, M.D.
practice limited to
UROLOGY
Northwest Professional Center 681-0343
2925 West T.C. Jester Blvd. Houston, Texas

THE UROLOGY CLINIC
1010 Louisiana, Houston, Texas 77002
227-1414
JAMES S. BOREN, M.D.
ROBERT I. COX, M.D.
Diplomates American Board of Urology

JOHN F. COLLINS, JR., M.D.
Urology
Doctor's Park 1400 Crescent
Denton, Texas 76201 (817) 387-3828

CLASSIFIED ADS

Physicians Wanted

WANTED—M.D.'s to do general practice with surgery, Houston area. Present doctors netting $4,000 to $8,000 monthly after six months practice. No investment required. Send resume to Ad-179, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

ORTHOPEDIC SURGEON AND TWO GP's needed by 19 doctor gronp. 100-bed fully accredited hospital. Salary open. Full partnership in one year. For additional details, write John B. Chester, M.D., 3330 South Lancaster Road, Dallas, Texas 75216.

GENERAL PRACTITIONER NEEDED to assume well-established practice in Milford, Texas. The community's only doctor recently suffered a heart attack and has moved. An eight room small clinic owned by the City is availabie rent free. Income limited only by interest and ability. Good school and churches. Twelve and 17 miles from two first-class hospitals, 48 miles south of Dallas, 48 miles north of Waco. Contact C. O. Miller, P.O. Box 546, Milford, Texas 76670, area code 214, 493-2511.

DERMATOLOGIST, EENT AND GENERAL PRACTITIONER WANTED to associate with clinic with five physicians, two dentists, one orthodontist. Also complete laboratory and x-ray facilities. Write John G. Compton, Jr., M.D., Medical Center Clinic, Waxahachie, Texas 75165.

INTERNIST, board certified or eligible to join four internists in 15-doctor, multi-specialty clinic in West Texas city of 35,000. Life and malpractice insurance, disability and retirement programs provided. Modern clinic building adjacent to accredited hospital. Starting salary $25,000. Contact Jack H. Burnett, Jr., M.D., Malone and Hogan Clinic, 901 Main Street, Big Spring, Texas 79720.

EXCELLENT OPPORTUNITY FOR PHYSICIANS in Carrizo Springs, Texas. Office space available in new professional bnilding adjacent to hospital and nursing home. Excellent schools and housing in city. One general practitioner needed. For information write or call C. W. Vandervoort, 500 North 1st Street, Carrizo Springs, Texas 78834. Phone 876-2550.

UROLOGIST, board certified or eligible, to associate with a progressive and expanding multispecialty group in West Texas. Many fringe benefits including retirement program. No investment reqnired. Adjoining accredited hospital. City population 35,000. Contact Ad-236, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

RADIOLOGIST, board certified or eligible, to associate with a progressive and expanding multispecialty group in West Texas. Many fringe benefits inclnding retirement program. No investment reqnired. Adjoining accredited hospital. City population 35,000. Contact Ad-236, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

PEDIATRICIAN, board certified or eligible, to associate with a progressive and expanding multispecialty group in West Texas. Many fringe benefits including retirement program. No investment required. Adjoining accredited hospital. City population 35,000. Contact Ad-236, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

ORTHOPEDIC SURGEON, PEDIATRICIAN, OBSTETRICIAN AND TWO GENERAL PRACTITIONERS needed by 19 doctor-group. Salary open. Full partnership in one year. 100-bed fully accredited hospital. Many fringe benefits including tax-sheltered retirement plan. For additional details write Chester Clinic and Hospital Association, 3330 Sonth Lancaster Road, Dallas, Texas 75216, Attn: John B. Chester, M.D.

PHYSICIANS NEEDED: Staff physicians, general practitioners and/or board certified specialists, for staff of Travis State Schooi. Fringe benefits include 40 hour work week, vacation and sick leave. Present and projected salary increases make positions attractive. Contact Medical Director, Travis State School, P.O. Box 430, Austin, Texas 78767.

GENERAL PRACTITIONER OR GP-SURGEON WANTED in East Texas community of Crockett (Houston County). Office space available for solo practice or association with other physicians in area—106-bed new hospital. Center for industry, farming, livestock, and forestry operations. Excellent schools, churches, and recreational facilities available. For additional information contact Houston County Development Foundation, P.O. Box 807, Crockett, Texas 75835, area code 713, 544-2359.

PATHOLOGY RESIDENCIES AND INTERNSHIPS available in 600-bed general hospital. Fully approved four year program in anatomical and clinical pathology. Average annual specimens and tests—348,587. Interns—$6300; residents—$8100 up. Board and laundry. Charles B. Mitchell, M.D., Director of Laboratories, Harris Hospital, 1300 West Cannon, Fort Worth, Texas 76104.

WANTED: SOMEONE WHO WANTS TO MAKE A LOT OF MONEY AND IS WILLING TO WORK: Denver City, Yoakum County, Texas, needs a general practitioner who does general surgery. Present physician is leaving to enter industrial medicine. Completely equipped clinic, modern fifty bed hospital. This is one of the most lucrative practices in the State of Texas. Retiring Doctor has left all records here and they are available. Arrangements can be made to either purchase or lease clinic that will make this most attractive. For more information call or write Manager, Yoakum County Hospital, 612 West 4th Street, Denver City, Texas 79323, or telephone AC506, 592-2121.

GENERAL PRACTITIONER WANTED to join five man clinic in growing town of Clifton, 30 miles northwest of Waco near Lake Whitney. 41-bed fully accredited hospital with plans to expand by 30 beds. Salary to start, commensurate with present requirements; partnership later. Good schools, churches and hunting and fishing facilities. Contact V. D. Goodall, M.D., Goodall & Witcher Clinic, Clifton, Texas 76634.

WANTED: ASSOCIATE to associate with doctor doing internal medicine and cardiology. Equal time off. Salary for six months, then percentage on yearly sliding scale. Send medical curriculum vitae and references to Monroe Albert, M.D., 3118 Clark Avenue, San Antonio, Texas 78210.

CHIEF OF MEDICINE: Modern chest disease hospital needs internist, preferably with respiratory experience, to assume supervision of an 11-man medical staff, and serve as consultant to the surgical division. A special program for rehabilitation of patients with chronic obstructive chest diseases operates as an integral unit of the hospital which is affiliated with The University of Texas Southwestern Medical School. Entering salary is $22,500 per annum with an additional $1,000 for board certification. Fringe benefits include dual retirement plans, paid vacations and sick leave and 40-hour week. This is a challenging position in a progressive community of 60,000 in the rolling piney woods of East Texas, 100 miles east of metropolitan Dallas. Candidates must be licensed in Texas, be board certified, or eligible for certification. Submit resume or contact Personnel Officer, East Texas TB Hospital, P. O. Box 2003, Tyler, Texas 75701. (Equal opportunity employer)

PSYCHIATRIC RESIDENCY in approved three year program. Effective connections with universities, medical schools, private clinics, and community centers. Outstanding faculty, and programs. Stipends with Texas license, $13,000, $14,000 and $15,000 per year. NIMH grants available. For full information write: Anthony P. Rousos, M.D., Director of Training, Austin State Hospital, Austin, Texas 78751.

INDUSTRIAL MEDICAL CLINIC LOCATED IN DALLAS NEEDS A GENERAL PRACTITIONER. First year salary guaranteed and is based upon experience with future percentage partnership. Please reply to Charles E. Cook, M.D., 426 Medical Arts Building, 1719 Pacific Avenue, telephone 747-3712, or 650 Locke Medical Building, 6011 Harry Hines Blvd., telephone 638-2730.

WANTED: LOCUM TENENS to do general medicine (no OB or surgery). Advise of time available. Salary open. Send medical curriculum vitae and references to Monroe Albert, M.D., 3118 Clark Avenue, San Antonio, Texas 78210.

WANTED: PARTNERSHIP to buy part, half or full interest in clinic building and practice of 21 years in metropolitan city in South Central Texas, consisting primarily of internal medicine. Large annual gross. Fair appraisal made of both before price placed on same. Send medical curriculum vitae to Ad-265, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

GENERAL PRACTITIONER to take over large, solo practice in GP and surgery. Present MD to move in June due to progressive family allergies. Recently built office, 3-bedroom, 2½ bath home, and mobile home on lake lot for sale, lease, or rent with option to buy part or all. Town of 9,000 in Lower Rio Grande Valley of Texas. 26-bed hospital, 50-bed nursing home, good schools, churches, hunting, fishing, boating, golf, near Mexico and Gulf of Mexico. Excellent opportunity for young, energetic MD. Should gross in excess of $60,000 first or second year. Offer not open to limited practitioner or semi-retired. Gene E. Bennack, M.D., 505 South 10th Street, Raymondville, Texas 78580. Phone 689-2188.

GENERAL PRACTITIONER NEEDED to associate with well-established physician in Dallas area. Contact: Ben Capote, M.D., 308 NW 2nd, Grand Prairie, Texas 75050.

WANTED: GENERAL PRACTITIONER WITH INTEREST IN SURGERY; GENERAL PRACTITIONER WITH INTEREST IN INTERNAL MEDICINE OR INTERNIST WITH INTEREST IN CARDIOLOGY to associate with a general practitioner with training in surgery. No other active general practitioner in area of about 8,000 people. Modern clinic building for three or four doctors next to 40-bed open staff hospital. Located on Interstate 10, 60 miles from Houston. Area primarily industrial. Fine schools. Excellent hunting and fishing. Salary or partnership negotiable. Contact C. I. Shult, M.D., 1220 Bowie Street, Columbus, Texas 78934. Phone AC 713, 732-2318 or 732-2373.

INTERNIST-CARDIOLOGIST NEEDED. Office complete. Growing industrial area. County population 75,000. 205 bed fully accredited hospital with 10 bed ICU unit newly completed and fully equipped for CCU. No other internist in town. Excellent opportunity. Beautiful, friendly community. Camping, boating, fishing and hunting. Near Houston. Write Mrs. G. D. Garcia, 1915 Greenbriar Avenue, Orange, Texas 77630.

INTERNIST for group of eight in Central Texas. Percentage of practice with annual guaranteed income of $35,000. Please reply to Ad-269, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

STAFF PHYSICIAN: Chest disease hospital affiliated with The University of Texas Southwestern Medical School needs a physician, preferably with chest experience, to join an 11-man staff. Entering salary is $20,000 to $21,500 per annum, depending on experience. There is an additional $1,000 for board certification. Fringe benefits include dual retirement plans, paid vacation and sick leave and 40-hour week. This is a challenging position in a progressive community of 60,000 in the rolling piney woods of East Texas. Candidates must be licensed to practice in Texas. Submit resume or contact Personnel Officer, East Texas TB Hospital, P. O. Box 2003, Tyler, Texas 75701. (Equal opportunity employer)

GENERAL PRACTITIONER WANTED—Modern office space and hospital available. In town of 2,000; trade area of 5,000. Made up of stable economy and permanent residents. Located in the heart of the Hill Country, where excellent hunting and fishing are always available. Good schools and numerous churches. Contact immediately. Administrator, Mason Memorial Hospital, Mason, Texas 76856.

CLASSIFIED AD RATES & DATA: Classified Advertising sells for $6.00 per issue for 50 words or less, payable in advance. Ad numbers can be substituted for formal addresses upon request at no extra cost. Name and address of ad number listings can not be given out unless specific permission to do so has been given. The advertising office will not contact ad number holders except by mail. Copy deadline is the 20th of the month preceding publication. Send copy to Advertising Assistant, TEXAS MEDICINE, 1801 North Lamar Blvd., Austin, Texas 78701.

DIRECTOR PULMONARY REHABILITATION: Progressive respiratory disease hospital affiliated with The University of Texas Southwestern Medical School needs a physician experienced in pulmonary physiology to head a special program for the rehabilitation of patients with chronic obstructive chest diseases. Entering salary is $22,500 per annum, with an additional $1,000 for board certification. Fringe benefits include dual retirement plans, paid vacations, sick leave and 40-hour week. This is a challenging position in a progressive community of 60,000 in the rolling piney woods of East Texas, 100 miles east of metropolitan Dallas. Candidates must be licensed in Texas, be board certified or eligible for certification. Submit resume or contact Personnel Officer, East Texas TB Hospital, P. O. Box 2003, Tyler, Texas 75701. (Equal opportunity employer)

OB/GYN: Board certified or eligible. Needed by a 13-man multispecialty group. Primary need is for gynecologic surgery. Modern, fully equipped, and recently redecorated clinic building, located within one block of either of two hospitals. City population over 100,000. Starting salary $25,000. Plus percentage of gross. Liberal fringe benefits and retirement program. Please reply to Ad-273, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

FOR SALE: LOCATED IN AUSTIN. General practice with surgery. Practice built up for forty years. 1000 square feet of office space with very reasonable rent. Equipment and practice for sale at a good price. Available immediately. Will sell equipment separately from practice. Well equipped and in good condition. Please reply to AD-274, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

ESTABLISHED GENERAL PRACTICE, office, all equipment rent free for two years while I take leave of absence with Peace Corps. Associates for alternating calls. Available in four to eight months. If you want to stay, full partnership of all facilities would be offered at my return. Good area in North Texas with full hospital facilities. Furnished home included for cost of payments. Write P. O. Box 4109, Wichita Falls, Texas 76308.

FAMILY PRACTITIONERS, INTERNISTS, AND PEDIATRICIANS —you are needed in growing progressive West Texas city which received "Look" magazine's 1969 "All-America City" award. New magnesium plant. New junior college. Excellent school system. Well-equipped ultramodern AHAJC accredited hospital. Third ranking oil producing county in state. Small town living with big city medical facilities. Write Carl A. Dillaha, M.D., Cogdell Center, Snyder, Texas 79549.

PRIVATE INDIVIDUAL AND GROUP PRACTICE. $30,000 guaranteed first year with little or no practice expense. Maximum leisure time with family. Both small town and city locations. Not an employment agency. Sanford Smith, P. O. Box 9836, Houston, Texas 77015. 713-453-5454.

SMALL TEXAS PANHANDLE TOWN—county seat with excellent trade area, has opening for a general practitioner in a well equipped two man clinic. Clinic is presently staffed with one overworked MD and is on the grounds of a new 30-bed general hospital. This town offers excellent practice, excellent schools, good churches and good relaxed living. Net income (excluding taxes) should exceed $40,000 the first year. Only investment required is your time and effort. Contact Hospital Administrator, Box 526, Wheeler, Texas 79096. Telephone 806-826-5581.

WANTED GENERAL PRACTITIONER OR GENERAL SURGEON as an associate with GP in small town in Central Texas. Have privately owned combination clinic and hospital. Beginning salary $5000 per month or may rent space and be on own. M. A. Childress, M.D., Goldthwaite, Texas 76844. Phone 915-648-2212.

GENERAL PRACTITIONER TO JOIN 3-man general practice group in Terrell. Good hospital and laboratory facilities available. Advantages of practice in a town of 15,000, close to Dallas. Two out of three weekends off. Salary open. Percentage available later. Contact Drs. Alexander, Conradt and Wilson, 202 West Nash, Terrell, Texas 75160.

WANTED: PSYCHIATRIST FOR CLINICAL DIRECTOR OR CHIEF OF SERVICE. Salary $22,500 plus additional compensation in accordance with qualifications. Write Superintendent, Big Spring State Hospital, Box 231, Big Spring, Texas 79720.

OPHTHALMOLOGIST AND OTOLARYNGOLOGIST NEEDED in South Central Texas community located on Hwy. 71 between Austin and Houston. Seven physicians now practice in the community, but there is a definite need for an ophthalmologist and otolaryngologist. New million-dollar 60-bed hospital. Population of city 4,400, service area population 83,000. Would prefer full-time service, but would consider a part-time arrangement. Contact La Grange Chamber of Commerce, P. O. Box 70, La Grange, Texas 78945. Telephone area code 713, 968-4756.

Situations Wanted

MD SEEKS OPENING in state, federal, insurance, industrial, college or relief work. Experienced in private practice and industrial and institutional work. Part time or locum tenens. Please reply to Ad-195, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

RADIOLOGIST, university trained, age 41. Certified 1963, diagnosis, therapy, and isotopes. Prefer group or private practice in city of 500,000 or less. Please reply to Philip M. Platten, M.D., 502 Queens Road, Salina, Kansas 67401.

SEEKING LOCATION. 31 year old GP with special interest in OB and allergy wishes to relocate in Texas. AAGP. Desires town of 10,000-25,000 population, close to hunting and fishing. Noble L. Ballard, M.D., 120 North Bryant, Edmond, Oklahoma 73034. Area code 405, 341-2233.

DERMATOLOGIST, age 35 years, board eligible. Seeking full salary position in existing practice. Will consider new practice, preferably in the Houston area. Reply to Ad-276, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

For Sale or For Rent

MEDICAL OFFICE FOR RENT: Prime location in North Dallas. Completely partitioned and available for immediate occupancy. Call area code 214, 363-6415 or 363-2770, or write Dr. Robert Londeree, 6140 Sherry Lane, Dallas, Texas 75225.

PRACTICE AND EQUIPMENT AVAILABLE. Recently vacated, completely equipped 1800 square foot medical clinic after 17 years practice, suburban Dallas. Excellent opportunity and facilities for two to three physicians to share. Area's steady and rapid growth creates urgent need for general practitioners, pediatricians, internists. Graduated rent until established. Inquire Allen Maurice Fain, M.D., 8303 Marvin Love Freeway, Dallas, Texas 75216.

AVAILABLE—Office suite designed for obstetrician or general practitioner in doctors building. Richardson, Texas. For additional information call AC 214, 363-2001, Dallas.

FOR SALE: A used stationary hip type whirlpool with rotating chair —in excellent condition. Contact Austin Bone & Joint Clinic, 1011 East 32nd Street, Austin, Texas 78705, AC 512, 477-6341.

FOR RENT in the heart of the Texas Medical Center, Houston. Fully equipped office available for daily afternoon use. An ideal way to begin practice at the lowest possible overhead. Call collect area code 713, 528-2429.

PHYSICIANS PLEASE READ. No children's hospital in this centrally located Texas town of over 250,000 persons. An ideally located site is available, including 5.20 acres of nine foot fenced improved land. Present building will convert to hospital of unusual beauty and usefulness. Permanent improvements only 13 years old. Now used for institution for adults. No sickness ever here. Extremely clean. Possibilities too numerous to mention. If in perfect condition, appraised value $1,500,000. Water damage under one end. Can be had for less than $1,000,000. Good financing available to qualified men. Do not pass this over. Property is not on market. Appointments to inspect are private and confidential. Contact Mrs. J. L. Smith, Realtor, AD-275, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

Miscellaneous

WANTED: PHARMACY LOCATION in clinic with 18 or more doctors. Contact Robert Grantham, Jr., P.O. Box 13350, Houston, Texas 77019.

SOUTHWEST REGIONAL POISON CONTROL CENTER AND TOXICOLOGY LABORATORY. Free toxicological consultation and information on medicinal and commercial products is available by phone when your patients are poisoned. Center is open 24 hours each day, 7 days a week, with professionally trained staff present. Call area code 713, 765-1420. Toxicological analyses performed by prearrangement with Dr. Nash, AC 713, 765-2408, University of Texas Medical Branch, Galveston, Texas 77550. Supported by PHS-CPF-69-21.

FOR SALE: FINE ART. Doctors only. Antique paintings, silver, porcelains, crystal, cut glass, bronzes, persian rugs. Paintings by Robert Wood, Salinas, Grandee, Fried Pal, Rockwell, Onderdonk, Wiggins, Ryder, Cortes, Dyf, Sharp, Picasso and others. Contact Carl F. Rainone, D.D.S., 1212 West Park Row, Arlington, Texas 76010. Phone AC 817, 261-7844.

REGISTER NOW!

TMA ANNUAL SESSION

APRIL 30-MAY 3

DALLAS

ONCOLOGY

Oscar L. Morphis, M.D., F.A.C.R.
Radiation Therapy
Radium Therapy

R. P. O'Bannon, M.D., F.A.C.R.
Radiation Therapy

Norris Gilfillan, M.D., F.A.C.S.
Chemotherapy

Tom B. Bond, M.D., F.A.C.R.
Consultant

Jack M. Morgan, M.S., F.A.C.R.
Consultant-Physicist

1550 West Rosedale, Suite 620 Fort Worth 336-2028

ADVERTISING INDEX

American Cancer Society 136

Arch Laboratories
Dicarbosil 95

Beverly Hills Hospital and Clinic 131

Blue Cross-Blue Shield of Texas 7

The Brown Pharmaceutical Company
Android 139
Cerebro-Nicin 139

The Brown Schools 49

Bristol Laboratories
Tetrex bidcaps 34

Burroughs Wellcome & Company, Inc.
Empirin Compound with Codeine 12

Campbell Soup Company 105

Casualty Indemnity Exchange
Malpractice Insurance 47

Conal Pharmaceuticals, Inc.
Urised 27-28

Dallas Medical & Surgical Clinic and Hospital 2nd Cover

The Dow Chemical Company
Novahistine LP 37

Francis Hospitels Incorporated
Convalescent Care 52

Geigy Pharmaceuticals
Dulcolax 11
Preludin 14-15

Glenbrook Laboratories
Bayer Aspirin 35

Highland Hospital 132

Hoechst Pharmaceutical Co.
Doxidan 31

Homestead Child Placement 132

Humco Laboratory
Vasomist 46

Hynson, Westcott and Dunning, Inc.
Bromsulphalein 55

Ives Laboratories, Inc.
Cyclospasmol 50-51
Isordil 8

Mead Johnson Laboratories
K-Lyte 134-135
Vasodilan 24-25

Kelsey-Seybold Clinic 90

The Killgore Children's Psychiatric Center and Hospital, Inc. 122

King's Daughters Clinic Back Cover

Lederle Laboratories
Achrostatin V 46
Declostatin 154

Eli Lilly and Company
Illosone 16

Loma Linda Foods
Soyalac 26

The Martin X-Ray and Radium Clinic 122

Medical Arts Clinic, Corsicana 140

The Medical Protective Company
Professional Liability Insurance 93

The Wm. S. Merrell Company
Kolantyl 36

The National Drug Company
AVC/Dienestrol 10
Quinamm 9
Tepanil Ten-tab 48

Oncology—Fort Worth 152

Ortho Comfort Stores
Adjust-A-Bed 51

William P. Poythress & Company, Inc.
Mudrane 13

T. Rowe Price Growth Stock Fund, Inc. 95

The Prudential Insurance Company of America
TMA Group Insurance Plan 110

Radiology Associates of Fort Worth 140

A. H. Robins Company
Allbee with C 138
Ambar #2 Extentabs 3rd Cover
Dimetapp Extentabs 103
Donnatal 137
Phenaphen with Codeine 38

Roche Laboratories
Berocca 54, 133
Valium 32

Julius Schmid Pharmaceuticals
Candeptin 94-95

Scott and White Clinic Back Cover

G. D. Searle & Company
Pro-Banthine 106-107

Smith Kline & French Laboratories
Thorazine Spansule 53

Starlite Village Clinic 140

Surgical Mechanical Research, Inc.
Medical and Dental Equipment 44

Terrell's Laboratories and Medical Group 1

Texas Central Credit Union 44

Texas Medical Association
1970 Annual Session 23, 117-120
Orient Adventure 109

Timberlawn Psychiatric Hospital 90

Torbett, Hutchings, Smith Memorial Hospital 2nd Cover

Travis Clinic and Nan Travis Memorial Hospital 140

Turner's Clinical & X-Ray Laboratories 122

Wichita Falls Clinic-Hospital 132

Physicians' Directory 141-150

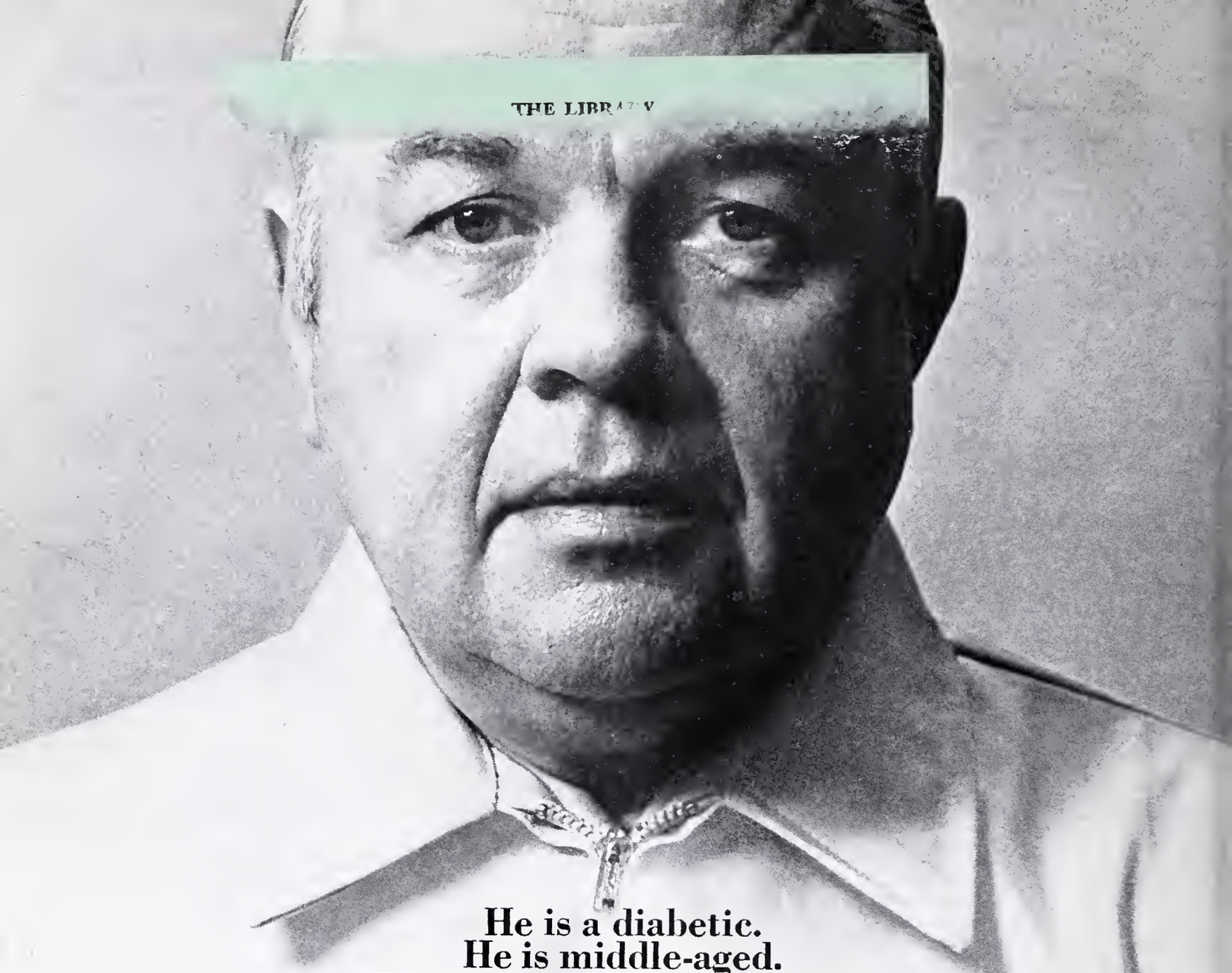
Classified Advertisements 151-152

ADVERTISING RATES & DATA: Available on request from the Advertising Director, Texas Medicine. Advertising plates should be sent directly to the printer. Space reservations, copy and proofs should be sent to the Advertising Director. Represented nationally by the State Medical Journal Advertising Bureau, Inc., 1010 Lake Street, Oak Park, Ill. 60301.

ADVERTISING & BUSINESS OFFICES: Texas Medical Association, 1801 North Lamar Blvd., Austin 78701; Telephone: 512-477-6704.

PRINTING OFFICES: Texas Medicine, c/o Stafford-Lowdon Company, 1114 West Daggett, Fort Worth 76104.

THE LIBRARY



He is a diabetic.
He is middle-aged.
When he needs an antibiotic he may be a candidate for

DECLOSTATIN® 300

Demethylchlortetracycline HCl 300 mg and Nystatin 500,000 units CAPSULE-SHAPED TABLETS Lederle

b.i.d.

To guard susceptible patients against intestinal monilial overgrowth during broad-spectrum therapy—the protection of nystatin is combined with demethylchlortetracycline in DECLOSTATIN.

For your susceptible candidates, prescribe DECLOSTATIN—the broad-spectrum therapy that prevents monilial overgrowth.

Effectiveness: Because its antibacterial component is DECLOMYCIN Demethylchlortetracycline, DECLOSTATIN should be equally or more effective therapeutically than other tetracyclines in infections caused by tetracycline-sensitive organisms. The antifungal component, Nystatin, protects against superinfection by antibiotic-resistant fungal overgrowth (particularly monilia) in the intestinal tract.

Contraindication: History of hypersensitivity to demethylchlortetracycline or nystatin.

Warning: In renal impairment, usual doses may lead to excessive accumulation and liver toxicity. Under such conditions, lower than usual doses are indicated, and, if therapy is prolonged, serum level determinations may be advisable. A photodynamic reaction to natural or artificial sunlight has been observed. Small amounts of drug and short exposure may produce an exaggerated sunburn reaction which may range from erythema to severe skin manifestations. In a smaller proportion, photoallergic reactions have been reported. Patients should avoid direct exposure to sunlight and discontinue drug at the first evidence of skin discomfort. Necessary subsequent courses of treatment with tetracyclines should be carefully observed.

Precautions: Overgrowth of nonsusceptible organisms may occur. Constant observation is essential. If new infections appear, appropriate measures should be taken. In infants, increased intracranial pressure with bulging fontanels has been observed. All signs and symptoms have disappeared rapidly upon cessation of treatment.

Side Effects: Gastrointestinal system—anorexia, nausea, vomiting, diarrhea, stomatitis, glossitis, enterocolitis, pruritus ani. Skin—maculopapular and erythematous rashes; a rare case of exfoliative dermatitis has been reported. Photosensitivity; onycholysis and discoloration of the nails (rare). Kidney—rise in BUN, apparently dose related. Transient increase in urinary output, sometimes accompanied by thirst (rare). Hypersensitivity reactions—urticaria, angioneurotic edema, anaphylaxis. Teeth—dental staining (yellow-brown) in children of mothers given this drug during the latter half of pregnancy, and in children given the drug during the neonatal period, infancy and early childhood. Enamel hypoplasia has been seen in a few children. If adverse reaction or idiosyncrasy occurs, discontinue medication and institute appropriate therapy. Demethylchlortetracycline may form a stable calcium complex in any bone-forming tissue with no serious harmful effects reported thus far in humans.

Average Adult Daily Dosage: 150 mg q.i.d. or 300 mg b.i.d. Should be given 1 hour before or 2 hours after meals, since absorption is impaired by the concomitant administration of high calcium content drugs, foods and some dairy products. Treatment of streptococcal infections should continue for 10 days, even though symptoms have subsided.

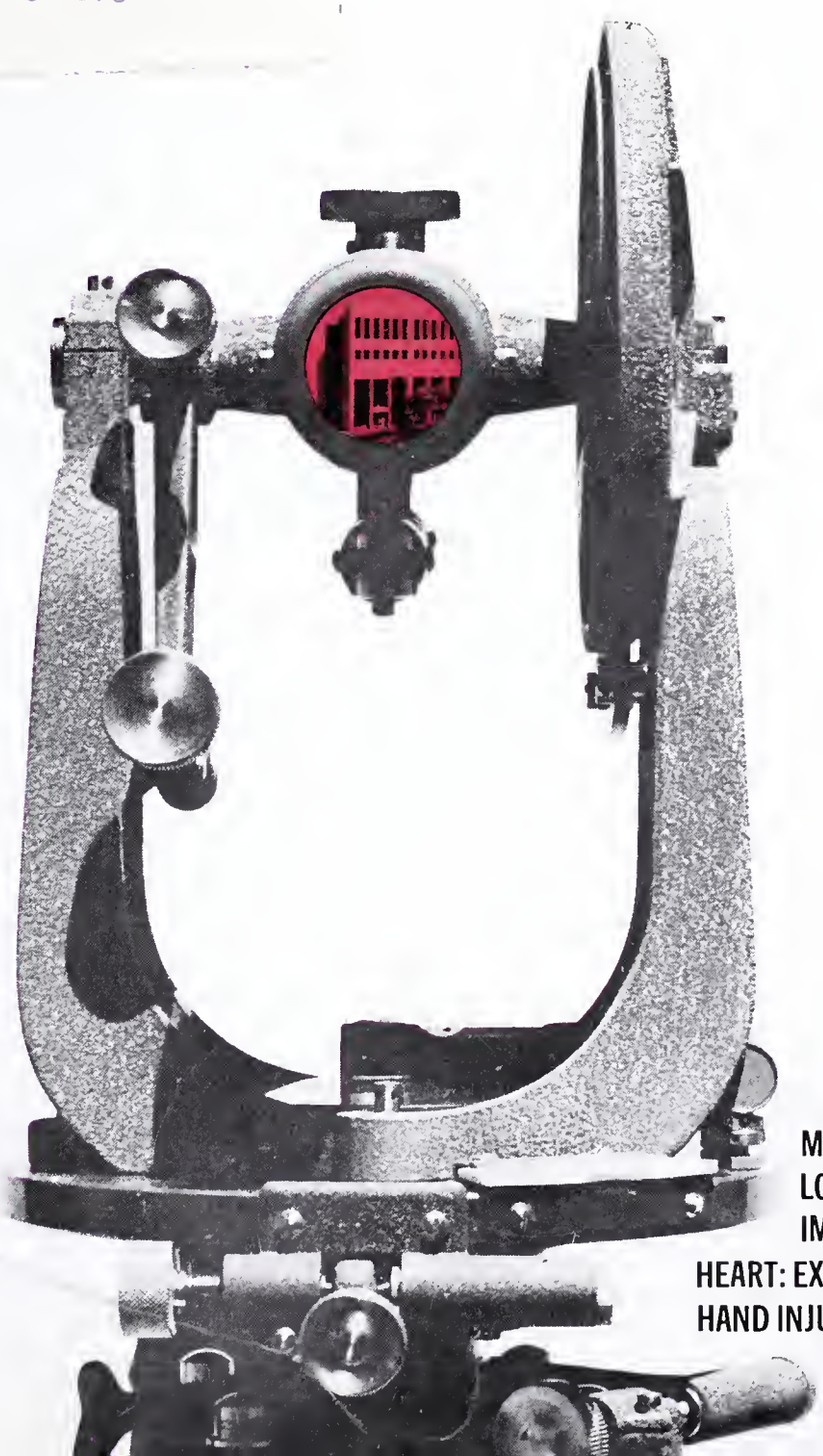
Lederle

LEDERLE LABORATORIES
A Division of American Cyanamid Company, Pearl River, New York

MAY 1970

TEXAS MEDICINE

U. C. SAN FRANCISCO
MEDICAL CENTER LIBRARY
JUN 3 1970



MEDICAL SCHOOL EXPANSION
LONG-DISTANCE TELEPHONED ECGS
IMMUNOLOGY OF TRANSPLANTATION
HEART: EXERCISE TESTS, PROSTHETIC VALVES
HAND INJURIES

Torbett, Hutchings, Smith Memorial Hospital
And The Torbett Clinic

306 Coleman Street
Post Office Box 60

Marlin, Texas

Telephone: WE 6-3561

GENERAL SURGERY
Howard O. Smith, M.D., F.A.C.S.
D. R. Swetland, M.D., F.A.C.S.
Howard L. Smith, M.D., F.A.C.S.

INTERNAL MEDICINE
W. F. McKinley, Jr., M.D.
James S. Bussell, M.D.
C. G. Brown, M.D.

EYE, EAR, NOSE AND THROAT
S. W. Hughes, M.D.

ALLERGY
Walter S. Smith, M.D.*

OBSTETRICS AND PEDIATRICS
M. A. Davison, M.D., F.A.C.O.G.
W. L. Reese, M.D., F.A.C.O.G.

RADIOLOGY
J. M. Brown, M.D., F.A.C.R.

PATHOLOGY
W. W. Klatt, M.D.
Ronald E. Henderson, Jr., M.D.
Kent Smith, M.D.

UROLOGY
Howard O. Smith, M.D., F.A.C.S.

DENTISTRY
B. E. Latimer, D.D.S.

NEUROPSYCHIATRY
S. B. Morrison, M.D.

DERMATOLOGY
Maurice C. Barnes, M.D., D.A.B.D.

Administrator:
J. D. Norris, Jr.

Superintendent of Nurses:
Ruby Lowrance, R.N.

Howard O. Smith, M.D., FACS, Chairman of the Board of Trustees, of Torbett, Hutchings, Smith Memorial Hospital and the Torbett Clinic which opened January, 1963. The original hospital was founded by Dr. J. W. Torbett, Sr., in 1898.

The Torbett Clinic and Memorial Hospital continues to utilize the Marlin Hot Mineral Water and other forms of physical therapy as an adjunct in the treatment of arthritis and allied rheumatic conditions.

*Expired 4-24-69.

THE DALLAS MEDICAL & SURGICAL CLINIC AND HOSPITAL

4105 Live Oak Street

DALLAS, TEXAS

Telephone TA 3-4151

*Geo. M. Underwood, M.D., F.A.C.P., Diagnosis & Gastroenterology, D.A.B. Internal Medicine & Gastroenterology
P. E. Luecke, Sr., M.D., F.A.A.P., Pediatrics Diplomate American Board Pediatrics
*G. A. Davidson, B.S., M.D., Dermatology
*Wm. H. Potts, B.A., F.A.C.P., Internal Medicine
*Ozro T. Woods, M.D., Surgery, Emphasizing Tumors
Richard M. Smith, M.D., F.A.C.P., Diagnosis & Internal Medicine
J. Wilbur Bourland, Jr., M.D., Obstetrics & Gynecology
Harry M. Spence, M.D., D.A.B.U., F.A.C.S., Urology
Wells M. Wade, D.D.S., Dental Surgery
Halcuit Moore, M.D., F.A.A.P., Pediatrics Diplomate American Board Pediatrics
John B. Bourland, M.D., Gynecology & Obstetrics Diplomate American Board OB-GYN
Raymond W. Burford, M.D., D.A.B.R., Radiology
Henry G. Montgomery, M.D., F.A.C.S., D.A.B.S., Surgery
Edwin M. Cleveland, M.D., Internal Medicine
John B. Allen, M.D., Internal Medicine Diplomate American Board Internal Medicine
R. M. Burnside, M.D., D.A.B.O., Ophthalmology
Adam D. Green, M.D., Surgery
Morris E. Magers, M.D., Internal Medicine Diplomate American Board Internal Medicine
B. Celia Slaughter, M.D., F.A.A.P., Pediatrics Diplomate American Board Pediatrics
D. W. Shuster, M.D., D.A.B.O., Otolaryngology and Otologic Surgery
P. E. Luecke, Jr., M.D., Pediatrics, F.A.A.P., Diplomate American Board Pediatrics
Channing Woods, M.D., Internal Medicine
William W. Hoffman, M.D., D.A.B.U., F.A.C.S., Urology
James M. Copps, M.D., D.A.B.O., Ophthalmology
Joe B. Caldwell, M.D., D.A.B.R., Radiology
Terry D. Allen, M.D., D.A.B.U., Urology
J. Boyd Hollabaugh, D.D.S., General Dentistry
George P. Fosmire, M.D., F.A.C.S., D.A.B.S., General Surgery
Richard C. Stone, M.D., Internal Medicine and Gastroenterology
Daniel L. Maddox, D.D.S., General Dentistry
William N. New, M.D., Dermatology
Donald A. Sutherland, M.D., Internal Medicine (Hematology)
John R. Woodward, M.D., Obstetrics & Gynecology, Diplomate American Board OB-GYN
Masashi Kawasaki, M.D., D.A.B.O., Otolaryngology, Tumor and Reconstructive Surgery of the Head and Neck
Miss Billye J. Norris, R.N., Director of Nurses
C. H. Rosamond, Administrator
Arthur L. Cook, Business Manager

*Inactive status

TERRELL'S LABORATORIES

T. C. TERRELL, M.D., F.C.A.P., F.A.C.P., DIRECTOR
JOHN S. TERRELL, M.D., F.A.A.P., ASSISTANT DIRECTOR

FORT WORTH, TEXAS

211 Medical Arts Building

DEPARTMENT OF PATHOLOGY
T. C. Terrell, M.D., F.C.A.P., F.A.C.P.
May Owen, M.D., F.C.A.P., F.A.C.P.
Alexander A. Kosinski, M.D., F.C.A.P., F.A.C.P.
Joan Windmiller, M.D., F.A.A.P.

DEPARTMENT OF RADIOLOGY
H. W. Banker, M.D., D.A.B.R., M.A.C.R.
Ernest E. Holt, M.D., D.A.B.R., M.A.C.R.
James C. Moore, M.D., D.A.B.R., M.A.C.R.

DEPARTMENT OF CHEMISTRY
LaMonte A. Tucker, Ph.D.

DEPARTMENT OF BACTERIOLOGY & MYCOLOGY
Robert F. Devlin, Ph.D.

CONSULTING & ANALYTICAL SERVICES

PATHOLOGY, FORENSIC PATHOLOGY & VETERINARY PATHOLOGY: Histology, Cytology.
CLINICAL PATHOLOGY: Serology, Bacteriology & Mycology, Parasitology, Hematology.
INDUSTRIAL & CLINICAL CHEMISTRY: Radioassay, SMA-12 survey and other Automated Procedures. Hormone Chemistry, Chromatography, Electrophoresis, Immunochemistry.
TOXICOLOGY: Drugs, Water, Foods & Biological materials.
MANUFACTURING DEPARTMENT: Allergenic Extracts and Treatment Sets, Mounting Media, Specifically Prepared Reagents and Stains for Laboratory Use.

TERRELL MEDICAL GROUP

FORT WORTH, TEXAS

210 Medical Arts Building

INTERNAL MEDICINE Diagnosis, Allergy, Cardiology	T. C. Terrell, M.D., F.C.A.P., F.A.C.P. Elizabeth A. Taylor, M.D.
NEUROPSYCHIATRY Electroencephalography	Henry G. Gardiner, Jr., M.D.
PEDIATRICS Pediatric Hematology Adolescent Medicine & Pediatric Consultation	Joan Windmiller, M.D., F.A.A.P. John S. Terrell, M.D., F.A.A.P.
CLINICAL PSYCHOLOGY	Michael W. Wheeler, Ph.D.

Administrator: Arthur Fuston

TEXAS MEDICINE

VOLUME 66 NUMBER 5 MAY 1970

SCIENTIFIC ARTICLES

48 Immunology of Transplantation

Stephan E. Ritzmann is research associate professor of medicine at The University of Texas Medical Branch, Galveston. Dr. Ritzmann is chief of the Division of Hematology-Immunology at the Shriners Burns Institute, and he directs the Immunohematology Laboratory in the Hematology Division of the Department of Medicine. He is a Leukemia Society Scholar, and a member of many professional groups. His coauthor, Jerry C. Daniels, is a research fellow in the Division of Hematology-Immunology at Shriners Burns Institute, was previously an NIH research fellow at the Scripps Clinic and Research Foundation, La Jolla, Calif, and will be a medicine intern at The University of Texas Medical Branch Hospitals in June.

54 Heart Rate Response to Exercise by Double Master Test

Maurice E. Rougraff is vice president and medical director of Great Southern Life Insurance Company, Houston. His coauthor, John C. Baker, is medical director of the American United Life Insurance Company, Indianapolis. Both are diplomates of the Board of Life Insurance Medicine.

58 Prosthetic Heart Valves in Pregnancy; Case Report, Review

Lt Robert H. Radnich, MC, USN, is a 1968 graduate of Baylor College of Medicine, Houston, and is a resident in obstetrics and gynecology at the US Naval Hospital, Bethesda, Md. He is a junior fellow of the American College of Obstetrics and Gynecology. His coauthor, Warren M. Jacobs, is in private practice in Houston and also serves as clinical professor, Department of Obstetrics and Gynecology, Baylor College of Medicine.

64 Intraluminal Venous Angioma

Robert L. Sewell, a diplomate of the American Board of Surgery, is in private practice in Fort Worth. He is a past president of both the Fort Worth and Texas Surgical Societies.

66 Diagnosis and Treatment of Arteriovenous Fistulas

Dennis M. King is a senior medical student at The University of Texas Medical Branch, Galveston. He is a graduate of Texas Christian University in Fort Worth. His coauthor, Melvyn H. Schreiber, is professor of radiology at the Medical Branch.

RITZMAN

ROUGRAFF

SEWELL

KING

AHERN

BUICE

JONES

72 Hand Injuries; What To Do, What Not To Do

Gerald S. Ahern of Corpus Christi is a diplomate of the American Board of Orthopaedic Surgery, and a recent past president of the Texas Orthopaedic Association. He discontinued orthopedic surgery practice in 1964 and spent three months on a preceptorship in hand surgery in New Orleans, followed by three months in Grant Medical School in Bombay, India, where he dealt with hand surgery in leprosy. Returning to Corpus Christi in May of 1965, he has since limited his practice to hand surgery.

76 Cineradiography in a Community Hospital

James W. Buice is staff radiologist at Harris Hospital in Fort Worth and Johnson County Memorial Hospital, Cleburne. He is a diplomate of the American Board of Radiology, a fellow of the American College of Radiology, and a member of other professional societies.

87 Clinicopathologic Conference

Participants in this CPC from The University of Texas (Southwestern) Medical School and Parkland Memorial Hospital, Dallas, are Ellwood Jones, 1966 graduate of Southwestern and resident in internal medicine; Thomas Curry III, assistant professor of radiology; C. Gunnar Blomquist and Stuart D. Tauber, assistant professors of internal medicine; Floyd Rector, Jr, professor of internal medicine; Lawrence S. Cohen, associate professor of internal medicine; Bruce D. Fallis, professor of pathology; and Edwin H. Eigenbrodt, associate professor of pathology and guest editor for this series.

EDITORIALS

31 Economical Long-Distance Telephoned Electrocardiographs
Gus Schreiber

33 Physician-Hospital Cooperation
David Garrett

34 Nonprofessionals Work Well in Public Health Programs
B. M. Primer

39 "All For One, One For All"
Walter Walthall

DEPARTMENTS

4 Association and Late News

13 Highlights of Coming Meetings

19 Continuing Education Courses

97 News

105 Walter Walthall, M.D.: The Man in Control

108 Texas Medical Education Enters Expansion Phase

115 Medicine in Literature

115 New Books in TMA Library

117 Pamphlets

117 Personals

117 Recent Deaths

ON THE COVER

Through the transit, Texas physicians can see that medical schools in our state are growing—enrollments are increasing, building programs are under way, and new schools are being developed. The future is bright and challenging. (See article p. 108.)

NEXT MONTH

The physician as biologist and ecologist will be considered editorially, as will the concept of functional asplenia. Scientific articles scheduled for June are on the pitfalls in rattlesnake bite, osteogenesis imperfecta, male factor in infertility, pelvic neurofibroma, nonsuture repair of pelvic fistulas, primary malignant tumors of the ileum and jejunum, and the lower esophageal ring as a source of dysphagia. An automobile can be many things—a useful machine, a status symbol, a deadly weapon. A special article in next month's issue will suggest some of the ways that the physician can fight the killer automobile.

PUBLICATION INFORMATION

Texas Medicine is published monthly by the Texas Medical Association.

Editorial and Business Offices: 1801 N. Lamar Blvd., Austin, Texas 78701; Telephone: Area Code 512 477-6704.

Second Class Postage paid at Austin, Texas, with additional entry at Fort Worth, Texas, under Act of March 3, 1879.

Subscription communications should be sent to the Business Offices, $3 per year for members; $6 for nonmembers; $8 for foreign; $3 for medical students; single copy, $1.

Contributions, previously unpublished, are welcomed for review; suggestions for preparation are available from the Editorial Offices. News and other items should be sent to the Editorial Offices by the 10th of the month preceding the month of publication. All contributions are sent at the owner's risk.

Printing Offices: c/o Stafford-Lowdon Company, 1114 West Daggett, Fort Worth 76104.

ASSOCIATION & LATE NEWS

Texas Medical Association House of Delegates Sets Policies for 1970-1971, Considers Future of Medical Practice During April 30-May 3 Annual Session

Medicine's wide world of concern for patients and the future of medical practice was evident in the range of topics considered in detail by the Texas Medical Association's House of Delegates on Friday night, May 1, at the 1970 Annual Session in Dallas.

Guidelines for peer review, support of fully accredited medical schools, a position paper regarding compulsory insurance programs, patient-physician confidentiality, liaison on government medical programs, recommendations on a cancer registry, methadone treatment for heroin addicts, and care of athletes reflect the gamut of the delegates' considerations. The delegates also approved a dues increase to support the services of the Texas Medical Association, and they made suggestions regarding nationally televised programs on medicine and on federal regulations on oral contraceptives.

Peer Review

Because of the need for peer or consultative review, guidelines for the Texas Medical Association and its county medical societies and the recognition that developing such guidelines would be complicated, the House of Delegates has recommended that the incoming President of the Association appoint an ad hoc committee to define peer or consultative review and develop guidelines. Delegates further observed that "should peer review be endorsed by the TMA, the appropriate state and federal government agencies must understand that such endorsement is predicated on the willingness of these agencies to bargain through arbitration with physicians and the Texas Medical Association in order to insure the effective operation of government programs."

Confidentiality

Delegates approved a resolution calling for the Association to work actively for statutory recognition of patient-physician confidentiality. They noted that the right of confidentiality is an inherent right of all patients and physicians and voiced concern that various agencies were violating confidentiality between the doctor and his patient.

Accredited Medical Schools

The delegates reiterated their support of expansion of medical education in Texas enabling increases in the numbers of medical doctors in the state. They endorsed the plans for enrollment increases now being developed by the four existing medical schools in Texas. They further urged adequate and complete funding of the state's two newest medical schools, The University of Texas Medical School at Houston and the Texas Tech University School of Medicine at Lubbock, so that these institutions can become the high quality medical schools envisioned in the original legislation. Delegates emphasized their concern for quality medical care by calling for future legislative support to be given only to provide fully accredited medical school facilities.

Government Medical Programs

Delegates endorsed the Board of Trustees' decision to devote more attention to advising county medical societies about regulations concerning government medical programs. The trustees had acted upon a request from the Hidalgo-Starr Counties Medical Society at the 1969 Annual Session and had approved the establishment of an office on government health programs to serve TMA officers and committees, county medical societies, and members of the Association in this vital area. The delegates endorsed the appointment of Donald M. Anderson, the Association's assistant executive secretary, to this position.

Political Action

The House of Delegates concurred with the opinion of the Association's out-going President, Dr. Charles Max Cole of Dallas, that physicians must help shape the future of medicine by strongly supporting their political action movements. They commended the Texas Political Action Committee (TEXPAC) for its impressive efforts to encourage physician participation in political campaigns. Particularly noted was TEXPAC's most recent campaign to encourage absentee voting, to disseminate political information to Texas physicians and their wives, and its efforts to involve more physicians in grass roots activity. Increasing interest, contributions, and membership in TEXPAC were cited; and the delegates recommended that all county medical societies initiate voluntary TEXPAC billing along with annual membership dues. TEXPAC was also commended for its "vitally important role" in disseminating information about candidates for state political races.

Cancer

Delegates endorsed plans for a Cancer Information System for the State of Texas. It was noted that a feasibility pilot project is to be completed in October in Bexar County and that an agreement has been reached that the information collected would be computerized and centralized in the Texas State Department of Health. The information system was developed with the cooperation of the Texas Medical Association's Committee on Cancer, the American College of Surgeons, and the Task Force on Cancer of the Regional Medical Programs of Texas.

Delegates also noted their approval calling for opposition to the sale of cigarettes in hospitals.

Care of Athletes

Noting that there were four football deaths in 1969, all due to head injuries, delegates recommended that spear tackling and butt blocking should continue to be avoided.

"Many injuries occurred during practice sessions," delegates were told by the Committee on Athletics; and it was thus recommended that first-aid type medical care be made available at these sessions. It was further recommended that a course be offered during the high school coaches association meetings.

Oral Contraceptives

Delegates expressed concern with recent FDA regulations calling for a printed pamphlet to be enclosed with

oral contraceptives advising patients in detail about the effects of oral contraceptives. Delegates were primarily concerned about a statement in the pamphlet which said, "These points were discussed with you when you chose this method of contraception"; and they approved a resolution asking for the deletion of these words from the pamphlet. They also expressed opposition to unnecessary intervention in the doctor-patient relationship by any branch of government and voiced specific objection to the Department of Health, Education, and Welfare regarding the proposed statement on contraceptives.

Methadone Treatment of Heroin Addicts

Delegates approved the following guidelines on the experimental use of methadone for treatment of heroin addicts, emphasizing that no program should be undertaken unless endorsed by the local county medical society, the State Department of Health, and finally the Texas Medical Association. (a) Methadone usage at the present time is experimental and should be administered as a research program only. (b) No program should be undertaken unless endorsed by the local county medical society, the State Department of Health, and finally the Texas Medical Association. (c) Local hospital facilities should be available for emergency care, primary evaluation, and follow-up care. (d) The patient should have medical and psychiatric evaluation before the treatment is established. (e) A competent staff must be in attendance for supervision of sociological and rehabilitation efforts.

Compulsory Health Insurance Programs

Delegates adopted a position statement on compulsory national health insurance programs which have been previously proposed by many groups. The full text of the statement will appear in the June issue of *Texas Medicine.*

Comprehensive Health Maintenance Service

Recent proposals calling for amendments to Medicare (Medicare Part C—Comprehensive Health Maintenance Service) led delegates to state that this new section, which would allow benefits to prepaid practice groups (referred to as Health Maintenance Organizations), as proposed in statements made by Under Secretary of HEW, John Veneman, would be in conflict with Texas laws. The corporate practice of medicine is illegal under the Texas Medical Practice Act.

Televised Programs on Medicine

Delegates commended Dr. Charles Max Cole for his recent taping of a rebuttal to the CBS program entitled, "Don't Get Sick in America." Dr. Cole's comments were presented over a Dallas television station immediately following the nationally televised program.

Delegates further approved a resolution calling for amicable negotiations with a national television network to present a television documentary on the true image of medicine in the United States.

Hospital Constitution and Bylaws

Concern that representatives of medical staffs might not be consulted in preparation and revision of hospital bylaws led delegates to approve a resolution advising members to rewrite the purposes of their staff constitutions and bylaws to clearly delineate medical staff duties and "cause to be null and void any attempt to have staff members perform functions of an administrative nature."

Dues Increase

An increase of dues up to $15 with the actual increments to be determined, as needed in the years ahead, by the Board of Trustees was approved. The delegates voted to change the bylaws to read, "Dues of not more than $70 per capita on the membership of component county societies shall be levied each year and shall constitute the state association dues."

Other Bylaws Changes

Among other bylaws revisions approved by the delegates was one changing the last date for reinstatement of membership after payment of delinquent dues from Dec. 31 to July 1.

Another change called for all county society officers and delegates to the state association to be elected during the last quarter of the year, or at the last meeting of the year for the county society when there is no meeting in the last quarter.

Himler Report

Conclusions and recommendations of the House of Delegates regarding the AMA report of its Committee on Planning and Development (Himler report) will be summarized for publication in the June issue of *Texas Medicine.*

TMA Delegates Elect New Officers for 1970

Baytown general practitioner Dr. James H. Sammons was named President-Elect of the Texas Medical Association at the final session of its House of Delegates during Annual Session.

Dr. Walter Walthall of San Antonio was installed as TMA's 105th President at a luncheon ceremony on Saturday, May 2.

Dr. Russell Holt of El Paso was selected as Vice-President. Other new TMA officers include Dr. Don G. Harrel of Dallas, elected to a five-year term on the board of trustees; Dr. N. L. Barker of Paris, newly named as Texas delegate to the American Medical Association; and Dr. James K. Peden of Dallas, named alternate delegate. All other AMA delegates and alternate delegates were elected to continue in their positions.

Dr. Byron P. York of Houston and Dr. Howard O. Smith of Marlin will continue in their offices as secretary and treasurer, respectively.

The 1970 Distinguished Service Award will be presented to Dr. Truman

UNIT VALUES FOR TMA MEMBERS RETIREMENT PLAN AND TRUST

(As a service to participants in the TMA Members Retirement Plan and to physicians interested in enrolling in the program, comparative values for investment media are published regularly in *Texas Medicine.* Figures shown are the latest available at press deadline and are for comparison purposes only. Most daily newspapers list up-to-the-minute values on mutual funds.)

Investment Media	Original Price 9-30-68	Net Asset Value Per Share 3-31-70	Net Asset Value Per Share 3-31-70*
Mercantile National Bank Stock Fund	$10.25	$ 9.43	$ 9.43
Loomis-Sayles Capital Development Fund	14.20	10.51	11.24
T. Rowe Price Growth Stock Fund	25.93	23.96	25.69
Loomis-Sayles Mutual Fund	16.82	13.75	14.90
Stein Row & Farnham Balanced Fund	23.34	18.89	20.20
Mercantile Bank Fixed Income Fund	10.00	8.98	8.98

*Adjusted to include dividends and distributions since 9-30-68.

G. Blocker, Jr., president of The University of Texas Medical Branch at Galveston.

County Medical Society Responds to TV Program

A taped response by Texas Medical Association President Dr. Charles Max Cole was telecast in the Dallas area on April 20 immediately following the first segment of a three-part CBS series on "Health in America."

The Dallas County Medical Society arranged for the CBS affiliate station in Dallas, KRLD-TV, Channel 4, to provide a five-minute interview and commentary with Dr. Cole, including any appropriate corrective statements, at the conclusion of the one-hour special. Entitled "The Promise and the Practice," the initial program explored the question of whether adequate health care is available to the average American when he needs it. The television station delayed its 10 p.m. newscast to present the full-color, taped interview during prime time.

Officers of the Dallas County Medical Society were allowed to preview the program at an advance, closed circuit television screening scheduled by CBS for its local stations on April 17 and 18. Millard J. Heath, the society's executive officer, then prepared Dr. Cole's statements, which were delivered in the following dialogue with Fritz Kuler, program manager of KRLD-TV:

Kuler: Dr. Cole, it was stated that the United States is in need of 50,000 more physicians, as well as other health personnel. Would you tell us what is being done about this?

Cole: It is true that there is a manpower shortage in the health field, due not only to the population increases, but also to increased utilization. A lot of work is being done on this. In the past six years, 17 new medical schools have been established, 14 of which are open. In Texas, three new schools have been authorized by the Legislature; one began operation in San Antonio two years ago; one in Houston will open this September; and one is contemplated in Lubbock. In addition, the three existing schools are increasing their enrollment. Classes and schools are being established for allied health personnel; to mention only one or two, the Dallas County Junior College and the new School of Allied Health Sciences of The University of Texas Southwestern Medical School. Recruitment efforts are very extensive to encourage young people to select a career in health.

Kuler: At the opening it was stated that "a ten-year old boy in America has a shorter life expectancy than in 21 other developed countries." Would you comment on that?

Cole: Yes. This statement by itself doesn't give a completely true picture. It doesn't take into consideration the tremendous number of deaths from automobile and other accidents. No other nation has the number of automobiles and the miles of freeways and streets with which we are blessed. This is one of the high penalties we pay for this prosperity. It has little or no direct relationship to good or bad health.

Kuler: The statement was also made that the infant death rate is worse in this country than in 12 other countries. Is this probably true?

Cole: This again is misleading. These statistics were probably from a United Nations' report which also made it quite clear that they cannot be accurately used for comparison between nations. The reason is that the same statistical basis is not used by all reporting countries. For example, some consider any newborn child which breathes as a live birth, whereas others would require a longer period to constitute a viable infant rather than a stillbirth. These rates are based on the number of deaths per thousand live births. In some areas, births are required to be reported promptly, where infant deaths may be reported within 12 months. This kind of reporting then would give a distorted picture if comparisons are made. It is also essential to consider the abortion practices, much of which is unknown. There is really no way, at present, to make accurate comparisons between nations.

Kuler: One final question, Dr. Cole. Quite a desolate picture was given of inadequate health services for the poor. Is new legislation needed for this purpose?

Cole: Interestingly enough the Congress provided legislation for this in 1966 when the Social Security Amendments, which included Medicare, were passed. Title 19 of that Act provided for medical services first to dependent children, the needy blind, and certain others. But it also provided for the medically indigent. The legislation is already available. The financing is what is missing. It is my opinion that we have not learned how to solve the problem of poverty for a great segment of our population. Medical care is a part of all the other problems which are prcsent in our blighted areas and among our undereducated, undertrained people. The American and Texas Medical Associations are deeply concerned in all of these matters and have been working with many other organizations and with federal, state, and local governments to try to find solutions. We pledge our continued efforts in this direction.

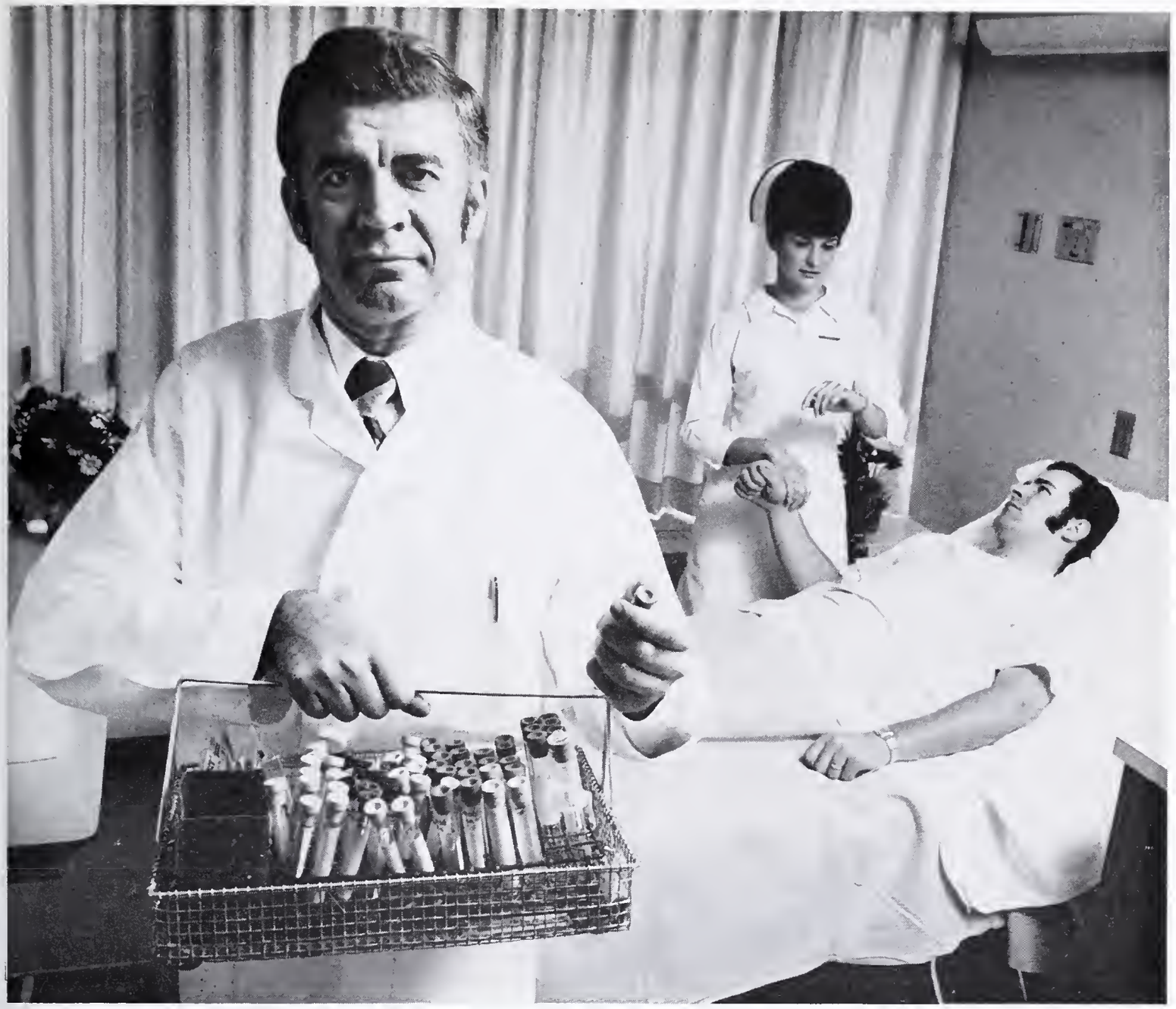
The second show in the CBS series, telecast on April 21 and entitled "Don't Get Sick in America," concerned costs of medical treatment and the effect of serious prolonged illness on the finances of the middle class family; and the third program, "A Question of Survival," dealt primarily with environmental pollution but included health aspects. At the suggestion of officers of the Dallas County Medical Society, officers of the Dallas Hospital Council previewed the second segment and were also allowed to make a statement on KRLD-TV in Dallas following that telecast.

In addition, the Presidents of the American Medical Association and the National Medical Association, Dr. Gerald D. Dorman and Dr. Julius W. Hill, respectively, have asked CBS for equal time to present the many positive efforts being made to improve American health care. Also, the American Medical Association prepared one-minute and five-minute spots with Dr. Dorman which were sent to state and county societies for their use locally. Newspaper and periodical ads were prepared as well and were sent to county societies to use by purchasing space in appropriate outlets.

Reception to Honor New AMA Auxiliary President

The Texas Medical Association and its Woman's Auxiliary will honor Mrs. R. C. L. Robertson of Houston, incoming President of the American Medical Association Woman's Auxiliary, with a reception during the AMA's annual meeting June 21-25 in Chicago. The reception will be held on Tuesday, June 23, from 5-6:30 p.m. in the Gold Coast Room at The Drake Hotel.

All members of Texas Medical Association and of the Woman's Auxiliary to TMA who plan to be in Chicago for the AMA and Woman's Auxiliary conventions are invited to attend the reception as well as Mrs. Robertson's installation on Wednesday morning, June 24, as President of the AMA Woman's Auxiliary.



Yes, there is an Indispensable Person

Recognizing the broad responsibility we bear as leader in the health care protection field, our advertising this month is encouraging young people to choose a "career in health." The illustration above is from our May advertisement which is scheduled in midwest and southwest editions of these national publications: Time and Newsweek, May 11, Wall Street Journal, May 12. And besides these, in a large number of publications within the state of Texas. *We are on your team.*

"Everybody's swingin' to the Blues!"

BLUE CROSS®and BLUE SHIELD®'

Hospital and Health Care Coverage
(GROUP HOSPITAL SERVICE, INC.)

Medical and Surgical Benefits
(GROUP LIFE & HEALTH INSURANCE COMPANY)

OF TEXAS

MAIN AT NORTH CENTRAL EXPRESSWAY ■ DALLAS, TEXAS 75222

® American Hospital Association
®'National Association of Blue Shield Plans

help protect your angina patients with ISORDIL® SUBLINGUAL (ISOSORBIDE DINITRATE)

Prescribe ISDRDIL SUBLINGUAL (5-mg. tablets) for treatment of acute attacks or for prophylaxis when increased physical or emotional stress place an additional burden on your angina pectoris patients. ISDRDIL SUBLINGUAL acts almost as fast as nitroglycerin, yet lasts hours longer. Reliable because it's stable.

ISDRDIL® (isosorbide dinitrate) dilates coronary arteries and significantly reduces the number, duration and severity of angina attacks. Exercise tolerance is also increased in some patients.

Available in four additional dosage formulations to provide flexible management of your angina pectoris patients.

Prescribe ISDRDIL® 10 mg. (scored, oral tablets) or ISDRDIL® TEMBIDS® (40-mg. sustained action tablets) for basic prophylactic treatment of angina pectoris.

Prescribe ISDRDIL® DRAL 5 mg. (scored, oral tablets) to facilitate small adjustments in dosage.

Prescribe ISDRDIL® with PHENOBARBITAL when anxiety or emotional disturbances are important factors in the clinical picture. Each tablet contains 10 mg. isosorbide dinitrate and 15 mg. (¼ gr.) phenobarbital, U.S.P., *(Warning: Phenobarbital may be habit forming).*

INDICATIONS: *Sublingual*—for prevention and treatment of angina pectoris. *Oral*—for relief of angina pectoris (pain of coronary artery disease); the oral dosage forms are not intended to abort the acute anginal episode, but are widely regarded as useful in the prophylactic treatment of angina pectoris.

CONTRAINDICATION: Idiosyncrasy to this drug.

WARNING: Data supporting the use of nitrites during the early days of the acute phase of myocardial infarction (the period during which clinical and laboratory findings are unstable) are insufficient to establish safety.

PRECAUTIONS: Intraocular pressure is increased; therefore, caution is required in administering to patients with glaucoma. Tolerance to this drug and cross-tolerance to other nitrites and nitrates may occur. In patients with functional or organic gastrointestinal hypermotility or malabsorption syndrome, it is suggested that either the ISORDIL ORAL 5 mg. or ISORDIL 10 mg. oral tablet or ISORDIL SUBLINGUAL be the preferred therapy. The reason for this is that a few patients have reported passing partially dissolved ISORDIL TEMBIDS in their stools. This phenomenon is believed to be on the basis of physiologic variability and to reflect rapid gastrointestinal transit of the sustained action tablet. *ISORDIL TEMBIDS should not be chewed.*

ADVERSE REACTIONS: Cutaneous vasodilation with flushing. Headache is common and may be severe and persistent. Transient episodes of dizziness and weakness as well as other signs of cerebral ischemia associated with postural hypotension may occasionally develop. This drug can act as a physiological antagonist to norepinephrine, acetylcholine, histamine, and many other agents. An occasional individual exhibits marked sensitivity to the hypotensive effects of nitrite, and severe responses (nausea, vomiting, weakness, restlessness, pallor, perspiration and collapse) can occur even with the usual therapeutic dose. Alcohol may enhance this effect. Drug rash and/or exfoliative dermatitis may occasionally occur.

Consult direction circular before prescribing.

May we send you reprints, detailed information and/or professional samples?

TEMBIDS®—Trademark for Sustained Action Tablets

IVES LABORATORIES INC.
685 Third Avenue, New York, N.Y. 10017

With all the stuff in that mixer you could make a pill this big!

Pretty wild safety glasses, huh?

Oh, you just dab it on with your finger—like this.

That deoxyribonucleic acid is a gas!

"Isn't that a Syntex Tour Guide behind those Foster Grants?"

(Of course. Didn't you see her at Syntex?)

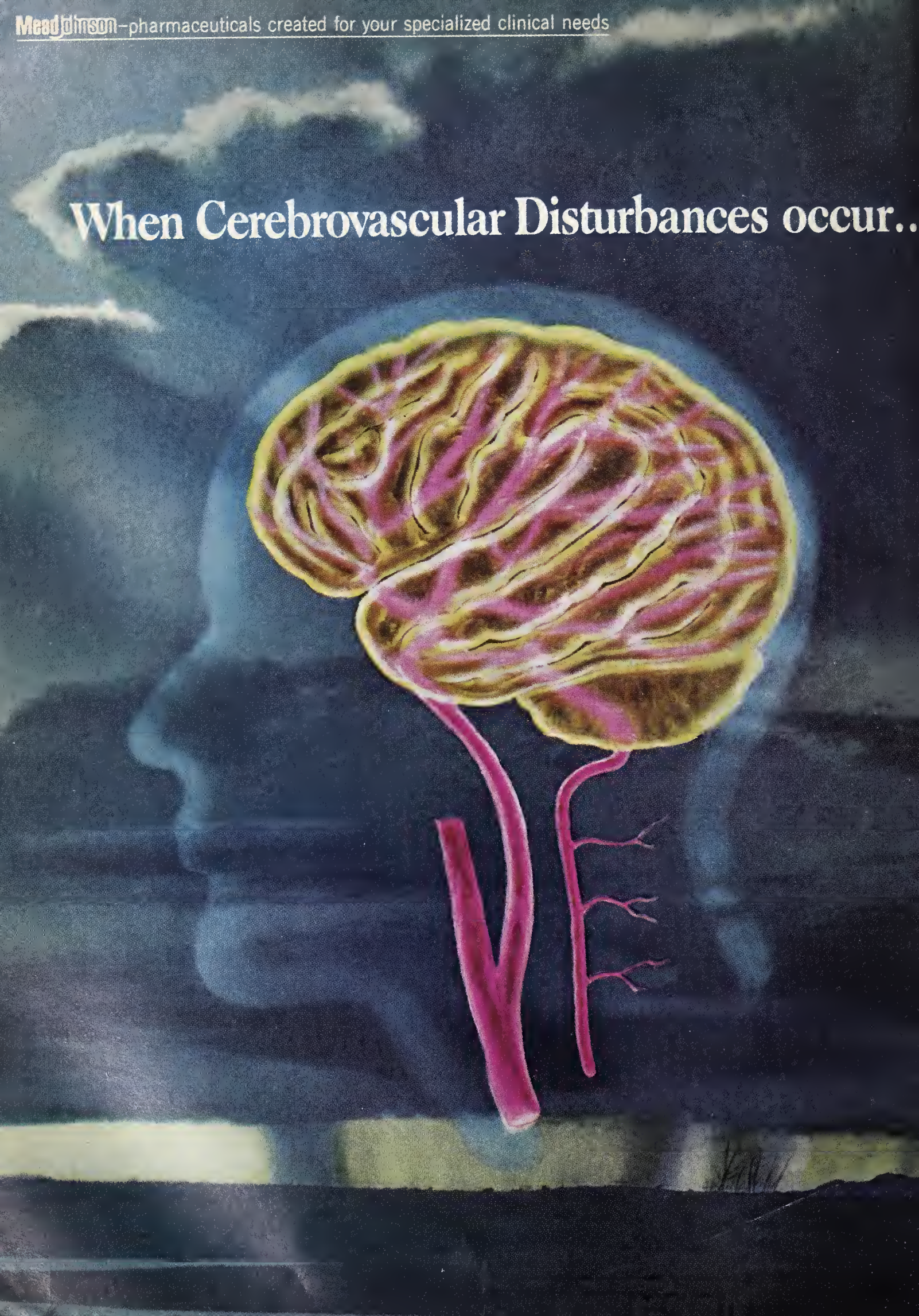
SHE'S an easy act to follow in that bright red suit, white boots, cap, gloves—and those Foster Grant glasses. She'll lead you up the garden path for a look at our buildings and landscaped grounds. She'll take you to see our growing collection of contemporary art, including a large bronze sculpture by Henry Moore. And she'll guide you through the laboratories of Syntex Research, where our scientists work in such fields as molecular biology, organic chemistry, hormone biology, clinical medicine, veterinary science, and pharmaceutical science. She's one of several Syntex employees specially trained to make your visit interesting and meaningful. They conduct small group tours, lasting an hour or so, that will give you a better idea of what Syntex does. For information, or reservations for a tour, phone Mrs. Diane Bierwagen of our Public Relations Department (415) 327-0110 or write her at **Syntex Laboratories, Inc.,** Stanford Industrial Park, Palo Alto, California 94304.

This x-ray diffractometer can give you some real groovy colors.

Wow! There goes one of our white rats.

Mead Johnson–pharmaceuticals created for your specialized clinical needs

When Cerebrovascular Disturbances occur..



...with episodes of vertigo, headache, confusion, sensory loss, slurred speech, consider

VASODILAN®

(ISOXSUPRINE HCl)

to help relieve symptoms by preventing vasospasm and increasing cerebral blood flow

New 20 mg. strength now available: Vasodilan 20 mg. tablets for greater dosage simplicity and convenience. Recommended *initial* dose: one 20 mg. tablet q.i.d.

Although not all clinicians agree on the value of vasodilators in vascular disease,[1] several investigators[2-5] have reported favorably on the effects of isoxsuprine on cerebral blood flow. Effects have been demonstrated both by objective measurement[2,5] and observation of clinical improvement.[2-4]

Indications: Cerebrovascular insufficiency, arteriosclerosis obliterans, diabetic vascular diseases, thromboangiitis obliterans (Buerger's disease), Raynaud's disease, postphlebitic conditions, acroparesthesia, frostbite syndrome and ulcers of the extremities (arteriosclerotic, diabetic, thrombotic). **Composition:** VASODILAN tablets, isoxsuprine hydrochloride 10 mg. and 20 mg. **Dosage:** Oral—10 to 20 mg. t.i.d. or q.i.d. **Contraindications and Cautions:** There are no known contraindications to recommended oral dosage. Do not give immediately postpartum or in the presence of arterial bleeding. **Side Effects:** Occasional palpitation and dizziness can usually be controlled by dosage reduction. As intramuscular administration of 10 mg. or more may cause brief hypotension and tachycardia, single intramuscular doses exceeding this amount are not recommended. Complete details available in product brochure from Mead Johnson Laboratories. **References:** (1) Fazekas, J. F.; Alman, R. W.; Ticktin, H. E.; Ehrmantraut, W. R., and Savarese, C. J.: Angiology *15*:No. 2 (Feb.) 1964. (2) Horton, G. E., and Johnson, P. C., Jr.: Angiology *15*:70-74 (Feb.) 1964. (3) Clarkson, I. S., and LePere, D. M.: Angiology *11*:190-192 (June) 1960. (4) Dhrymiotis, A. D., and Whittier, J. R.: Curr. Ther. Res. *4*:124-128 (April) 1962. (5) Whittier, J. R.: Angiology *15*:82-87 (Feb.) 1964.

Mead Johnson LABORATORIES

© 1970 MEAD JOHNSON & COMPANY • EVANSVILLE, INDIANA 47721 75970

before and after surgery

Berocca®

TABLETS
high potency B-complex and C
for nutritional support

AVAILABLE ONLY ON Rx

contains water-soluble vitamins only

b.i.d. dosage

good patient acceptance

no odor, and virtually no aftertaste

Each Berocca Tablet contains:

Thiamine mononitrate	15 mg
Riboflavin	15 mg
Pyridoxine HCl	5 mg
Niacinamide	100 mg
Calcium pantothenate	20 mg
Cyanocobalamin	5 mcg
Folic acid	0.5 mg
Ascorbic acid	500 mg

Usual dosage is one tablet b.i.d.

Indications: Nutritional supplementation in conditions in which water-soluble vitamins are required prophylactically or therapeutically.

Warning: Not intended for treatment of pernicious anemia or other primary or secondary anemias. Neurologic involvement may develop or progress, despite temporary remission of anemia, in patients with pernicious anemia who receive more than 0.1 mg of folic acid per day and who are inadequately treated with vitamin B_{12}.

Dosage: 1 or 2 tablets daily, as indicated by clinical need.

Available: In bottles of 100.

ROCHE

Roche
LABORATORIES

Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

AMERICAN MEDICAL ASSOCIATION

The 119th annual convention of the American Medical Association will be held in Chicago June 21-25. More than 10,000 physicians in general practice and all the specialties as well as 20,000 allied health professionals and guests are expected to attend the comprehensive scientific program to be presented at the International Amphitheatre on Chicago's Near South Side. Scientific and industrial exhibits will be presented, and many of the world's most prominent medical researchers and practitioners will be featured. The scientific program will include four general scientific meetings, special exhibits, and seven special sessions. Some of the topics to be covered are coma and the diagnosis of death, conception control and abortion, suicide, drug interactions, neurological surgery, and nuclear medicine. Included in the program are receptions, luncheons, and dinners for alumni organizations and specialty groups; sessions of the AMA House of Delegates; inauguration of the 124th AMA President; and the President's reception. There will be no registration fee.

Contact: Norman H. Budde, Program Service Department, American Medical Association, 535 N. Dearborn St., Chicago 60610.

TEXAS ACADEMY OF GENERAL PRACTICE

Texas physicians will meet at the Sheraton-Fort Worth Hotel, Fort Worth, June 7-10, for the 21st annual scientific assembly of the Texas Academy of General Practice. The assembly seminar will begin on Sunday at 12:30 p.m. and is acceptable for five prescribed hours of credit by the AAGP. Some of the topics to be discussed are new trends in our society and culture, recognizing the psychotic patient in the light of our present day culture, the drug scene, and trends in violence. Program speakers include Drs. Jack Otis (PhD), William A. Cantrell, Joseph C. Schoolar, George A. Constant, Robert McCormack, Alexander Schirger, Wilma C. Diner, Isadore Dyer, Milton V. Davis, John H. Moyer, Marcel Patterson, Philip Thorek, Philip J. Migliore, and Howard Britton. The entire program, acceptable for 12 prescribed hours of credit by the AAGP, will adjourn at noon on Wednesday.

Contact: Donald C. Jackson, 1905 N. Lamar Blvd., Austin 78705, executive secretary.

INTERNATIONAL CANCER CONGRESS

Houston will host a worldwide aggregation of physicians and researchers who are affiliates of the International Union Against Cancer May 22-29 when the organization convenes for its 10th International Cancer Congress. The congress is expected to draw nearly half of its visitors from foreign countries to discuss significant advances made in the fight against cancer. A wide range of entertainment events have been scheduled in Houston, and post-conference excursions to Mexico and South America will be available. Headquarters for the congress will be in the Convention and Exhibit Center in downtown Houston. The official languages of the congress will be French and English, and some presentations will also be translated into Spanish.

Contact: Dr. Murray M. Copeland, Office of the Secretariat, Tenth International Cancer Congress, P. O. Box 20465, Astrodome Station, Houston 77025, secretary-general.

HIGHLIGHTS OF COMING MEETINGS

CURRENT MEETINGS IN TEXAS

SCOTT AND WHITE MEMORIAL HOSPITAL's Annual Pediatrics Postgraduate Conference will take place May 23 at that hospital in Temple; it will be co-sponsored by the Scott, Sherwood and Brindley Foundation. Guest speakers will be Dr. Manuel R. Gomez, chairman, department of pediatric neurology, Mayo Clinic, Rochester, Minn.; and Dr. Robert C. Franks, associate professor of pediatrics and director of the section of pediatric endocrinology, The University of Texas Medical School at San Antonio. Contact: Education Office, Scott and White Memorial Hospital, Temple 76501.

TEXAS COMMISSION ON ALCOHOLISM will sponsor the 13th Annual Institute of Alcohol Studies at Jester Center, Austin, June 7-11. A special "cafeteria" section is planned for each afternoon, during which four topics will be discussed and individuals may attend the meeting of their choice. Featured speakers will be Dr. Milton Maxwell (PhD), executive director, Rutgers University Summer School of Alcohol Studies; George Dimas, president, North American Association of Alcoholism Programs; and Kenneth Eaton, associate director, National Center for Prevention and Control of Alcoholism. Contact: C. W. Coffey, 809 Sam Houston State Office Bldg., Austin 78701, assistant executive director.

TEXAS MEDICAL ASSISTANTS ASSOCIATION's 13th annual convention, hosted by East Harris County Medical Assistants Society, will be held at the Holiday Inn in Baytown May 21-24. "Year of the Constellation" will be the theme of the meeting, which will include executive and reference committee meetings, House of Delegates meetings, and an educational program. A poolside party and social, luncheon and style show at the Tower restaurant, and a fish fry on the bay are scheduled. Contact: Anita H. McCarthy, 2300 Taft Circle, #46, Baytown 77520, convention chairman.

TEXAS STATE BOARD OF MEDICAL EXAMINERS will give examinations June 15-17 at the Sheraton-Fort Worth Hotel, Fort Worth, and at The University of Texas Medical Branch at Galveston, the UT Southwestern Medical School at Dallas, the UT Medical School at San Antonio, and Baylor College of Medicine at Houston to graduating seniors and students taking the pre-clinical examination. Contact: Dr. M. H. Crabb, 1612 Summit Ave., Fort Worth 76102, secretary.

THE UNIVERSITY OF TEXAS NURSING SCHOOL (System-wide) will present a conference on dynamics of the interviewing process June 1-3 at the Psychiatric Pavilion, Amarillo Hospital District, Amarillo, and June 8-10 at the Holiday Inn in Galveston. Topics will include listening, blocks to communication, dynamics of group process, dimensions of counseling, and human potential and human promise. Participants will be able to present actual problem situations from their own jobs and to observe demonstrations of various approaches to different problems, participate in small group discussions which focus on interpersonal relations, practice the development of trusting relationships and improving ways of coping with problem situations, observe demonstrations of a number of role-playing situations illustrating different problems and approaches, and engage in interviewing practice sessions as a participant and as an observer. Registration fee is $25. Contact: Miss Dorothy Blume, Director, Continuing Education, The University of Texas Nursing School, Austin 78712.

CURRENT REGIONAL MEETINGS

NEW MEXICO REGIONAL MEDICAL PROGRAM will sponsor a two-day symposium on stroke May 22-23 at the Holiday Inn East in Albuquerque, N.M. The clinically oriented program will feature the following guest speakers: Dr. John S. Meyer, Baylor College of Medicine, Houston; Dr. Michael DeBakey, Baylor College of Medicine, Houston; Dr. Clark Millikan, Mayo Clinic, Rochester, Minn.; Dr. Fletcher McDowell, Cornell University; Dr. James Toole, Bowman-Gray School of Medicine; and Dr. Lawrence McHenry, Philadelphia General Hospital. Contact: Mrs. Elizabeth M. Barnett, Coordinator, Continuing Education, New Mexico Regional Medical Program, The University of New Mexico School of Medicine, Albuquerque, N.M. 87106.

CURRENT NATIONAL MEETINGS

AMERICAN ACADEMY OF ORTHOPAEDIC SURGEONS will sponsor a five-day training course for hospital emergency room nurses May 24-28 in San Diego, Calif. The course of lectures and audiovisual demonstrations will cover all phases of medical care rendered in the emergency room to ill and injured persons. Lecturers will discuss in depth the increasing responsibilities of emergency room nurses. Topics will include cardiopulmonary resuscitation, techniques of intravenous fluids and blood administration, treatment of the unconscious patient, handling psychiatric disturbances, and the legal and religious aspects of emergency care. Contact: Dr. Howell E. Wiggins, 2850 Sixth Ave., San Diego, Calif. 92103, course director.

AMERICAN NEUROLOGICAL ASSOCIATION's 95th annual meeting will be held at the Sheraton-Deauville Hotel and Motor Inn, Atlantic City, N.J., June 15-17. The meeting will consist of scientific sessions, followed by executive sessions. A special feature of the program will be the first annual Foster Elting Bennett Memorial Lecture, to be delivered at the 2 p.m. session June 17. Registration fee is $10. Contact: Dr. Samuel A. Trufant, Cincinnati General Hospital, Cincinnati, Ohio 45229, secretary.

AMERICAN THERAPEUTIC SOCIETY has scheduled its 71st annual meeting June 20-21 at the Continental Plaza Hotel in Chicago. Ten-minute formal presentations followed by five-minute discussions will compose the morning and afternoon scientific sessions. Prize essays will be awarded at the Saturday afternoon session, and the recipient of the 16th Oscar B. Hunter Memorial Award in Therapeutics will be introduced at the Saturday morning session. Contact: Dr. Richard T. Smith, 1718 Gallagher Rd., R.D. 4, Norristown, Pa. 19401, secretary-treasurer.

NATIONAL TUBERCULOSIS AND RESPIRATORY DISEASE ASSOCIATION and its medical section, the American Thoracic Society, will meet May 24-27 at the Sheraton-Cleveland Hotel in Cleveland, Ohio. Medical, general, public health, nursing, special interest, and business sessions are planned. General topics to be covered in 10-minute presentations include clinical tuberculosis, pathology, isotopes and computers, tuberculosis: laboratory and epidemiology, surgery, applied physiology, lung transplants, genetics and biochemistry, basic physiology, clinical pulmonary disease, immunology, applied physiology, and oncology and virology. Contact: Dr. James E. Perkins, 1740 N. Broadway, New York 10019.

MORE HIGHLIGHTS OF COMING MEETINGS

■ Denotes Texas meetings.

ALSO IN MAY

AMERICAN THORACIC SOCIETY, Cleveland, May 24, 1970. Robert G. Weymueller, 1790 Broadway, New York 10019, Exec. Officer.

■ THE UNIVERSITY OF TEXAS NURSING SCHOOL (System-wide), Principles of Management in Nursing Care, Fairway Motor Hotel, McAllen, Tex., May 26-27, 1970. Registration fee $10. Dorothy Blume, The University of Texas Nursing School, Austin 78712, Dir. of Continuing Education.

ALSO IN JUNE

AMERICAN DIABETES ASSOCIATION, annual, St. Louis, June 7-14, 1970. J. Richard Connelly, 18 E. 48th St., New York 10017, Exec. Dir.

AMERICAN MEDICAL SOCIETY ON ALCOHOLISM, Chicago, June 23-24, 1970. Dr. Frank A. Seixas, National Council on Alcoholism, 2 Park Ave., New York 10016, Sec.

AMERICAN PHYSICAL THERAPY ASSOCIATION, Washington, D.C., June 28-July 3, 1970. Royce P. Noland, 1740 Broadway, New York 10019, Exec. Officer.

AMERICAN RHEUMATISM ASSOCIATION SECTION OF THE ARTHRITIS FOUNDATION, Detroit, Mich., June 18-19, 1970. Margaret M. Walsh, 1212 Ave. of the Americas, New York, Exec. Sec.

JULY

■ POSTGRADUATE MEDICAL ASSEMBLY OF SOUTH TEXAS, Houston, July 27-29, 1970. Mrs. Betty Dahme, 209 Jesse H. Jones Library Building, Houston 77025, Exec. Sec.

ROCKY MOUNTAIN CANCER CONFERENCE, Denver, July 17-18, 1970. F. C. Schmidt, 1764 Gilpin St., Denver 80218, Exec. Officer.

SOCIETY OF NUCLEAR MEDICINE, Washington, D.C., July 6-12, 1970. Margaret Gloss, 211 E. 43rd St., New York 10017, Exec. Officer.

SOUTHERN OBSTETRIC AND GYNECOLOGIC SEMINAR, annual, Asheville, N.C., July 27-31, 1970. Dr. George T. Schneider, 1514 Jefferson Highway, New Orleans 70121, Sec.

■ TEXAS PHARMACEUTICAL ASSOCIATION, Dallas, July 26-29, 1970. Luther R. Parker, 404 Austin Savings Bldg., Austin, Exec. Officer.

■ THE UNIVERSITY OF TEXAS NURSING SCHOOL (System-wide), The Changing Role in Mental Health Nursing—A New Dimension: Family Systems and Therapy, San Antonio, July 9-10, 1970. Dorothy Blume, The University of Texas Nursing School, Austin 78712, Dir. of Continuing Education.

AUGUST

AMERICAN ACADEMY OF PHYSICAL MEDICINE AND REHABILITATION, New York City, Aug. 16-18, 1970. Creston C. Herold, 30 N. Mich. Ave., Chicago 60602, Exec. Dir.

AMERICAN COLLEGE OF CHEST PHYSICIANS, 11th International Congress, Lausanne, Switzerland, Aug. 3-7, 1970. Alfred Soffer, 112 E. Chestnut St., Chicago, Exec. Dir.

AMERICAN CONGRESS OF REHABILITATION MEDICINE, New York, Aug. 16-21, 1970. Creston C. Herold, 30 N. Michigan Ave., Chicago 60602, Exec. Dir.

THE UNIVERSITY OF WISCONSIN, Ninth National Conference on Therapies for Advanced Cancers, Madison, Wis., Aug. 20-22, 1970. Dr. Robert J. Samp, Assistant Professor of Surgery and Clinical Oncology, University Hospitals, Madison, Wis. 53706, Program Coordinator.

WORLD MEDICAL ASSOCIATION, Oslo, Norway, Aug. 16-22, 1970. Dr. A. Z. Romualdez, 10 Columbus Circle, New York 10019, Sec.

SEPTEMBER

AMERICAN ACADEMY OF GENERAL PRACTICE, San Francisco, Sept. 25-Oct. 1, 1970. Mac F. Cahal, Volker Blvd. at Brookside, Kansas City, Mo., Exec. Dir.

AMERICAN ACADEMY OF ORTHOPAEDIC SURGEONS, postgraduate course on hip surgery, Philadelphia, Sept. 13-16, 1970. Dr. Raymond G. Tronzo, 133 S. 36th St., Philadelphia 19104.

AMERICAN ASSOCIATION OF MEDICAL CLINICS, San Francisco, Sept. 20-23, 1970. Dr. Edward M. Wurzel, 719 Prince St., Alexandria, Va. 22313, Exec. Dir.

AMERICAN ELECTROENCEPHALOGRAPHIC SOCIETY, Washington, D.C., Sept. 17-19, 1970. Dr. Philip T. White, Marquette University School of Medicine, 8700 W. Wisconsin Ave., Milwaukee, Wis. 53226, Sec.

AMERICAN FRACTURE ASSOCIATION, New York City, Sept. 26-30, 1970. Dr. H. W. Wellmerling, 610 Griesheim Bldg., Bloomington, Ill. 61701, Sec.-Gen.

■ AMERICAN HEART ASSOCIATION, TEXAS AFFILIATE, INC., Dallas, Sept. 15-20, 1970. Dudley H. Hafner, Box 9928, 8600 Hwy. 183 N, Austin 78757, Exec. Officer.

■ AMERICAN HOSPITAL ASSOCIATION, Houston, Sept. 14-17, 1970. James E. Hague, 840 N. Lake Shore Drive, Chicago, Sec.

AMERICAN HUMANE ASSOCIATION, St. Louis, Sept. 27-30, 1970. Rutherford T. Phillips, P. O. Box 1266, Denver, Colo. 80201, Exec. Dir.

AMERICAN MEDICAL WRITERS ASSOCIATION, New York, Sept. 24-27, 1970. W. Wayne Curtis, 420 Lexington Ave., New York 10017, Exec. Officer.

AMERICAN ROENTGEN RAY SOCIETY, Miami Beach, Fla., Sept. 30, 1970. Dr. William B. Seaman, 20 N. Wacker Dr., Chicago 60606, Exec. Officer.

AMERICAN SOCIETY OF CLINICAL PATHOLOGISTS and COLLEGE OF AMERICAN PATHOLOGISTS, annual, Atlanta, Ga., Sept. 14-21, 1970. Albert G. Boeck, Jr., 710 S. Wolcott, Chicago, Exec. Officer.

ASSOCIATION OF LIFE INSURANCE MEDICAL DIRECTORS OF AMERICA, Boston, Sept. 28-30, 1970. Dr. Arthur E. Brown, c/o ALIMDA, P.O. Box 594, Newark, N.J.

■ TEXAS MEDICAL ASSOCIATION, Austin, Sept. 18-20, 1970. C. Lincoln Williston, 1801 N. Lamar Blvd., Austin 78701, Exec. Sec.

■ TEXAS PEDIATRIC SOCIETY, Fort Worth, Sept. 24-26, 1970. Dr. Pat A. Cato, 1015 E. 32nd St., Austin 78705, Sec.

OCTOBER

AMERICAN ACADEMY OF CLINICAL TOXICOLOGY, San Francisco, Oct. 24-26, 1970. Dr. Eric G. Comstock, P. O. Box 2565, Houston 77001, Exec. Dir.

AMERICAN ACADEMY OF OPHTHALMOLOGY AND OTOLARYNGOLOGY, Las Vegas, Nev., Oct. 5-9, 1970. Dr. C. M. Kos, 15 Second St., SW, Rochester, Minn. 55901, Exec. Sec.-Treas.

AMERICAN ASSOCIATION OF BLOOD BANKS, San Francisco, Oct. 25-29, 1970. Lois J. James, 30 N. Mich. Ave., Chicago, Central Office Mgr.

AMERICAN ASSOCIATION OF MEDICAL ASSISTANTS, Des Moines, Iowa, October, 1970. Pauline M. Hunter, 5652 N. 10th St., Phoenix, Ariz., Sec.

AMERICAN COLLEGE OF CHEST PHYSICIANS, annual meeting, Los Angeles, Oct. 25-30, 1970. Alfred Soffer, 112 E. Chestnut St., Chicago, Exec. Dir.

AMERICAN COLLEGE OF EMERGENCY PHYSICIANS, scientific assembly, Las Vegas, Nev., Oct. 18-23, 1970. Executive Secretary, 120 W. Saginaw, E. Lansing, Mich. 48823.

AMERICAN COLLEGE OF GASTROENTEROLOGY, New York, Oct. 25-31, 1970. Daniel Weiss, 299 Broadway, New York 10007, Exec. Officer.

AMERICAN COLLEGE OF SURGEONS, Chicago, Oct. 12-16, 1970. Dr. C. Rollins Hanlon, 55 E. Erie St., Chicago 60611, Dir.

AMERICAN DIETETIC ASSOCIATION, Cleveland, Ohio, Oct. 5-9, 1970. Ruth M. Yakel, 620 N. Mich. Ave., Chicago 60611, Exec. Dir.

■ AMERICAN PUBLIC HEALTH ASSOCIATION, Houston, Oct. 26-30, 1970. Berwyn F. Mattison, 1790 Broadway, New York 10019, Exec. Dir.

AMERICAN SOCIETY OF ANESTHESIOLOGISTS, New York, Oct. 17-21, 1970. John W. Andes, 515 Busse Hwy., Park Ridge, Ill., Exec. Sec.

ASSOCIATION OF AMERICAN PHYSICIANS AND SURGEONS, INC., Richmond, Va., Oct. 1-3, 1970. Frank K. Woolley, 230 N. Mich. Ave., Chicago 60601, Exec. Dir.

■ EASTER SEAL SOCIETY FOR CRIPPLED CHILDREN & ADULTS OF TEXAS, INC., San Antonio, Oct. 8-10, 1970. William E. Russell 4429 N. Central Expwy., Dallas, Exec. Dir.

OKLAHOMA CITY CLINICAL SOCIETY, Oklahoma City, Oct. 26-28, 1970. Mrs. Alma O'Donnell, 601 N.W. Expwy., Oklahoma City 73118.

■ PANHANDLE DISTRICT MEDICAL SOCIETY, Amarillo, Oct. 17, 1970. Mrs. Carlie Umphres, Box 3276, Amarillo 79106, Exec. Sec.

SOUTHERN PSYCHIATRIC ASSOCIATION, West Palm Beach, Fla., Oct. 4-6, 1970. Mrs. Annette S. Boutwell, P.O. Box 10387, Raleigh, N. C. 27605, Exec. Sec.

NOVEMBER

AMERICAN ASSOCIATION FOR THE ACCREDITATION OF LABORATORY ANIMAL CARE, Chicago, Nov. 2-6, 1970. Joseph J. Garvey, 4 E. Clinton St., Suite 605, P. O. Box 13, Joliet, Ill. 60434, Exec. Sec.

AMERICAN ASSOCIATION FOR INHALATION THERAPY, New Orleans, Nov. 14-18, 1970. Mark T. Bowers, 3554 Ninth St., Riverside, Calif. 92501, Exec. Sec.

AMERICAN CANCER SOCIETY, annual, New York City, Nov. 4-6, 1970. Norman R. Hollis, 219 E. 42nd St., New York City 10017, Asst. Sec.

AMERICAN DENTAL ASSOCIATION, Las Vegas, Nev., Nov. 8-12, 1970. Dr. C. Gordon Watson (DDS), 211 E. Chicago Ave., Chicago 60611, Exec. Dir.

AMERICAN HEART ASSOCIATION, Atlantic City, N.J., Nov. 12-17, 1970. Dr. James M. Hundley, 44 E. 23rd St., New York 10010, Exec. Officer.

AMERICAN MEDICAL ASSOCIATION, clinical session, Boston, Nov. 29-Dec. 2, 1970. AMA, 535 N. Dearborn St., Chicago 60610.

AMERICAN MEDICAL RECORD ASSOCIATION, Colorado Springs, Colo., Nov. 1-6, 1970. Mrs. Mary-j Waterstraat, 211 E. Chicago Ave., Chicago 60611, Exec. Officer.

AMERICAN MEDICAL WOMEN'S ASSOCIATION, INC., Puerto Rico, Nov. 7-10, 1970. Gertrude F. Conroy, 1790 Broadway, New York 10019, Exec. Dir.

AMERICAN SOCIETY OF CLINICAL HYPNOSIS, Miami Beach, Fla., Nov. 4-8, 1970. F. D. Nowlin, 800 Washington Ave., SE, Minneapolis, Minn. 55414, Exec. Sec.

AMERICAN SOCIETY OF CYTOLOGY, Los Angeles, Nov. 4-7, 1970. Dr. Warren R. Lang, 7112 Lincoln Dr., Philadelphia, Pa. 19119, Sec.-Treas.

ASSOCIATION OF MILITARY SURGEONS OF THE US, Washington, D.C., Nov. 29-Dec. 3, 1970. BG Frank E. Wilson, AUS, Ret., 8502 Conn. Ave., Chevy Chase, Md. 20015, Exec. Dir.

■ BLACKFORD MEMORIAL LECTURES, annual, Denison, Tex., Nov. 7, 1970. Dr. John D. Gleckler, 211 N. Fannin, Denison 75020, Chrmn.

MEDICAL SOCIETY OF THE US AND MEXICO, annual, Guadalajara, Jal. Mexico, Nov. 4-7, 1970. Virginia E. Bryant, 333 W. Thomas Rd., #207, Phoenix 85013, Exec. Sec.

NATIONAL SOCIETY FOR THE PREVENTION OF BLINDNESS, INC., New York, Nov. 19, 1970. Margaret S. Banks, 79 Madison Ave., New York 10016, Admin. Asst.

RADIOLOGICAL SOCIETY OF NORTH AMERICA, Chicago, Nov. 29-Dec. 4, 1970. Mrs. Marguerite H. Henry, 713 E. Genesee St., Syracuse, N.Y. 13210, Exec. Dir.

■ SOUTHERN MEDICAL ASSOCIATION, Dallas, Nov. 16-19, 1970. Robert F. Butts, 2601 Highland Ave., Birmingham, Ala. 35205, Exec. Dir.

■ TEXAS ASSOCIATION FOR CHILDREN WITH LEARNING DISABILITIES, INC., Austin, Nov. 20-21, 1970. Mrs. William F. Howard, 4601 Small Drive, Austin 78731. Chrmn.

UNIVERSITY OF FLORIDA COLLEGE OF MEDICINE, seminar in obstetrics and gynecology, Gainesville, Fla., Nov. 19-20, 1970.

DECEMBER

AMERICAN ACADEMY OF DERMATOLOGY, Chicago, Dec. 5-10, 1970. Mrs. Dorothy P. Compton, 2250 N.W. Flanders St., Portland, Ore., Exec. Sec.

AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE, Chicago, Dec. 26-31, 1970. Dr. Dael Wolfle, 1515 Massachusetts Ave., NW, Washington, D.C. 20005, Exec. Officer.

ASSOCIATION OF STATE AND TERRITORIAL HEALTH OFFICERS, Washington, D.C., Dec. 6-10, 1970. Noble J. Swearingen, 234 E. Capitol St., Washington, D.C. 20002, Dir.

SOUTHERN SURGICAL ASSOCIATION, Boca Raton, Fla., Dec. 7-9, 1970. Dr. David C. Sabiston, Jr., Duke University Medical Center, Durham, N.C., Sec.

■ TEXAS ACADEMY OF INTERNAL MEDICINE, Galveston, Dec. 5, 1970. Dr. O. Roger Hollan, 703 Nix Bldg., San Antonio 78205, Sec.

■ TEXAS SOCIETY OF INTERNAL MEDICINE, INC., Dec., 1970. Mrs. Iris Wenzel, 1801 N. Lamar Blvd., Austin 78701, Exec. Sec.

■ TEXAS SOCIETY OF OPHTHALMOLOGY AND OTOLARYNGOLOGY, Corpus Christi, Dec. 4-5, 1970. Dr. Bland H. Schwarting, 304 Med. Prof. Bldg., San Antonio, Sec.

EVERY WOMAN WHO'S LOVED...
will appreciate this advice from you
Many women find they occasionally have excessive discharge, spotting and increased mucus secretion, which can result in unpleasant odor. Douching with StomAseptine cleanses, deodorizes, soothes and relieves itching . . . and helps prevent embarrassment. Your recommendation of a regular program of StomAseptine douching will do wonders for a woman's self-assurance and peace of mind.
STOMASEPTINE®
DOUCHE POWDER
cleanses internally
deodorizes thoroughly
StomAseptine provides sodium perborate, sodium bicarbonate, sodium chloride, sodium borate, menthol, thymol, eucalyptol, methyl salicylate and aromatics.
HARCLIFFE LABORATORIES, Inc.
423 Atlantic Avenue, Brooklyn, N.Y. 11217

CONTINUING EDUCATION COURSES

Pediatrics: Aspen, Colo., will be the site July 19-22 of a postgraduate course in pediatrics, sponsored by the University of Colorado School of Medicine. Designed for the practicing pediatrician to help him keep abreast of significant new developments in his broad field and its many branches and related fields, the course will also provide adequate time for leisure activities such as fishing, hiking, golfing, swimming, and sightseeing. The Aspen Music Festival will be in progress at the time of the course. Guest speakers will include Dr. Philip R. Dodge of St. Louis; Dr. Samuel L. Katz of Durham, N.C.; and Dr. Howard H. Higman of Boulder, Colo.

Tuition is $90. Contact The Office of Postgraduate Medical Education, University of Colorado School of Medicine, 4200 E. Ninth Ave., Denver 80220, for further details.

Internal Medicine: The YMCA Conference Center at Estes Park, Colo., will be the site of a postgraduate course in internal medicine July 27-31, sponsored by the University of Colorado School of Medicine. Designed specifically to help the practicing internist keep abreast of significant new developments in the broad field of internal medicine, the course will cover on separate days cardiology, gastroenterology, neurology, and rheumatology, and on half-days, clinical immunology and clinical pharmacology. Adequate time will be provided for leisure activities such as swimming, horseback riding, fishing, hiking, golfing, and sightseeing.

The tuition for the course is $90, including a non-refundable registration fee of $10. Write to the Office of Postgraduate Medical Education, University of Colorado School of Medicine, 4200 E. Ninth Ave., Denver 80220, for additional information.

Rheumatoid Arthritis: The American Academy of Orthopaedic Surgeons will sponsor a postgraduate course on rheumatoid arthritis June 4-6 at the Jack Tar Hotel in San Francisco. The three-day course of lectures and panel discussions is offered by the academy's committee on arthritis in cooperation with the department of continuing education in the health sciences, University of California at San Francisco. It will be devoted to practical considerations of the orthopedic problems presented by the rheumatoid patient. Specific details of surgical techniques, indications and contraindications for surgery, preoperative and postoperative management, and total hip replacement surgery will be discussed. Participants may bring problem cases for presentation and discussion. The twenty-five-member faculty for the course includes lecturers from ten states and Canada.

For application forms and further information contact Dr. William R. Murray, Room 57OU, University of California, San Francisco 94122, or the American Academy of Orthopaedic Surgeons, 430 N. Mich. Ave., Chicago 60611.

Various Subjects: The American College of Physicians will sponsor a series of postgraduate courses on the following subjects: heart disease—clinical and pathological correlation, May 27-29, Washington, D.C.; pathology—pathologic physiology and clinical aspects of renal disease, June 3-5, Washington, D.C.; psychiatry and the internist, June 8-12, Baltimore, Md.; internal medicine, 1970—Old Principles, New Practice, June 8-12, Iowa City, Iowa; cardiac auscultation, June 15-17, New York, N.Y.; and blood transfusion therapy and related immunology, June 15-17, East Lansing, Mich. Lectures, demonstrations, panel discussions, and question and answer periods will be included.

Tuition is $60 for members and $100 for nonmembers for each of the courses. Write to Dr. Edward C. Rosenow, Jr., Executive Director, American College of Physicians, 4200 Pine St., Philadelphia 19104, for additional information and registration forms.

Infectious Diseases: The American College of Physicians will present a course on the clinical aspects of infectious diseases May 20-22 at the University of Washington School of Medicine at Seattle. The purpose of this course is to present recent advances in diagnosis and therapy of infectious diseases; and practical aspects will be emphasized, although basic mechanisms will be included where applicable. The rapid changes in details of antibiotic therapy and the increasing incidence of gram-negative infections will receive attention, as will prevention and treatment of infections in patients with lowered host defenses. Audience participation in the discussion and question periods will be encouraged.

Fee for college members, residents, and research fellows is $60 and for nonmembers is $100. Requests for more information, applications, and registration may be sent to Dr. Edward C. Rosenow, Jr., Executive Director, American College of Physicians, 4200 Pine St., Philadelphia 19104.

Laboratory Training: A series of laboratory training courses is being presented by the Laboratory Division of the National Communicable Disease Center in Atlanta, Ga. An advanced course in "Laboratory Methods in Medical Mycobacteriology" will be offered July 20-24, and registration for this course will end May 25. Offered July 27-Aug. 21 will be "Laboratory Methods in General Medical Mycology." Registration for this course will close June 1.

Information and application may be obtained from the Training Office Laboratory Division, National Communicable Disease Center, Atlanta 30333.

Electroencephalography: The American Electroencephalographic Society will sponsor a continuation course on "Current Practice of Clinical Electroencephalography" Sept. 14-16, 1970, in Washington, D.C. The course is designed to review the principal applications of the EEG to clinical medical practice.

Requests for further details about the course or registration procedure may be addressed to Dr. Donald W. Klass, EEG Course Director, Mayo Clinic, Rochester, Minn. 55901.

Laboratory Workshops: A series of laboratory workshops for the benefit of public health, hospital, clinical, and other medical laboratories is under way. A course on introductory immunofluorescence again will be offered May 25-27; it was first offered in February. Scheduled for May 27-29 is a course on public health and medical parasitology which will give the laboratory worker an opportunity to learn first hand how to recognize the common intestinal protozoan parasites. From June 1-5 will be a course on public health and medical bacteriology, dealing with specific tests used in the identification of several microorganisms of public health importance. Daily starting and closing times for each workshop will be 9 a.m. and 5 p.m.

There is no registration fee for the workshops, and admittance is by prior registration only. Application may be sent to Dr. J. V. Irons (ScD), Director of Laboratories, Texas State Department of Health, 1100 W. 49th St., Austin 78756.

The girth control pill

Tepanil® Ten-tab®

(continuous release form)

(diethylpropion hydrochloride)

works on the appetite not on the 'nerves'

When girth gets out of control, TEPANIL can provide sound support for the weight control program you recommend. TEPANIL reduces the appetite—patients enjoy food but eat less. Weight loss is significant—gradual—yet there is a relatively low incidence of CNS stimulation.

Contraindications: Concurrently with MAO inhibitors, in patients hypersensitive to this drug; in emotionally unstable patients susceptible to drug abuse.

Warning: Although generally safer than the amphetamines, use with great caution in patients with severe hypertension or severe cardiovascular disease. Do not use during first trimester of pregnancy unless potential benefits outweigh potential risks.

Adverse Reactions: Rarely severe enough to require discontinuation of therapy, unpleasant symptoms with diethylpropion hydrochloride have been reported to occur in relatively low incidence. As is characteristic of sympathomimetic agents, it may occasionally cause CNS effects such as insomnia, nervousness, dizziness, anxiety, and jitteriness. In contrast, CNS depression has been reported. In a few epileptics an increase in convulsive episodes has been reported. Sympathomimetic cardiovascular effects reported include ones such as tachycardia, precordial pain, arrhythmia, palpitation, and increased blood pressure. One published report described T-wave changes in the ECG of a healthy young male after ingestion of diethylpropion hydrochloride; this was an isolated experience, which has not been reported by others. Allergic phenomena reported include such conditions as rash, urticaria, ecchymosis, and erythema. Gastrointestinal effects such as diarrhea, constipation, nausea, vomiting, and abdominal discomfort have been reported. Specific reports on the hematopoietic system include two each of bone marrow depression, agranulocytosis, and leukopenia. A variety of miscellaneous adverse reactions have been reported by physicians. These include complaints such as dry mouth, headache, dyspnea, menstrual upset, hair loss, muscle pain, decreased libido, dysuria, and polyuria.

Convenience of two dosage forms: TEPANIL Ten-tab tablets: One 75 mg. tablet daily, swallowed whole, in midmorning (10 a.m.); TEPANIL: One 25 mg. tablet three times daily, one hour before meals. If desired, an additional tablet may be given in midevening to overcome night hunger. Use in children under 12 years of age is not recommended.

T-006A / 1/70 / U.S. PATENT NO. 3,001,910

THE NATIONAL DRUG COMPANY
DIVISION OF RICHARDSON-MERRELL INC
PHILADELPHIA, PENNSYLVANIA 19144

I love my family.
I adore this house.
My in-laws are great.
The neighbors are wonderful.

Indications: For use in management of anxiety and tension occurring alone or as accompanying symptom complex to medical and surgical disorders and procedures. Though not a hypnotic, fosters normal sleep through antianxiety and related muscle-relaxant properties.

Contraindications: History of sensitivity to meprobamate.

Important Precautions. Carefully supervise dose and amounts prescribed, especially for patients prone to overdose themselves. Excessive prolonged use has been reported to result in dependence or habituation in susceptible persons, as alcoholics, ex-addicts, and other severe psychoneurotics. After prolonged excessive dosage, reduce dosage gradually to avoid possibly severe withdrawal reactions. Abrupt discontinuance of excessive doses has sometimes resulted in epileptiform seizures.

Warn patients of possible reduced alcohol tolerance, with resultant slowing of reaction time and impairment of judgment and coordination.

Reduce dose if drowsiness, ataxia or visual disturbance occurs; if persistent, patients should not operate vehicles or dangerous machinery.

Side Effects include drowsiness, usually transient; if persistent and associated with ataxia, usually responds to dose reduction; occasionally concomitant CNS stimulants (amphetamine, mephentermine sulfate) are desirable. Allergic or idiosyncratic reactions are rare, but such reactions, sometimes severe, can develop in patients receiving only 1 to 4 doses who have had no previous contact with meprobamate. Previous history of allergy may or may not be related to incidence of reactions. Mild reactions are characterized by itchy urticarial or erythematous maculopapular rash, generalized or confined to groin. Acute nonthrombocytopenic purpura with cutaneous petechiae, ecchymoses, peripheral edema and fever have been reported. One fatal case of bullous dermatitis following intermittent use of meprobamate with prednisolone has been reported. If allergic reaction occurs, meprobamate should be stopped and not reinstituted. Severe reactions, observed very rarely, include angioneurotic edema, bronchial spasms, fever, fainting spells, hypotensive crises (1 fatal case), anaphylaxis, stomatitis and proctitis (1 case) and hyperthermia. Treat symptomatically as with epinephrine, antihistamine and possibly hydrocortisone. Aplastic anemia (1 fatal case), thrombocytopenic purpura, agranulocytosis and hemolytic anemia have occurred rarely, almost always in presence of known toxic agents. A few cases of leukopenia, usually transient, have been reported on continuous administration.

Meprobamate may sometimes precipitate grand mal attacks in patients susceptible to both grand and petit mal. Extremely large doses can produce rhythmic fast activity in the cortical pattern. Impairment of accommodation and visual acuity has been reported rarely. After excessive dosage for weeks or months, withdraw gradually (1 or 2 weeks) to avoid recurrence of pretreatment symptoms (insomnia, severe anxiety, anorexia). Abrupt discontinuance of excessive doses has sometimes resulted in vomiting, ataxia, tremors, muscle twitching and epileptiform seizures. Prescribe very cautiously and in small amounts for patients with suicidal tendencies. Suicidal attempts have resulted in coma, shock, vasomotor and respiratory collapse and anuria. Excessive doses have resulted in prompt sleep; reduction of blood pressure, pulse and respiratory rates to basal levels; and occasionally hyperventilation. Treat with immediate gastric lavage and appropriate symptomatic therapy. (CNS stimulants and pressor amines as indicated). Doses above 2400 mg./day are not recommended.

Composition: Tablets, 200 mg. and 400 mg. meprobamate. Coated Tablets, WYSEALS® EQUANIL (meprobamate) 400 mg. (All tablets also available in REDIPAK® [strip pack]. Wyeth.) Continuous-Release Capsules, EQUANIL L-A (meprobamate) 400 mg.

The young homemaker: her underlying anxiety and tension can surface and intensify under the continuous stress of rearing a growing family. Especially when she's confined to the home and its environs so much.

You can help her over the rough spots with reassurance and counsel. Equanil can help relieve tension, ease anxiety—with little risk of serious side effects. Time and experience will probably do the rest.

Equanil®
(meprobamate)
Wyeth Laboratories
Philadelphia, Pa.

Photo professionally posed.

Mylanta®
24 million hours a day.

Through the day, every day,
ulcer patients take
one million doses of Mylanta
for relief of ulcer pain.

Mylanta®
LIQUID/TABLETS

aluminum and magnesium hydroxides plus simethicone

Good taste = patient acceptance
Relieves G.I. gas distress*
Non-constipating

*with the defoaming action of simethicone

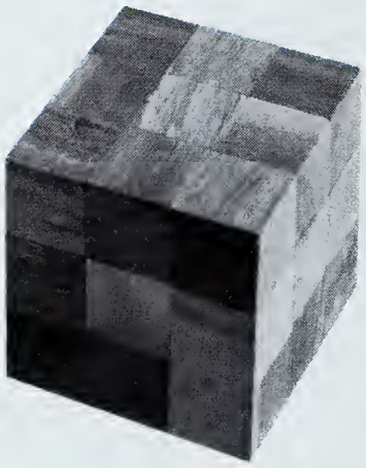
Stuart PHARMACEUTICALS Pasadena, Calif. 91109
Division of Atlas Chemical Industries, Inc., Wilmington, Del. 19899

IN G.U. THERAPY

Does not create problems...

SOLVES THEM

WITH FIRST DOSE PAIN RELIEF



Urised is a problem solver through its time tested record of minimal side effects. Unlike newer antibiotics or sulfonamides, Urised does not create problems. It brings patient comfort with first dose pain relief. For over 50 years, Urised has created physician and patient confidence by providing effective therapy when needed.

Clinically effective for G.U. Therapy[1-5]

URISED®

For G.U. Frequency–Urgency–Burning

- **CYSTITIS**
- **PYELITIS**
- **TRIGONITIS**
- **URETHRITIS**

Each blue-coated tablet contains active:

Atropine Sulfate	0.03 mg.	Methylene Blue	5.4 mg.
Hyoscyamine	0.03 mg.	Phenyl Salicylate	18.1 mg.
Methenamine	40.8 mg.	Benzoic Acid	4.5 mg.

Caution: Federal law prohibits dispensing without a prescription.

Action and Uses: Urised is effective in cystitis, pyelitis, trigonitis in pregnancy, urethritis, and other urinary tract infections where the invading organisms, such as E. coli, S. aureus and albus, are susceptible to methenamine and methylene blue in an acid medium.

URISED also is useful as a prophylactic measure prior to urinary tract instrumentation or operation. In acute fulminating infections, URISED may be used for symptomatic relief while awaiting specific laboratory diagnosis. May be combined with specific therapy where indicated.

Effects: Rapid relief of pain, relaxation of smooth muscle spasm through parasympatholytic action of atropine and hyoscyamine; pus cell content decreased.

Administration and Dosage:

Adults: Two tablets, orally, four times per day, followed by liberal fluid intake.

Children: One-half the adult dose.

Acute cases: Initially two tablets every hour for three doses, followed by the recommended daily administration.

Precautions: Administer with caution to persons with known idiosyncrasy to atropine and cardiac disease. While under this therapy the urine is blue; patients should be so advised to allay apprehension.

Side Effects: Neither irritation nor untoward reactions have been reported; however, if pronounced dryness of the mouth, flushing, or difficulty in initiating micturition occurs, decrease dosage. If rapid pulse, dizziness or blurring of vision occurs, discontinue use immediately. Acute urinary retention may be precipitated in prostatic hypertrophy.

Contraindications: Glaucoma, urinary bladder neck or pyloric obstruction, duodenal obstruction and cardiospasm. Hypersensitivity to any of the ingredients.

How Supplied: Bottles of 100, 500 and 1,000 tablets.

References: (1) Sands, R. X.: New York St. J. Med. 61:2598-2602, 1961; (2) Renner, M. J., et al.: Hosp. Topics 39:71-73, 1961; (3) Haas, Jr., J., and Kay, L. L.: Southwest. Med. 42:30-32, 1961; (4) Marshall, W.: Clin. Med. 7:499-502, 1960; (5) Strauss, B.: Clin. Med. 4:307-310, 1957.

CONAL **Manufacturers of Uriceutical® Specialties**

Pharmaceuticals, Inc.
Chicago, Illinois 60640

MJ-GP-1

Well, Dr. Cunningham! I was just telling Herbert I should talk to you about my allergy. First my nose starts to tickle and..."

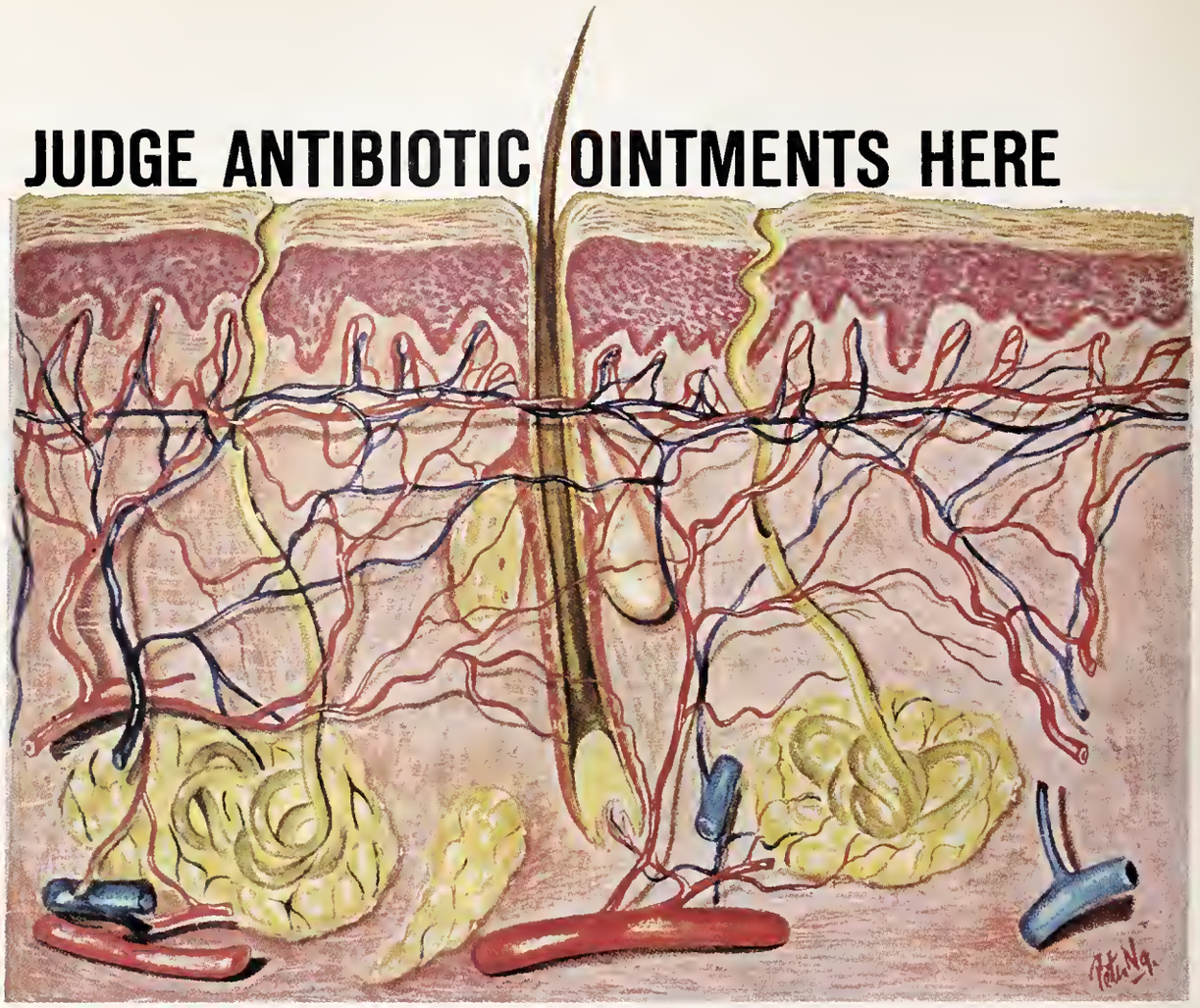
You know the rest of the story. Sneezing. Watery eyes. Rosy nose. And for prompt relief of these symptoms, here's Novahistine® LP. These continuous-release tablets have a vasoconstrictor-antihistamine formulation that begins working in minutes, then continues to provide relief for hours. Even when nasal congestion is due to repeated allergic episodes, two Novahistine LP tablets, morning and evening, let most patients breathe freely all day and all night. Use with caution in individuals with severe hypertension, diabetes mellitus, hyperthyroidism or urinary retention. Caution ambulatory patients that drowsiness may result.

Novahistine® LP decongestant

(Each tablet contains 25 mg. of phenylephrine hydrochloride and 4 mg. of chlorpheniramine maleate.)

DOW THE DOW CHEMICAL COMPANY Rx Pharmaceuticals Indianapolis

JUDGE ANTIBIOTIC OINTMENTS HERE



Results on skin are final proof of any topical antibiotic's effectiveness

No in vitro test can duplicate a clinical situation on living skin. 'Neosporin' (polymyxin B – bacitracin – neomycin) Ointment has consistently proven its effectiveness in thousands of cases of bacterial skin infection. The spectra of the three antibiotics overlap in such a way as to provide bactericidal action against most pathogenic bacteria likely to be found topically. Diffusion of the antibiotics from the special petrolatum base is rapid since they are insoluble in the petrolatum, but readily soluble in tissue fluids. The Ointment is bland and nonirritating.

Caution: As with other antibiotic preparations, prolonged use may result in overgrowth of nonsusceptible organisms and/or fungi. Appropriate measures should be taken if this occurs. Articles in the current medical literature indicate an increase in the prevalence of persons allergic to neomycin. The possibility of such a reaction should be borne in mind.

Contraindications: This product is contraindicated in those individuals who have shown hypersensitivity to any of its components.

Supplied: Tubes of 1 oz., ½ oz. with applicator tip, and ⅛ oz. with ophthalmic tip.

Complete literature available on request from Professional Services Dept. PML.

'NEOSPORIN'®

brand

POLYMYXIN B-BACITRACIN-NEOMYCIN OINTMENT

BURROUGHS WELLCOME & CO. (U.S.A.) INC., Tuckahoe, N.Y.

IN ASTHMA
IN EMPHYSEMA

optional therapy

*

THE mudranes®

All Mudranes are bronchodilator-mucolytic in action, and are indicated for symptomatic relief of bronchial asthma, emphysema, bronchiectasis and chronic bronchitis. **MUDRANE tablets** contain 195 mg. potassium iodide; 130 mg. aminophylline; 21 mg. phenobarbital (Warning: may be habit-forming); 16 mg. ephedrine HCl. **Dosage** is one tablet with full glass of water, 3 or 4 times a day. **Precautions** are those for aminophylline-phenobarbital-ephedrine combinations. **Iodide side-effects:** May cause nausea. Very long use may cause goiter. Discontinue if symptoms of iodism develop. **Iodide contraindications:** Tuberculosis; pregnancy (to protect the fetus against possible depression of thyroid activity). **MUDRANE-2 tablets** contain 195 mg. potassium iodide; 130 mg. aminophylline. **Dosage** is one tablet with full glass of water, 3 or 4 times a day. **Precautions** are those for aminophylline. **Iodide side-effects and contraindications are listed above. MUDRANE GG tablets** contain 100 mg. glyceryl guaiacolate; 130 mg. aminophylline; 21 mg. phenobarbital (Warning: may be habit-forming); 16 mg. ephedrine HCl. **Dosage** is one tablet with full glass of water, 3 or 4 times a day. **Precautions** are those for aminophylline-phenobarbital-ephedrine combinations. **MUDRANE GG-2 tablets** contain 100 mg. glyceryl guaiacolate; 130 mg. aminophylline. **Dosage** is one tablet with full glass of water, 3 or 4 times a day. **Precautions:** Those for aminophylline. **MUDRANE GG Elixir.** Each teaspoonful (5 cc) contains 26 mg. glyceryl guaiacolate; 20 mg. theophylline; 5.4 mg. phenobarbital (Warning: may be habit-forming); 4 mg. ephedrine HCl. **Dosage:** Children, 1 cc for each 10 lbs. of body weight; one teaspoonful (5 cc) for a 50 lb. child. Dose may be repeated 3 or 4 times a day. Adult, one tablespoonful, 4 times daily. All doses should be followed with ½ to full glass of water. **Precautions:** See those listed above for Mudrane GG tablets.

MUDRANE—original formula
First choice

MUDRANE-2
When ephedrine is too exciting or is contraindicated

MUDRANE GG
During pregnancy or when K.I. is contraindicated or not tolerated

MUDRANE GG-2
A counterpart for Mudrane-2

MUDRANE GG ELIXIR
For pediatric use or where liquids are preferred

Clinical specimens available to physicians.

WILLIAM P. POYTHRESS & COMPANY, INC., RICHMOND, VIRGINIA 23217

Manufacturers of Ethical Pharmaceuticals

CAUTION:

OVEREATING MAY BE HAZARDOUS TO YOUR HEALTH.

According to the Framingham Heart Study, the obese face:

86% greater risk of angina pectoris,
82% greater risk of diabetes,
71% greater risk of coronary heart disease.*

Obesity may also aggravate osteoarthritis, flat feet, intertriginous dermatitis, varicose veins, and ventral or diaphragmatic hernias.[1-3]

ou are considering weight reduction, consider

Preludin®
phenmetrazine hydrochloride
Endurets®
prolonged-action tablets

Often effective

Controlled studies in a general patient population have shown that when Preludin is used with diet, the rate of weight loss exceeds that obtained by placebo and diet.

Long acting

Slow, even release of the active principle usually suppresses appetite continuously for about 12 hours.

Once-a-day dosage

One Endurets tablet after breakfast. It helps reduce weight and costs, conveniently.

For contraindications, warning, precautions, and adverse reactions, please see the full prescribing information.
It is summarized on this page.

Where there's no will there's a therapeutic way.

•Among persons 20% or more overweight as compared with median weight for persons of like height and sex.

1. Kannel, W.B., *et al.*: *Circulation* 35:734, 1967.
2. Thomas, H.E., Jr., *et al.*: *Med. Times* 95:1099, 1967.
3. Albrink, M.J., in: Beeson, P.B. & McDermott, W. (eds.): *Cecil-Loeb Textbook of Medicine*, ed. 12, Phila.: W.B. Saunders Co., 1967.

Preludin®
phenmetrazine hydrochloride

Preludin is indicated only as an anorexigenic agent in the treatment of obesity. It may be used in simple obesity and in obesity complicated by diabetes, moderate hypertension (see Precautions), or pregnancy (see Warning).

Contraindications: Severe coronary artery disease, hyperthyroidism, severe hypertension, nervous instability, and agitated prepsychotic states. Do not use with other CNS stimulants, including MAO inhibitors.

Warning: Do not use during the first trimester of pregnancy unless potential benefits outweigh possible risks. There have been clinical reports of congenital malformation, but causal relationship has not been proved. Animal teratogenic studies have been inconclusive.

Precautions: Use with caution in moderate hypertension and cardiac decompensation. Cases involving abuse of or dependence on phenmetrazine hydrochloride have been reported. In general, these cases were characterized by excessive consumption of the drug for its central stimulant effect, and have resulted in a psychotic illness manifested by restlessness, mood or behavior changes, hallucinations or delusions. Do not exceed recommended dosage.

Adverse Reactions: Dryness or unpleasant taste in the mouth, urticaria, overstimulation, insomnia, urinary frequency or nocturia, dizziness, nausea, or headache.

Dosage: One 25 mg. tablet b.i.d. or t.i.d. Or one 75 mg. Endurets tablet a day, taken by mid-morning.

Availability: Pink, square, scored tablets of 25 mg. for b.i.d. or t.i.d. administration, in bottles of 100 and 1000.

Pink, round Endurets® prolonged-action tablets of 75 mg. for once-a-day administration, in bottles of 100 and 1000.

(B)R3-46-560-B

For complete details, please see full prescribing information.

Under license from
Boehringer Ingelheim G.m.b.H.

Geigy Pharmaceuticals
Division of
Geigy Chemical Corporation
Ardsley, New York 10502

Now available for your prescribing needs

Cordran® Tape

Flurandrenolide Tape (4 mcg. per sq. cm.)

Additional information available upon request • Eli Lilly and Company, Indianapolis, Indiana 46206

000108

Lilly

TEXAS MEDICINE

VOLUME 66 NUMBER 5 MAY, 1970

Devoted to the interests of the medical profession and public health in Texas

BOARD OF PUBLICATION
Charles P. Hardwicke, MD, Austin
Chairman
James A. Hallmark, MD, Fort Worth
John M. Smith, Jr, MD, San Antonio
Vice Chairman
R. Harvey Bell, MD, Palestine
N. L. Barker, MD, Paris
C. W. Yates, MD, Rosenberg
Don G. Harrel, MD, Dallas

TMA OFFICERS
Walter Walthall, MD, San Antonio
President
C. Lincoln Williston, Austin
Executive Secretary

EDITORIAL AND BUSINESS OFFICES
1801 North Lamar Blvd, Austin
Telephone: 477-6704
Marilyn Baker, Managing Editor
Rae Vajgert, Assistant Managing Editor
Nancy Arthurs, Assistant Editor
Sharon Walker, Editorial Assistant
Judy Harris, Editorial Secretary
E. Maxwell Jones, Business Manager
Jon R. Hornaday, Advertising Director
Anne Shelnutt, Advertising Assistant

PRINTING OFFICES
c/o Stafford-Lowdon Company
1114 West Daggett, Fort Worth 76104

Subscriptions: $3 per year for members; $6 for nonmembers; $8 for foreign; $3 for medical students. Single copy: $1.

Copyright 1970 by The Texas Medical Association
Owned and issued monthly by the Association.

Editorial

ECONOMICAL LONG-DISTANCE TELEPHONED ELECTROCARDIOGRAPHS

A simple technique of recording and compression of telephone-electrocardiographs (ECG) which reduces long-distance tolls is described. This recording technique also permits the ECG cart to be available to all beds in the hospital, and allows a delayed transmission to the interpretation or relay station.

A dressing cart with well-tracking casters and an attached long extension cord is arranged so that the ECG machine is parallel to the pushing handle at which the operator stands. Behind the ECG machine are, first, a monaural automatic-recording level high-fidelity multispeed tape recorder and, second, a battery-powered FM telephone transmitter. These are so connected that only a soft monitoring tone is heard from the tape recorder during the recording of the ECG. Exact details of both the transmitting and receiving equipment with wiring diagrams will be supplied upon request.

The technician should be supplied with an ECG requisition which, in addition to the usual data, should have an information code for the benefit of the interpreter to best assist that physician in the care of his patient. A suggested code which enables the technician to merely read the circled numbers into the microphone follows:

1. STAT TELEPHONED INTERPRETATION.
2. Recent anterior chest pain.
3. Recent pleuritic chest pain.
4. Condition critical.
5. Single Master's test.
6. Double Master's test.
7. Quinidine or Pronestyl in last 24 hours.
8. Digitalis preparation in last week.
9. Known old anterior MI.
10. Known old inferior or diaphragmatic MI.
11. Known old lateral MI.
12. Known old posterior MI (not inferior).
13. Known old septal MI.
14. Known previous RBBB.
15. Known previous LBBB.
16. Treatment suggestions requested.
17. Known to have had significant diastolic hypertension.
18. Previous ECG by interpreter.
19. Taking contraceptive pills.
20. Has thrombophlebitis.
21. Has had recent hemoptysis.
22. Known previous pulmonary embolism.
23. Known hypokalemia.
24. Known hyperkalemia.
25. Known hypocalcemia.
26. Known hypercalcemia.
27. Has chronic pulmonary disease.

28. Just over an episode of tachycardia.
29. Suspected mitral disease.
30. Suspected aortic valve disease.

With this ECG requisition in hand, the technician pushes the ECG cart to a quiet private area, plugs the extension cord in to the wall current, switches the external speaker to "Off," and places the microphone plug into the "MIC" jack. The recorder speed is set at 3¾ inches per second (ips), and the number of the tracing is given ("Tracing number one, or two, etc"), as is the patient's name, age, room number, and name of physician. Then, "Code" is stated, followed by the appropriate circled numbers. The recorder is then placed in the "Stop" position and the speed is changed to 7½ ips. Again recorded is "One," or the appropriate number of the tracing in sequence on the tape. Then, if STAT has been circled, the word "STAT" is stated at 7½ ips, thereby allowing the monitored and written-out tracing to be noted as STAT. The technician then removes the microphone plug from its jack, turns on the FM telephone transmitter and the ECG, with the ECG on Single Standardization. The external speaker switch is moved from "Off" to "Soft," and ten standardizations are recorded. These can be recognized and heard from the monitor speaker of the recorder and are done at 7½ ips as was the serial number of that tracing. (After the first tracing only two or three such standardizations are necessary at the beginning of an ECG recording.) The technician then unplugs the extension cord from the wall, turns off the FM telephone transmitter, and pushes the ECG cart to the patient's bedside.

The patient is prepared with the most critical of techniques—all electrodes shining, skin scrubbed with alcohol, etc, as the perfection necessary at the receiving station can be no better than the original tracing. With the patient prepared and the electrodes attached, including V_1, lead I is run as usual by the technician, using the marking stylus and making the length of paper desired for mounting. Then the paper is stopped from running but the writing stylus is left "bouncing." The FM transmitter is turned on, and the recorder is placed in the recording mode on "Pause." If the patient can, he holds his breath in slight inspiration, and when the base line has no wandering the tape recorder is run for some five QRS complexes, a standardization marker being placed between the first two, then the recorder is again placed on "Pause." Then a regular lead II is run and marked as desired, and again the process is repeated with the tape recorder with the paper not running. This allows the technician to concentrate on the recorder, a straight base line, and the standardization code placed between the first two QRS complexes (which are audible on the monitor). Each of the first three leads is coded with a single short flash, the unipolar extremity leads with a single longer flash, and then the precordial leads with a single short flash between the first two complexes heard on the monitor. Lead VB is much preferred and should appear as the seventh lead after AVF. Should there be an irregularity present, lead V_2 is selected to run some 20 or 30 QRS complexes. If some difficulty develops while any one lead is being recorded, the tape recorder can be rewound slightly to the beginning of that lead and again recorded with a straight base line. This horizontal base line in the left precordial leads is a necessity, and can be obtained best by having the patient hold his breath in slight inspiration.

After lead VB has been recorded, the FM transmitter is turned off, the tape recorder placed in "Stop" position, and the ECG selector switch again returned to "Single Standardization."

Precordial leads with high voltage should be recorded at ½ standardization, and the stylus kept toward the bottom of the graph paper. The standardization marking between the first two QRS complexes will allow the interpreter to know of its reduction. Likewise, for lead VB a double standardization may be necessary, and this information will likewise be recorded by the standardization code between the first two QRS complexes.

The technician now removes the electrodes, cleans them, and proceeds to repeat the process with the next patient. That is: the information is given at 3¾ ips, the serial number of the tracing and some standardization flashes are given at 7½ ips, and the ECG is recorded at 7½ ips. When all of the assigned tracings have been graphed and recorded, the technician returns the ECG cart to its location by a telephone. When no more tracings are to be done and when prepared to transmit the recordings, the tape is rewound. A transmitting coil is held around the ear piece of the telephone and its plug is placed in the external speaker jack of the tape recorder. When the receiving station telephone is connected, the technician gives the name of the hospital and turns on the tape recorder to run at 7½ ips using the telephone to monitor the transmission. This induction technique should be done so as to sound fairly loud to the technician, and should be constant after experience has determined what volume setting is satisfactory.

This transmission has been received through a similar automatic-recording level tape recorder running at 7½ ips while its external speaker jack has had a plug inserted which drives some earphones as well as the ECG write-out mechanism. The reception is actually monitored by means of the telephone, and a direct write-out is performed to reduce distortions which might be introduced by the tape recorders. The detailed information and coding is obtained by the receiving station replaying the tape at 3¾ ips. Another write-out at 7½ ips is easily performed should the original write-out have failed for lack of paper, etc.

Although complicated in explanation, with short practice by experienced ECG technicians this technique is easily mastered, and an unbelievable amount of "on line" time is saved. By this same compression technique of speech (2X) the interpretations can be dictated to the tape recorder at the interpretation station at 3¾ ips and then transmitted to the hospital's tape recorder (equipped with a receiving coil plugged into the "MIC" jack) at 7½ ips on both recorders. Then, by replaying this tape at the hospital at 3¾ ips, the details of the interpretations and suggestions can be written on the hospital's mounted ECG. The interpretation station keeps its tracing for purposes of serial tracing comparisons.

Gus Schreiber, MD, Dallas.

Dr. Schreiber, 1430 Medical Arts Bldg, Dallas 75201.

PHYSICIAN-HOSPITAL COOPERATION

In the days ahead, physicians and hospitals must stand together as never before to meet the trying times that will surely come.

In the face of rising costs for both services and equipment, when the human values will be lost under the weight of complaints at the higher and higher break-even costs, then we must improve the job we are doing now to present a more understanding image to society, and to pay tribute to our physicians—an outstanding group of men and women.

A hospital administrator cannot speak in public about how great the medical profession is without having his audiences say, "He has to talk like that because he has to work with doctors."

That is not true. The hospital administrator, who is the most knowledgeable about doctors of any lay person, has to call it as I do—exactly as I see it.

The nurse sees one side of a physician, the technician another, the patient another, and the families still another. The hospital administrator sees all of these, and more. Pick any side, any mood, any reaction to any set of circumstances, and the administrator has been exposed to each and every one.

Almost every day somebody complains bitterly over a bill for medical services. These people put their lives and well-being into their physicians' hands without a second thought. But when the bill comes that's an entirely different story. To them,

the miracle of the cure takes second place to the fee, which may have been $100.

Few people know or care what it took and takes to become a doctor—the years spent in school, always at an upper scholastic level, the internship, the residency, house staffs, specialized training for board certification. During these years, their contemporaries were working their way up the competitive business ladders and earning good incomes.

Before the doctor can start earning, having already spent at least $40,000 on his education and training, he must set up his office, buy furniture and equipment, hire a nurse and a secretary at today's competitive wages, become established in private practice, and earn from $2,000 to $5,000 a month before one cent is his.

If he has a family it needs him, too, and his community needs his participation in the PTA, chamber of commerce, church, and civic groups.

His hospital needs him.

There is the most important point to me. As an administrator, I can say that our doctors have helped us as I hope we have helped them. They have been the captains of our team effort, and we have tried to give them the latest tools and equipment to match their techniques.

Some of them do make a lot of money and some of them do send large bills, but unlike other professionals they work long hours and sometimes around the clock. In return for health for the patient, these are much better than the alternative.

With it all, in spite of facing greater temptations in the practice of medicine than in any other profession, doctors are the best controlled and best disciplined of all, because of their complete involvement in maintaining higher standards than their other professional friends in society. I know, because as a hospital administrator I have dealt with all the professions.

Most of the physicians I know are dedicated, and I appreciate what our medical staff has done for our hospital. Their devotion, their consideration, their strength in facing their problems—all add up to the love of man and the search for perfection. Together, one day, we will achieve this. I hope we can obtain this togetherness early in this decade. If we don't the alternatives are not too pleasant.

David Garrett, San Antonio,
Administrator, Baptist Memorial Hospital.

NONPROFESSIONALS WORK WELL IN PUBLIC HEALTH PROGRAMS

Public health programs are undergoing many changes, and health departments are being pressured to add new programs which Congress has legislated into existence. Shortages in professional personnel, budget limitations, and proposals under the federal programs have led to reevaluation of health department staffing patterns, and to consideration of the use of nonprofessional staff and volunteers to assist professionals and extend the health services.

Several years ago, the health department in San Marcos received a grant from the Office of Economic Opportunity to supplement the nursing program with nonprofessional personnel. It was decided that nonprofessionals could assume many duties of the professional public health nurses.

Selection is a key factor if nonprofessionals are to be a successful addition to the health team. Many things can be accomplished more effectively by people from the same socioeconomic area as the clients of the health department. They should be respected citizens of the community, in good physical condition, and have the ability to work productively with individuals and to communicate with people in their own areas. Therefore, the San Marcos health department recruited nonprofessionals from the poverty area.

Training and orientation is important, and must be done by the supervising nurse

and the staff nurse who will be directly responsible for the nonprofessional's activities. Every attempt should be made to link the orientation and training to the practical in the minds of these workers. Since formal school education is not a requirement for employment, all training must be provided in terms that the trainees can understand, and should be limited to those activities that are deemed appropriate.

Special continuous on-the-job training should be carried on. During the training, the professional acts as a counselor and has the dual role of helping the worker in making decisions, and assisting the worker to become independent. Often, nonprofessionals can be motivated to obtain further education and training.

In San Marcos, it was found that where the health aides assist in clinics and conferences, many more people can be handled in a shorter time. Many duties can be delegated to them, such as setting up equipment and supplies, assisting the physician in physical examinations, weighing and measuring patients, and helping patients undress. They can handle appointments and make communication with patients much more efficient.

Some of the most valuable contributions made by the health aides in San Marcos are their accomplishments in field and home visits. They already know most of the people in the area, and can assist people with chronic disease in getting medical care and in taking their many medicines. The aides can check on tuberculosis patients and their contacts and see that they come in regularly for skin tests and x-rays. They help patients seek rehabilitation services, and check on home situations. They obtain social information that is helpful to physicians, hospitals, health and welfare departments; help ambulatory patients get to the clinic and keep appointments; fill out necessary applications; get pajamas and other supplies needed for hospitalization; see that children who miss appointments return to clinic, and bring them in if necessary. They also can refer patients to sources of help and information such as social security, welfare offices, and vital statistics.

In the field of health education, they can operate projectors and other equipment where professionals are giving educational programs. They can prepare posters and other materials, keep all educational supplies in order and on hand, and help gather statistics. Many can relieve overworked clerks by doing routine filing and similar tasks. The important thing to remember is that they must be supervised by a qualified professional.

The Austin-Travis County Health Department recently secured a grant under the so-called New Careers program which is to train people from poverty areas who are underemployed or unemployed. Most of the trainees were recruited from minority groups living in the city's low socioeconomic areas.

For this program, the health department prepared a job description for the position of public health aide which included items of supervisory control, general and specific description of duties, minimum educational requirements and other special qualifications, personality and skills, and "career lattice." This latter item was interesting; it was required to show how a worker starting as a public health aide trainee could advance through various stages to become a registered nurse. The New Careers program includes funds to pay for those trainees who can and want to improve themselves by formal education and training after completing the trainee program.

The health department decided to enter this program for several reasons. For several years we had been considering adding this type of worker to the staff, and the success of the program in San Marcos showed that such aides are needed on the health team. Also, the program would provide employment for some in the low socioeconomic areas who wanted to work.

A public health aide also has been used in the family planning program. Under the supervision of a registered nurse, this aide performs many duties formerly done by the nurse. She is bilingual and can

communicate with all of the patients of the family planning clinics. Because she lives in the low socioeconomic area, she is able to communicate better and can motivate local citizens to use the health department services. In the clinics, she interviews patients, prepares records and reports, interprets the physicians' findings and orders, helps patients prepare for examination, assists the physician at the examination, and generally assists the nurse who is supervising the clinic operation. In addition, she handles distribution of drugs to the various pharmacies who cooperate in the program, and collects funds and reports from them.

Public health aides are being used in another program of the Austin-Travis County Health Department under a grant from the Mental Health and Mental Retardation agency. The aide has obtained positive response in 80% of the families she visited. In view of the fact that most of the families referred were those with whom the public health nurse had ongoing difficulties implementing plans for care, this is a real achievement. Nineteen public health nurses have referred 109 families to the health aides. Usually, they render more than one service, and to more than one member of the family. However, the original reasons for visits by the health aide included repeatedly breaking appointments to Well Child Conference, 57; failure to complete immunizations, 5; help obtain or interpret need for medical care, 10; establish a working relationship with the family, 7; communication problems, 7; problems related to mentally retarded children in the family, 12; antepartum medical care, 4; persuade a mother with a "Pap IV" laboratory report to return to the doctor for medical care, 1; and vision, hearing, and dental problems, 6. Goals for the health aide were stated in such terms as "get the children to Well Child Conference," "help the family apply for a clinic card," or "help the parents understand the reason and need for evaluation of a mentally retarded child."

The Austin Child Guidance Center also uses nonprofessionals, called Outreach workers. They are recruited from the low socioeconomic areas, and their work includes early case finding, conducting interviews with actual or potential patients, follow-up of cases, coordinating efforts with other agencies, leading activity groups, record keeping, and reports. These activities are supervised by appropriate professional staff.

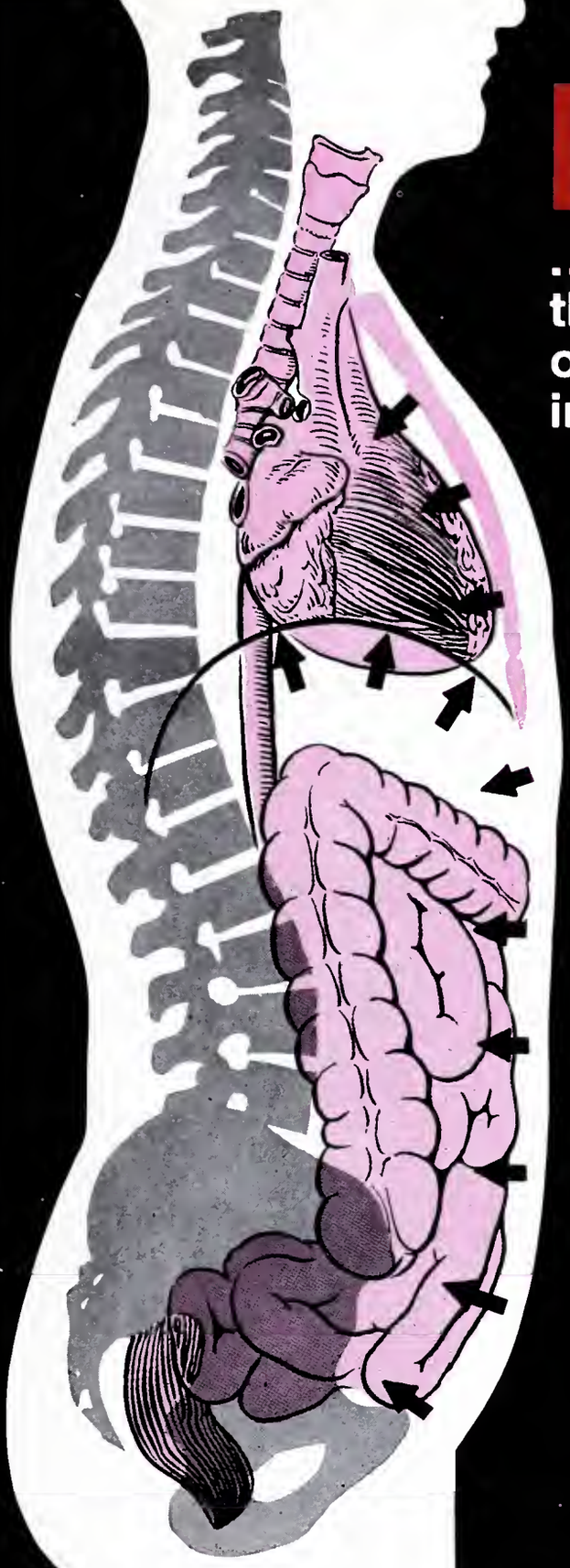
Volunteers have been used for many years in health department programs, and until recently our experience with them has not been good. With the beginning of the programs of the Office of Economic Opportunity, the use of volunteers was given a value in matching funds of the local agency. It became important to recruit volunteers and to provide duties that would hold their interest. Our experience with volunteers in the Family Planning and the Children's Dental Clinic programs has been good.

In the Family Planning Clinics, volunteers generally have above the average education and are from the more affluent areas. Graduate nurses assist in the clinics. Non-professionals help in the record keeping, take patient histories and assist the nurse director in clerical duties.

In the Austin Children's Dental Clinic, volunteers take histories, prepare records and reports, send notices to patients, and type letters. They develop x-rays, take inventory, and prepare orders for supplies.

In summary, the health department has found that nonprofessional workers and volunteers are good additions to the health team. Working with the public health nurse and under her guidance and assistance, they can be even more effective than professionals in motivating many citizens in the low socioeconomic areas to accept the services of the health department.

B. M. Primer, MD, Austin.



DOXIDAN®

...to reduce the hemodynamic "bind" of constipation in congestive heart failure

Constipation in the chronic heart failure patient carries with it the ever-present threat of acute cardiac decompensation while straining at stool. In the already weakened, distended heart, a sudden influx of blood on termination of the Valsalva maneuver is considered to be the mechanism of some of the deaths occurring in these cardiac patients during straining efforts.*

Doxidan is a gentle laxative designed to free your patient from the hemodynamic consequences of straining at stool. With a fecal softening agent to keep the stool soft and easy to evacuate, and with just enough peristaltic stimulation to urge the sluggish bowel, Doxidan reduces the hemodynamic "bind" of constipation.

Composition: Each capsule contains 50 mg. danthron N.F. and 60 mg. dioctyl calcium sulfosuccinate.

Dosage: Adults and children over 12—one or two capsules daily. Children 6 to 12—one capsule daily. Give at bedtime for two or three days or until bowel movements are normal.

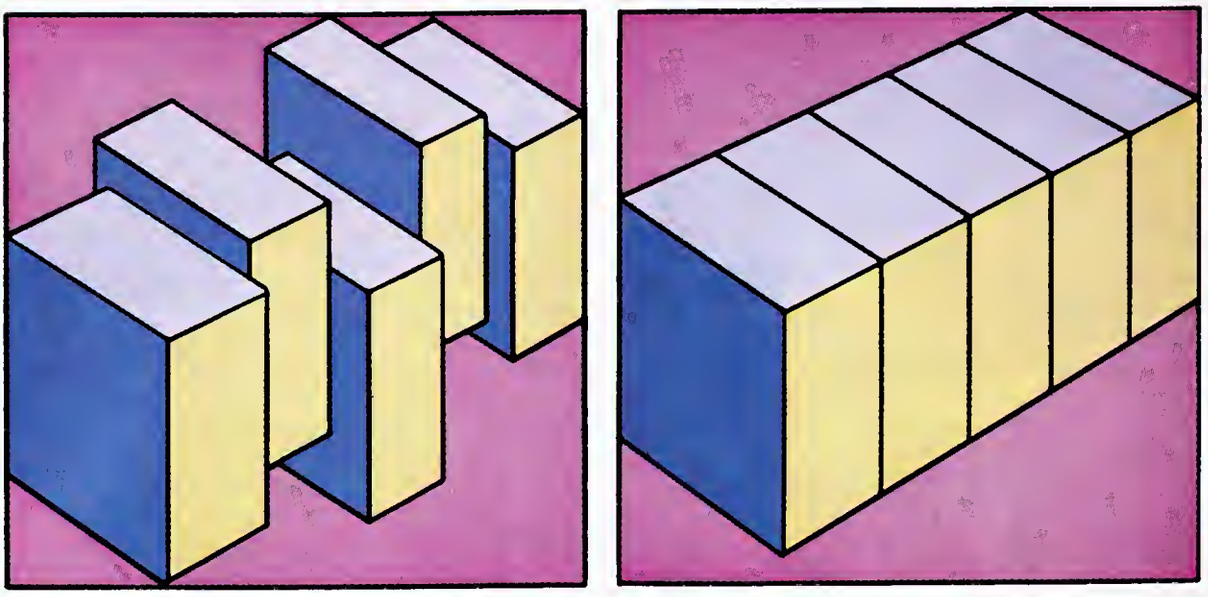
Supplied: Bottles of 30, 100 (FSN 6505-074-3169) and 1000 (FSN 6505-890-1247).

*Best, C. H. and Taylor, N. B.: *The Physiological Basis of Medical Practice*, 7th edition, Williams and Wilkins, Baltimore, 1961, p. 480.

DOXIDAN®

HOECHST
PHARMACEUTICAL CO.
Div. American Hoechst Corp.
Cincinnati, Ohio 45229 U.S.A.

C-124



from the discord of anxiety...

to emotional harmony

Before prescribing, please consult complete product information, a summary of which follows:

INDICATIONS: Indicated when anxiety, tension and apprehension are significant components of the clinical profile.
CONTRAINDICATIONS: Patients with known hypersensitivity to the drug.
WARNINGS: Caution patients about possible combined effects with alcohol and other CNS depressants. As with all CNS-acting drugs, caution patients against hazardous occupations requiring complete mental alertness (e.g., operating machinery, driving). Though physical and psychological dependence have rarely been reported an recommended doses, use caution in administering to addiction-prone individuals or those who might increase dosage; withdrawal symptoms (including convulsions), following discontinuation of the drug and similar to those seen with barbiturates, have been reported. Use of any drug in pregnancy, lactation, or in women of childbearing age requires that its potential benefits be weighed against its possible hazards.
PRECAUTIONS: In the elderly and debilitated, and in children over six, limit to smallest effective dosage (initially 10 mg or less per day) to preclude ataxia or oversedation, increasing gradually as needed and tolerated. Not recommended in children under six. Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider individual pharmacologic effects, particularly in use of potentiating drugs such as MAO inhibitors and phenothiazines. Observe usual precautions in presence of impaired renal or hepatic function. Paradoxical reactions (e.g., excitement, stimulation and acute rage) have been reported in psychiatric patients and hyperactive aggressive children. Employ usual precautions in treatment of anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation have been reported very rarely in patients receiving the drug and oral anticoagulants; causal relationship has not been established clinically.
ADVERSE REACTIONS: Drowsiness, ataxia and confusion may occur, especially in the elderly and debilitated. These are reversible in most instances by proper dosage adjustment, but are also occasionally observed at the lower dosage ranges. In a few instances syncope has been reported. Also encountered are isolated instances of skin eruptions, edema, minor menstrual irregularities, nausea and constipation, extrapyramidal symptoms, increased and decreased libido--all infrequent and generally controlled with dosage reduction; changes in EEG patterns (low-voltage fast activity) may appear during and after treatment; blood dyscrasias (including agranulocytosis), jaundice and hepatic dysfunction have been reported occasionally, making periodic blood counts and liver function tests advisable during protracted therapy.

with the aid of antianxiety

Librium®
(chlordiazepoxide HCl)

5-mg, 10-mg and 25-mg capsules

In an age of swift change and challenge, susceptible individuals may experience varying degrees of excessive anxiety. The resulting emotional stress may precipitate significant functional disorders or complicate existing organic disease. In properly individualized maintenance dosage, Librium (chlordiazepoxide HCl) quickly helps relieve anxiety and apprehension, provides useful adjunctive therapy in psychophysiologic disorders. In long clinical experience, Librium has demonstrated a wide margin of safety.

Also available:
Libritabs®
(chlordiazepoxide)

ROCHE
Roche
LABORATORIES
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

"All For One, One For All"

Throughout history, those who practiced medicine—or, as we say it today, participated in the delivery of health care to patients—have been either rated alongside saints or condemned and ridiculed by the populace. The pendulum seems to have swung again, and from a position of prestige, we physicians are being pushed to the other extreme.

We, as a profession, have throughout the ages been united by many common bonds, perhaps the strongest being our own code of ethics, the rules of conduct that have bound us together so strongly. These rules could be *all* that we have left to keep us strong, since we are the objects of all-out attempts to degrade us.

There are many facets that make up what is "organized medicine"—specialty groups, sub-specialty groups, general practitioners— and there are the large groups made up of medical school faculties, armed forces physicians, and others; but we are all joined together in our local, state, and national medical organizations.

These matters, among others perhaps less important, will be the subject of the "pages" which I will prepare during the coming months, and will make up a large part of the talks which I will give across the state during the next year.

As a profession we are NOW united (we have been divided from many of our would-be allies), and we must remain united by resolving our differences in our own councils, for if we become more divided or splintered, and if we ignore our binding code of ethics, we will no longer exist as a unified force. We must adopt the "All for one, one for all" motto.

Walter Walthall, M.D.

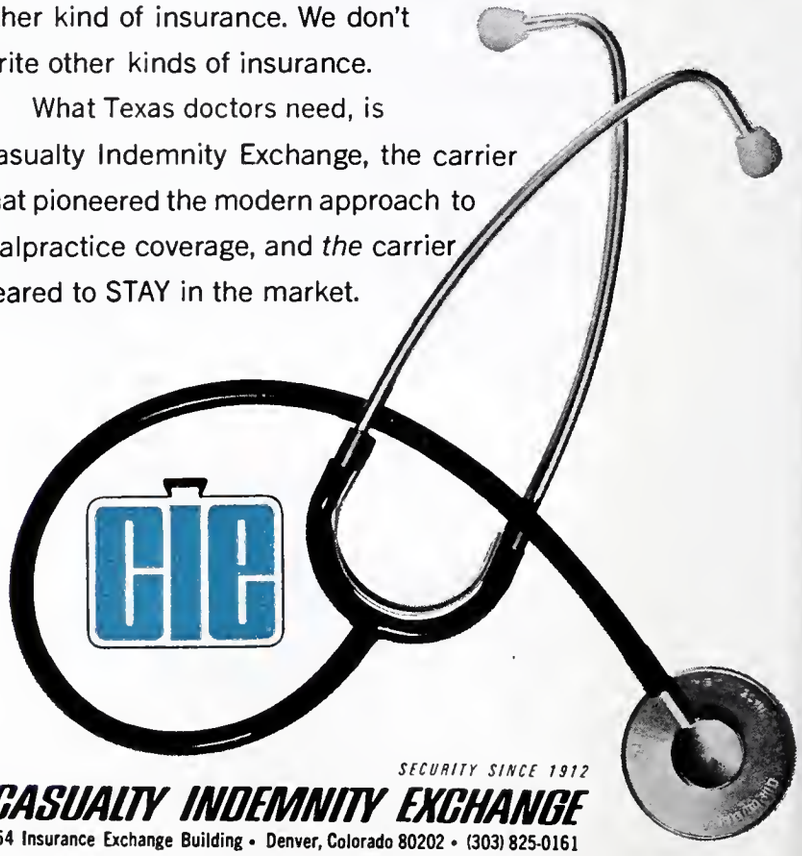
Walter Walthall, MD, President,
Texas Medical Association.

What Texas doctors need, is a Malpractice Liability Carrier that won't fade when trouble comes.

This means the up-to-date carrier. The one that's replete with innovations and new developments in this clouded, sensitive area of liability protection. And the one that doesn't talk malpractice coverage just to get a foot in the door for every other kind of insurance. We don't write other kinds of insurance.

What Texas doctors need, is Casualty Indemnity Exchange, the carrier that pioneered the modern approach to malpractice coverage, and *the* carrier geared to STAY in the market.

Contact your local agent or
RUSSELL GRACE INSURANCE
2304 W. 7th St.
Ft. Worth, Texas 76107
(817) 332-9269
In Dallas, Call
(214) 264-4300



SECURITY SINCE 1912
CASUALTY INDEMNITY EXCHANGE
754 Insurance Exchange Building • Denver, Colorado 80202 • (303) 825-0161

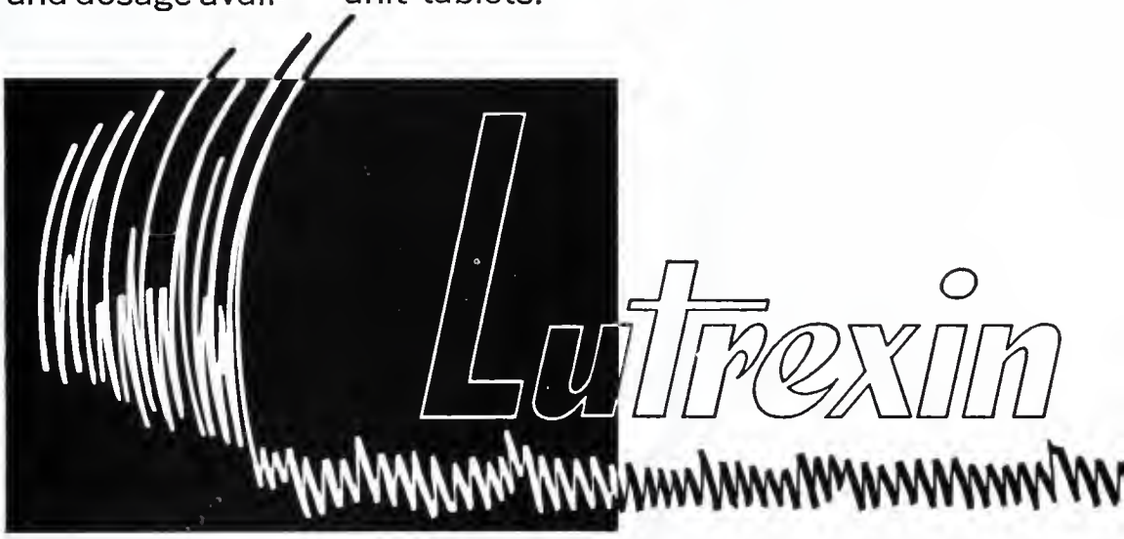
Lutrexin®

HW&D BRAND OF LUTUTRIN

3000 UNIT TABLETS

IN THE TREATMENT OF FUNCTIONAL DYSMENORRHEA AND SELECTED CASES OF PREMATURE LABOR AND 2ND AND 3RD TRIMESTER THREATENED ABORTION

- LUTREXIN, the non-steroid "uterine relaxing factor" has been found to be useful by many clinicians in controlling abnormal uterine activity.
- Literature on indications and dosage available on request.
- No side effects have been reported, even when massive doses (25 tablets per day) were administered.
- Supplied in bottles of twenty-five 3,000 unit tablets.



(In vivo measurement of Lutrexin on contracting uterine muscle of the guinea pig.)

HYNSON, WESTCOTT & DUNNING, INC. BALTIMORE, MARYLAND 21201

(LTR23)

"Mommy,
I don't feel
so good..."

Young heads and stomachs often can't manage the pace of hurry-up-and-stop for the light... or going up hill, down hill, and around the curve. All too quickly a pleasant drive can become an upsetting trip. *Motion sickness makes children—and their parents—absolutely miserable.*

You can help make young patients better passengers with

BONINE®

(MECLIZINE HCl)

Bonine protects most patients—young or old—against nausea and vomiting up to 24 hours with a single dose. Pleasant-tasting Bonine tablets are chewable. They can be taken anytime, anywhere, without water. In difficult cases, multiple daily doses may be necessary for maximum response.

Precautions: Although the incidence of drowsiness and atropine-like side effects such as dry mouth and blurring of vision is low, the physician should alert the patient to the need for due precautions when engaging in activities where alertness is mandatory. *Use in women of childbearing age:* In weighing potential benefits vs. risk in women of childbearing age, consider the fact that a review of available animal data reveals that meclizine exerts a teratogenic response in the rat. In one study a dose of 50 mg./kg./day (50 times the maximum recommended human dose) produced cleft palate in 2 of 87 fetuses when administered to the rat at critical times during the first 15 days of gestation. At doses of 125 mg./kg./day, meclizine will produce 100% incidence of cleft palate in the rat. At doses of 25 mg./kg./day, decreased calcification of the vertebrae and relative shortening of the limbs were also produced in the rat, but experts disagree as to whether this is a teratogenic response. While available clinical data are inconclusive, scientific experts are of the opinion that this drug may possess a potential for adverse effects on the human fetus. Consequently, consideration should be given to initial use of a nonphenothiazine agent that is not suspected of having a teratogenic potential. In any case, the dosage and duration of treatment should be kept to a minimum.

Supply: 25 mg. scored tablets.

More detailed professional information available on request.

Pfizer **LABORATORIES DIVISION**
New York, N.Y. 10017

in active stages of moderate to severe rheumatoid arthritis,

What more can you

after you've tried

rheumatoid spondylitis, and osteoarthritis of the hip

do for these patients?

salicylates and rest

INDOCIN®

(INDOMETHACIN | MSD)

helps relieve pain, fever,
swelling, and tenderness

Please see new prescribing information on following page.

REVISED PRESCRIBING INFORMATION

IMPORTANT NOTE: INDOCIN (Indomethacin, MSD) cannot be considered a simple analgesic and should not be used in conditions other than those recommended under Indications. The drug should not be prescribed for children because safe conditions for use have not been established.

General Adverse Effects: Because of the high potency of the drug and the variability of its potential to cause adverse reactions, the following are strongly recommended: 1) the lowest possible effective dose for the individual patient should be prescribed. Increased dosage tends to increase adverse effects, particularly in doses over 150-200 mg/day, without corresponding clinical benefits; and 2) careful instructions to, and observations of, the individual patients are essential to the prevention of serious and irreversible, including fatal, adverse reactions, especially in the aging patient.

Indications: Symptomatic relief of adult rheumatoid and degenerative joint disease unresponsive to adequate trial of salicylates and other measures of established value, such as appropriate rest. Has been found effective in active stages of: 1) moderate to severe rheumatoid arthritis including acute flares of chronic disease, 2) moderate to severe rheumatoid (ankylosing) spondylitis, and 3) moderate to severe degenerative joint disease of the hip (osteoarthritis of the hip). Has been found effective in relieving pain and reducing fever, swelling, and tenderness in acute gouty arthritis in selected patients. May enable reduction of steroid dosage in patients receiving steroids for the more severe forms of rheumatoid arthritis; in such instances the steroid dosage should be reduced slowly and the patients followed very closely for any possible adverse effects.

Contraindications: Children 14 years of age and under; pregnant women and nursing mothers; active gastrointestinal lesions or history of recurrent gastrointestinal lesions; allergy to aspirin and indomethacin.

Warnings: *Gastrointestinal Effects:* Because of the occurrence and, at times, severity of gastrointestinal reactions, be continuously alert for any sign or symptom signaling a possible gastrointestinal reaction. The risks of continuing therapy with INDOCIN in the face of such symptoms must be weighed against the possible benefits to the individual patient. Gastrointestinal effects may be reduced by giving the drug immediately after meals, with food, or with antacids. Use greater care in aging patients.
Ocular Effects: Corneal deposits and retinal disturbances, including those of the macula, have been observed in some patients on prolonged therapy. Discontinue therapy if such changes are observed. Ophthalmologic examination at periodic intervals is desirable in patients on prolonged therapy.
Central Nervous System Effects: INDOCIN (Indomethacin, MSD) may aggravate psychiatric disturbances, epilepsy, and parkinsonism, and should be used with considerable caution in patients with these conditions. If severe CNS reactions develop, discontinue the drug.

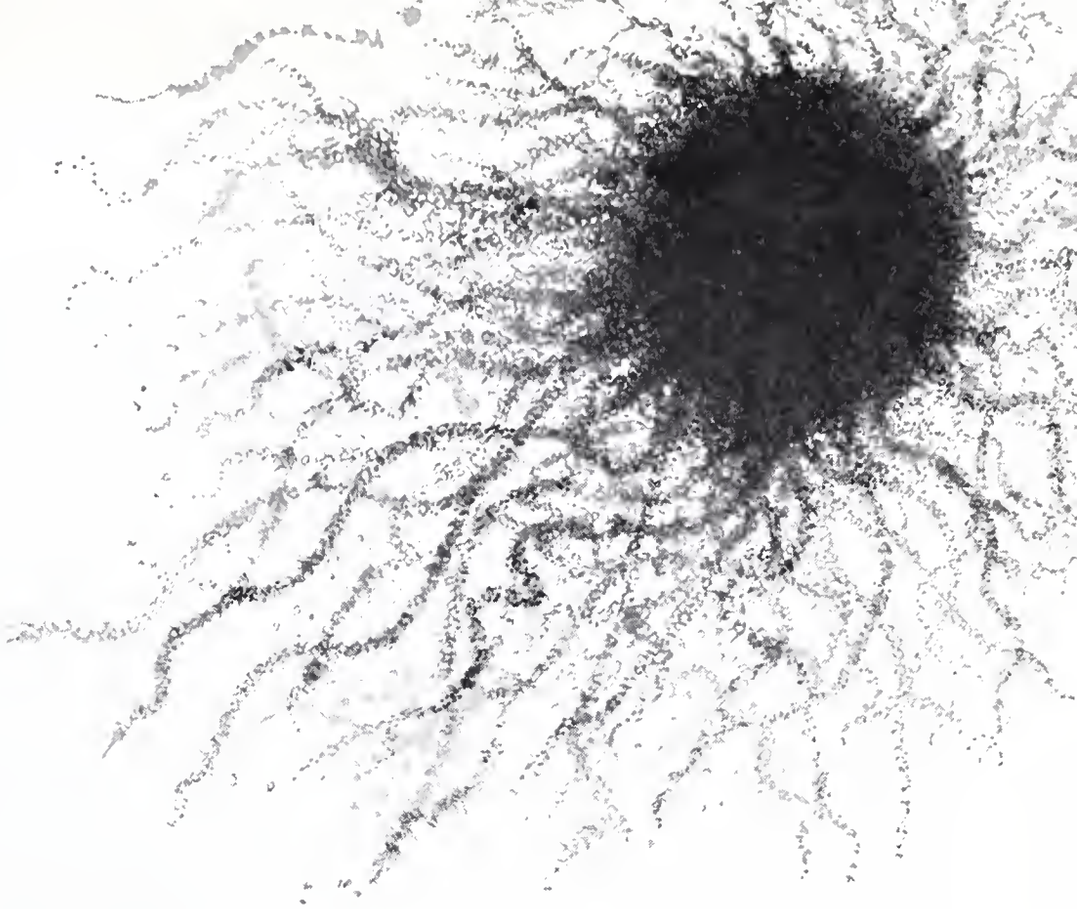
Precautions: Blurred vision may be a significant symptom that warrants a thorough ophthalmologic examination. Patients should be cautioned about engaging in activities requiring mental alertness and motor coordination, as driving a car. Headache which persists despite dosage reduction requires complete cessation of the drug. May mask the usual signs and symptoms of infection; therefore, the physician must be continually on the alert for this and should use the drug with extra care in the presence of existing controlled infection. After the acute phase of the disease is under control, an attempt to reduce the daily dose should be made repeatedly until the patient is off entirely.

Adverse Reactions: *Gastrointestinal Reactions:* Single or multiple ulcerations of the esophagus, stomach, duodenum, or small intestine, including perforation and hemorrhage, with fatalities in some instances; gastrointestinal bleeding without obvious ulcer formation; perforation of preexisting sigmoid lesions (diverticulum, carcinoma, etc.); rarely, increased abdominal pain in ulcerative colitis patients or development of ulcerative colitis and regional ileitis; gastritis, which may persist after the cessation of the drug; nausea, vomiting, anorexia, epigastric distress, abdominal pain, and diarrhea.
Eye Reactions: Corneal deposits and retinal disturbances, including those of the macula, have been observed on prolonged therapy; blurring of vision.
Hepatic Reactions: Rarely, toxic hepatitis and jaundice, including some fatal cases.
Hematologic Reactions: Aplastic anemia, hemolytic anemia, bone marrow depression, agranulocytosis, leukopenia, and thrombocytopenic purpura. Since some patients manifest anemia secondary to obvious or occult gastrointestinal bleeding, appropriate blood determinations are recommended.
Hypersensitivity Reactions: Acute respiratory distress, including dyspnea and asthma; angiitis; pruritus; urticaria; angioedema; skin rashes.
Ear Reactions: Hearing disturbances, deafness, tinnitus.
Central Nervous System Reactions: Psychotic episodes, depersonalization, depression, coma, convulsions, peripheral neuropathy, drowsiness, mental confusion, lightheadedness, dizziness, headache.
Cardiovascular-Renal Reactions: Edema, elevation of blood pressure, hematuria.
Dermatologic Reactions: Loss of hair, erythema nodosum.
Miscellaneous: Rarely, vaginal bleeding, hyperglycemia, glycosuria, ulcerative stomatitis, and epistaxis.

Supplied: Capsules containing 25 mg indomethacin each, in bottles of 100 and 1000; capsules containing 50 mg indomethacin each, in bottles of 100.

For more detailed information, consult your Merck Sharp & Dohme representative or see the package circular.

MSD **MERCK SHARP & DOHME** | **where today's theory is tomorrow's therapy**
Division of Merck & Co. Inc. West Point Pa 19486



Corticosteroid therapy week after week.

then antibiotic therapy last week.

and monilial overgrowth this week.

For many patients on long-term corticosteroid therapy, the addition of oral antibiotic therapy may trigger monilial overgrowth in the intestine. When you anticipate such a problem, take action with DECLOSTATIN 300. It combines the broad-spectrum potency of demethylchlortetracycline with the antifungal effectiveness of nystatin—it helps avoid monilial take-over. Experience has shown DECLOSTATIN to be highly useful for many women patients; individual culture studies will show exactly where this usefulness may best be applied.

it doesn't let monilia begin where bacteria end.

Declostatin® 300

Demethylchlortetracycline HCl 300 mg and Nystatin 500,000 units Capsule-Shaped Tablets Lederle

Effectiveness: Because its antibacterial component is DECLOMYCIN® Demethylchlortetracycline, DECLOSTATIN should be equally or more effective therapeutically than other tetracyclines in infections caused by tetracycline-sensitive organisms. The antifungal component, nystatin, protects against superinfection by antibiotic-resistant fungal overgrowth (particularly monilia) in the intestinal tract.

Contraindication: History of hypersensitivity to demethylchlortetracycline or nystatin.

Warning: In renal impairment, usual doses may lead to excessive accumulation and liver toxicity. Under such conditions, lower than usual doses are indicated and, if therapy is prolonged, serum level determinations may be advisable. A photodynamic reaction to natural or artificial sunlight has been observed. Small amounts of drug and short exposure may produce an exaggerated sunburn reaction which may range from erythema to severe skin manifestations. In a smaller proportion, photoallergic reactions have been reported. Patients should avoid direct exposure to sunlight and discontinue drug at the first evidence of skin discomfort. Necessary subsequent courses of treatment with tetracyclines should be carefully observed.

Precautions: Overgrowth of nonsusceptible organisms may occur. Constant observation is essential. If new infections appear, appropriate measures should be taken. In infants, increased intracranial pressure with bulging fontanels has been observed. All signs and symptoms have disappeared rapidly upon cessation of treatment.

Side Effects: Gastrointestinal system—anorexia, nausea, vomiting, diarrhea, stomatitis, glossitis, enterocolitis, pruritus ani. Skin—maculopapular and erythematous rashes; a rare case of exfoliative dermatitis has been reported. Photosensitivity; onycholysis and discoloration of the nails (rare). Kidney—rise in BUN, apparently dose-related. Transient, reversible, nephrogenic diabetes insipidus with excessive thirst and polyuria (rare). Hypersensitivity reactions—urticaria, angioneurotic edema, anaphylaxis. Teeth—dental staining (yellow-brown) in children of mothers given this drug during the latter half of pregnancy, and in children given the drug during the neonatal period, infancy and early childhood. Enamel hypoplasia has been seen in a few children. If adverse reaction or idiosyncrasy occurs, discontinue medication and institute appropriate therapy. Demethylchlortetracycline may form a stable calcium complex in any bone-forming tissue with no serious harmful effects reported thus far in humans.

Average Adult Daily Dosage: One tablet b.i.d. Should be given 1 hour before or 2 hours after meals, since absorption is impaired by the concomitant administration of high calcium content drugs, foods and some dairy products. Treatment of streptococcal infections should continue for 10 days, even though symptoms have subsided.

Lederle LEDERLE LABORATORIES, A Division of American Cyanamid Company, Pearl River, New York 448-9

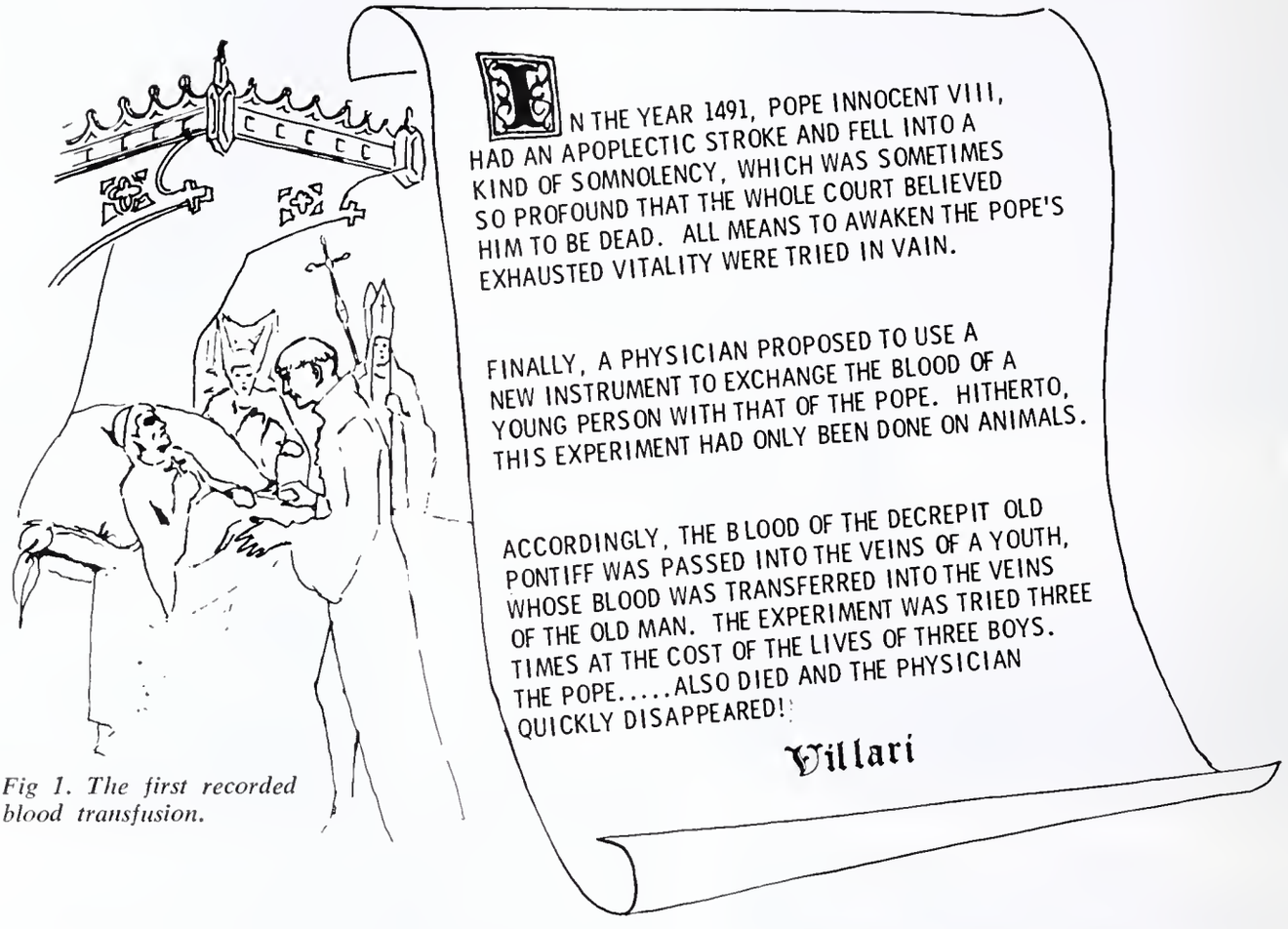


Fig 1. The first recorded blood transfusion.

Immunology of

THE HISTORICAL BLOOD transfusion to Pope Innocent the VIII in 1491, supported by Villari[1] (Fig 1), dramatizes the triad of problems—ethical, technical, and immunological—confronting the physician engaged in organ transplantation.

Immunological factors centering around allograft acceptance (Fig 2) are threefold: (a) proper donor selection, (b) effective immunosuppression, and (c) the induction of immunological tolerance.

Allograft Rejection: Before considering these factors, a brief examination of allograft rejection, as exemplified by renal graft rejection, is appropriate. The knowledge gained from clinical kidney transplantation applies to other organs. Although the basic underlying principles are the same from organ to organ, their final mode of expression will vary according to the structure and function of the organ involved.

From a clinical standpoint, several patterns of allograft rejection have emerged: (a) the immediate rejection, (b) the acute-subacute rejection, and (c) the delayed rejection. The salient features of these patterns are:

Immediate rejection (hyperacute, rapid), within minutes to hours following transplantation, is mainly antibody-mediated. Two types are now recognized: (a) The first type, reported by Kissmeyer-Nielson,[2] is associated with preformed cytotoxic antibodies against the donor's histocompatibility or related antigens. These antibodies may be found in graft recipients following multiple pregnancies, blood transfusions, and previous allotransplantation. (b) The second type of immediate rejection, described by Starzl's group and others,[3,36] resembles the Shwartzman reaction.

Acute-subacute rejection is chiefly cell-mediated. There exists an entire spectrum of histological and clinical reactions, overlapping both the immediate and delayed rejection categories. Details of these reactions in humans are often obscured by immunosuppressive treatment.[4]

STEPHAN E. RITZMANN, MD
JERRY C. DANIELS, MA

This succinct review presents the current concepts relating to the immunological aspects of organ transplantation.

Transplantation

On electron microscopy,[5] an intravascular triad is typically seen, consisting of fibrin, platelets, and polymorphonuclear leukocytes.

The finding by Braun and Merrill[6] of fibrinogen degradation products in the urine during clinical rejection, and their disappearance with immunosuppressive therapy, points toward the activation of the clotting mechanism. Infiltrating lymphocytes are present in interstitial spaces and in tubules, as well as intravascularly. It is the presence of these cells which distinguishes the acute-subacute from the immediate reaction.

Delayed rejection (chronic, late), is primarily mediated by antibodies or immune complexes. Fluorescent staining reveals the presence of immunoglobulin G and β_1-C- complement in endothelial locations.[7] Metabolic studies by Müller-Eberhard and associates,[8] with purified C′ 2 and 4 complement components, have shown an increased catabolism of complement during rejection.

During recent years, observations at the clinical, histological, and experimental levels have elucidated important mechanisms associated with allograft rejection (Fig 3). In the acute-subacute rejection, circulating small lymphocytes "visit" the transplant via the bloodstream, recognize the antigens as foreign, and become "informed" as a result. Studies by Gowans and McGregor[9] have shown that these informed lymphocytes move to the regional lymph nodes, where they undergo a process known as blastoid transformation. The resulting large immunoblasts, which subsequently divide to become activated lymphocytes, return to the allograft, destined to initiate and mediate the chain of events which terminates in allograft rejection with graft destruction. Lymphocytes effectively increase the number of surrounding macrophages by producing a substance that inhibits their dispersion.[10,11] Once the lymphocytes have defined the situation immunologically, a cascade of immunological assaults on the kidney ensues; the actual destruction probably is carried out principally by polymorphonuclear leukocytes and macrophages.

Lymphocytes possess a dual function: they detect and identify antigenic differences, and are also endowed with the biological means to attack such foreign cells and, directly or indirectly, eliminate them. This dual function enables the lymphocytes to provide an immunological surveillance for microorganisms, neoplastic cells and other manifestations of "nonself" antigenic structures.[12]

The phenomenon of blastoid transformation is paramount to most cell-mediated immunological reactions. Small lymphocytes, once considered end cells, are now known to respond to antigenic stimulation with well-defined morphological and functional changes. For instance, such substances as the plant extract, phytohemagglutinin (PHA), the tuberculin purified protein derivative (PPD), diphtheria, and other antigens stimulate these small lymphocytes to enlarge during culture and induce a proportion of these large blastoid cells to undergo mitosis.[48] The blastoid cell (Fig 4) represents a large lymphocyte with an enlarged nucleus and a basophilic and pyroninophilic cytoplasm indicating increased RNA concentrations. Similar changes take place in vivo, in regional lymph nodes of the allograft as well as in the allograft itself. Such lymphoid cells are instrumental in allograft rejection. This process of blastoid

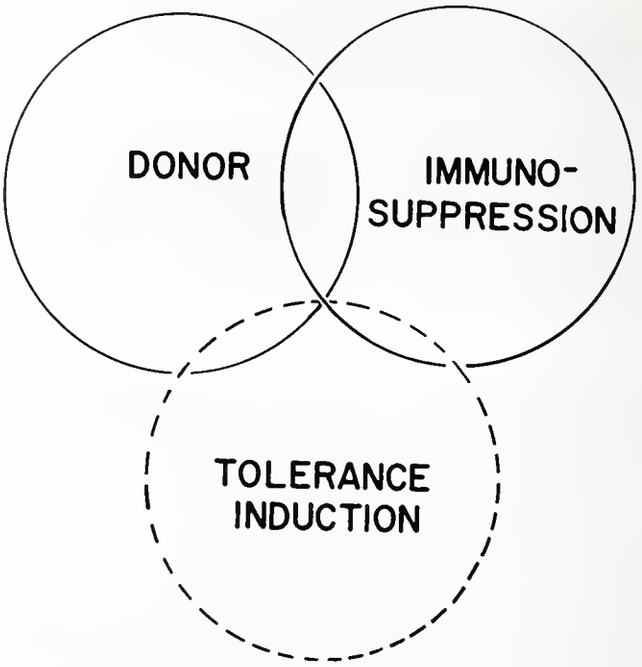
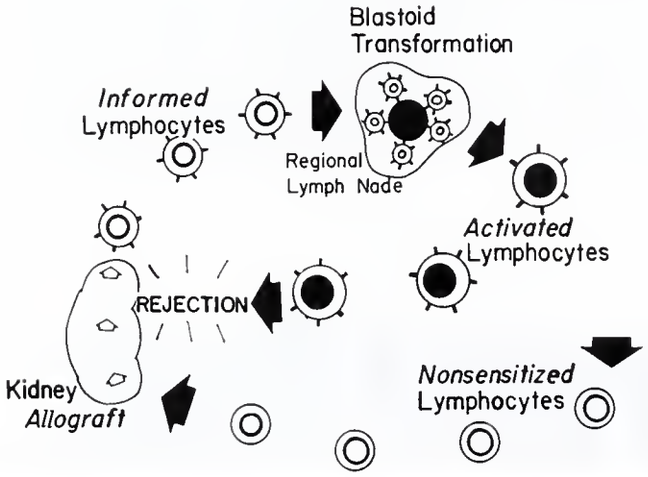
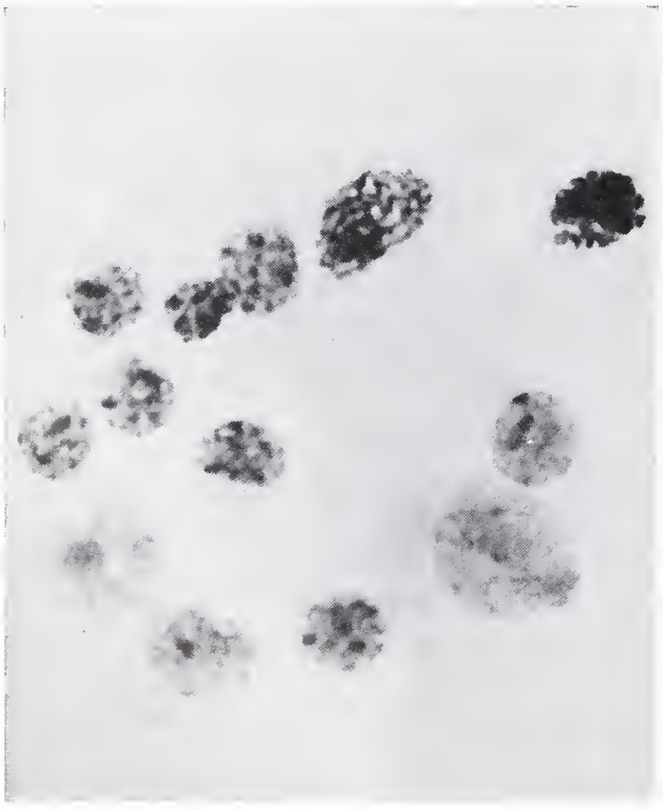


Fig 2. Immunological factors of allograft acceptance.

Fig 3. Below. Role of lymphocytes in the mechanisms of allograft rejection.

Fig 4. Bottom. Blastoid transformation: Blastoid cells among small, unstimulated lymphocytes.





transformation is impaired in certain immunological disorders such as Hodgkin's disease[13] and sarcoidosis.[14]

Allograft Acceptance: *Donor selection* is essential for allograft acceptance. The well known fact that allografts from identical twins are not subject to immunological rejection points towards the importance of tissue compatibility. When the first step away from this genetic identity occurs, there is a "quantum jump" and rejection occurs in a sizeable percentage.

1. The *ABO blood groups* are present on erythrocytes and practically all tissues with the exception of brain and spinal cord.[47] Incompatibility at the ABO group loci poses a threat of immediate allograft rejection.[15] This fact has resulted in the accepted practice of avoiding ABO mismatches.

2. *The HL-A system,* or histocompatibility locus-A,[16] represents the transplantation antigens in the strict sense. Transplantation antigens have been defined by Medawar[17] as substances which are released by the graft and elicit specific immunological recognition by the host. Presently, HL-A 1-13 antigens (with few exceptions) are generally accepted, but others undoubtedly exist.

Systemic, correlated studies on kidney transplant patients have clearly indicated that HL-A matching is of importance for the prognosis of the graft.[5,18,19]

These new data confirm the views of Simonsen,[20,46] who had concluded earlier that success of a transplant during the first years depends largely on the matching of graft and recipient with respect to three or four major

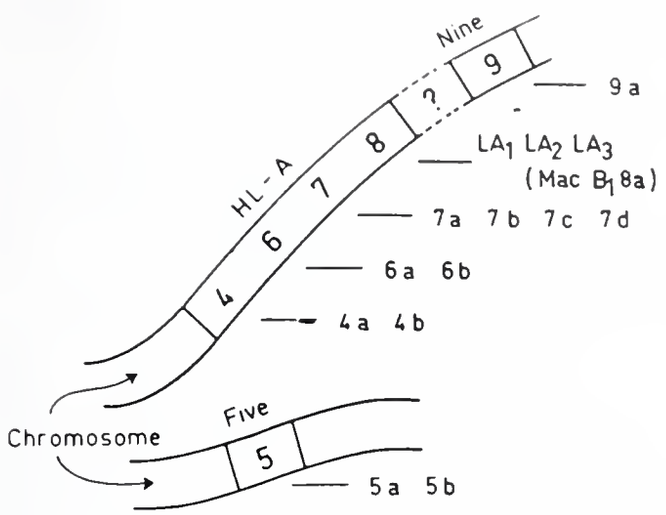


Fig 5. Schematic presentation of the localization of the genetic information of the leukocyte antigens on the chromosome. Family studies have shown unequivocally that the information for the antigens of the HL-A system is located in a small section of the chromosome. Subloci (4, 6, 7, and 8) might exist in the HL-A locus. In this schematic presentation, the subloci are arranged in their numerical order; nothing is known as yet about their actual arrangement. The locus of the group Five system is independent of the loci of HL-A and group Nine systems. (From van Rood JJ, Earnisse JG: The detection of transplantation antigens in leukocytes. Seminars in Hematology 5:187-214, 1968.)

alleles. Incompatibility at minor HL-A loci usually can be overcome by immunosuppressive treatment.

Although in many ways the HL-A system resembles the Rh blood group systems, it is compounded by numerous complexities which render it one of the most complex immunogenetic systems known in man, as shown in Fig 5.[21]

Patel, Mickey, and Terasaki[22] have recently analyzed the results of tissue typing in 104 patients from ten different transplant centers who received transplants from unrelated donors (Fig 6). The matched group had a mean creatinine clearance of 78.5 (±23.6) as compared with 50.1 (±26.4) ml per minute in the mismatched group ($p<0.005$) in which clearance tended to deteriorate after relatively long periods of comparative stability. Matched patients are also clinically superior and less prone to multiple or severe rejection episodes ($p<0.001$). Although early survival was not influenced, survival was better in the matched group after the first year. These results clearly indicate the necessity for histocompatibility. As typing becomes more refined and more antigenic groups are detected, the probability of finding a compatible pair will decrease. The probability of finding a highly compatible unrelated donor is directly related to the number of donors available. Cooperation between various centers or countries (eg, Eurotransplant)[19] appears to be essential. Increasing the donor pool by transporting suitable organs requires, however, improved techniques of organ preservation (Fig 7).[23]

Immunosuppression: Since there is only a small chance of finding a fully compatible organ donor, the residue of histoincompatibility must be neutralized by immunosuppression and/or induction of tolerance. Means of immunosuppression[24,43,44] include: (a) corticosteroids, (b) 6-mercaptopurine (6-MP) and its derivative azathiaprine, (c) antilymphocyte globulin (ALG), and (d) lymphocyte depletion by thoracic duct drainage.

Most of the immunosuppressive agents used in allotransplantation represent the application of development in the field of cancer chemotherapy. They were selected because they are essentially antiproliferative in action, and this implies that they also suppress bone marrow functions and inhibit wound healing. Their universal immunosuppressive effects result in severe impairment of the normal host defenses against his own indigenous bacterial, fungal, and viral flora. There exists, therefore, the significant hazard of succumbing to overwhelming sepsis in the face of a normally functioning transplant. Russell and associates[25] have estimated that some 85% of patients who die following transplantation do so with obvious clinical infections which contribute in various degrees to their deaths.

The possibility of suppressing the immunological surveillance mechanism,[12] which might allow the emergence of neoplasms, was clearly raised by Burnet's original formulation.[26] It is known that malignant tumors may develop in the face of impaired immunity. After iatrogenic suppression of immunity there is an increased incidence of malignancy.[27] Immunosuppressive therapy has permitted inadvertently transplant-

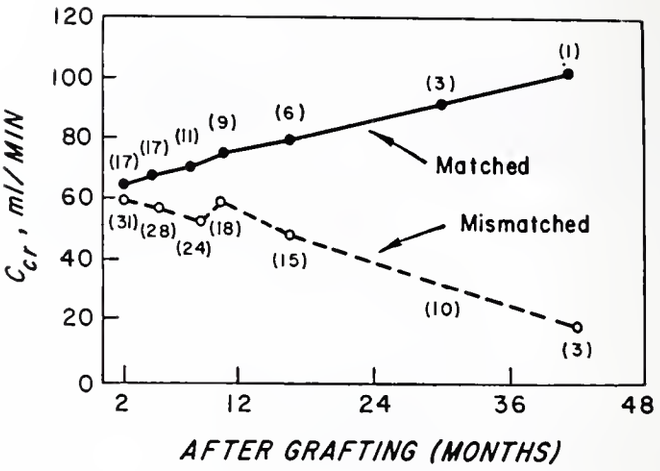


Fig 6. Mean creatinine clearance (C_{cr}) of the matched and mismatched patients. The points along the abscissa represent the mid-points of intervals during which the clearances were estimated. The numbers alongside each curve indicate the number of patients from which the mean value was calculated. (From Patel R, et al: Serotyping for homotransplantation. XVI. Analysis of kidney transplants from unrelated donors. New Eng J Med 279:501, 1968.)

ed neoplastic cells to survive and propagate in the recipient.[28]

Antilymphocyte globulin (ALG), one of the latest additions to the immunosuppressive armamentarium, was introduced into clinical use mainly by Starzl's group;[29,30] it acts primarily on peripheral lymphocytes. In Lance's view,[31] ALG acts by the selective killing of the long-lived, recirculating moiety of the lymphocyte population that is now thought to be thymus-dependent.[32] In that sense, ALG may produce a sort of "immunological thymectomy," as suggested by Monaco and associates.[33] The full therapeutic potential of ALG probably has not been exploited; this is partly due to the lack of reliable in vitro testing procedures for the potency and specificity of this agent.

Immune Tolerance: Induction of immune tolerance would allow allograft acceptance with little need for immunosuppression. Tolerance[34,41] represents an immunological state which allows the circulation of histoincompatible cells, associated with the production of a state of chimerism (Fig 8).[42]

Numerous techniques to produce tolerance in experimental animals have not yet been fully tested in the human, but various groups are active in this promising field. In general, tolerance may be induced by the following approaches: (a) Tolerance may be induced by suppressing specific complement components.[35] (b) The production of tolerance by pretreatment of the prospective recipients with highly purified donor HL-A antigens is theoretically feasible. However, one recalls Witebsky's futile attempts[37] at overcoming incompatible ABO blood group antigens by using purified blood group substances. (c) Production of tolerance by ALG has been considered.[38] The action of ALG has been compared with that of a blocking antibody. (d) Production of tolerance by proteolytic enzyme treatment of lymphocytes is suggested by Woodruff's demonstration that lymphocytes treated with trypsin[39] or neuraminidase[45] lose their "homing" instinct.

We are now faced with the compelling question of why the organism rejects some foreign tissues but accepts others, such as the allogeneic fetus in utero.[40] We stand at the dawning of a new era which may hold the key to the understanding of these basic laws of nature.

Acknowledgement: The authors appreciate the secretarial assistance of Mrs. Helen Mueller; the services of Mr. Edmond Stephenson and Mr. Lewis Milutin, Medical Communications Department, Shriners Burns Institute, Galveston, Texas; and the technical assistance of Miss Kathy Cobb, ASCP, and Mrs. Jo Ann Murillo, ASCP.

REFERENCES

1. Villari P: The History of Girolamo Savanarola and His Times, cited in Kilduffe RA, DeBakey M: The Blood Bank and the Technique and Therapeutics of Transfusion. St Louis, CV Mosby, 1942, pp 17-18.

2. Kissmeyer-Nielsen F, Olsen S, Peterson VP, et al: Hyperacute rejection of kidney allograft, associated with pre-existing humoral antibodies against donor cells. Lancet 2:622-625, 1966.

3. Starzl TE, Lerner RA, Dixon FJ, et al: Shwartzman reaction after human renal homotransplantation. New Eng J Med 278:642-648, 1968.

4. Dammin GJ: The pathology of human renal transplantation, in: Rapaport FT, Dausset J, Eds: Human Transplantation. New York, London, Grune and Stratton, 1968, pp 170-200.

5. Porter KA: Pathological changes in transplanted kidneys, in: Starzl TR, Ed: Experience in Renal Transplantation. Philadelphia, WB Saunders Co, 1964.

6. Braun WE, Merrill JP: Urine fibrinogen fragments in human renal allografts: A possible mechanism of renal injury. New Eng J Med 278:1366-1371, 1968.

7. McKenzie IFC, Whittingham S: Deposits of immunoglobulin and fibrin in human allografted kidneys. Lancet 2:1313-1315, 1968.

8. Carpenter CB, Ruddy S, Shehadeh IH, et al: Complement metabolism in man: Hypercatabolism of the fourth (C'4) and third (C'3) components in patients with renal allograft rejection and hereditary angioedema (HAE). J Clin Inv 48:1495-1505, 1969.

9. Gowans JL, McGregor DD: The immunological activities of lymphocytes. Progr Allerg 9:1, 1965.

10. David JR: Macrophage migration. Fed Proc 27:6-12, 1968.

11. Bloom BR, Bennett B: Migration inhibitory factor associated with delayed type hypersensitivity. Fed Proc 27:13-15, 1968.

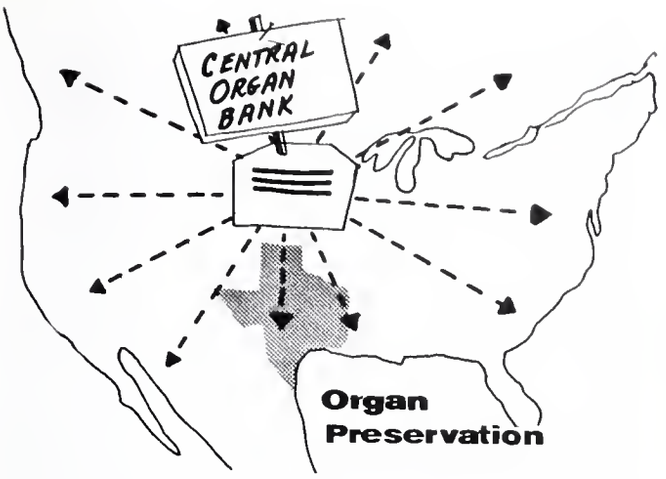


Fig 7. Organ preservation and pooling on a regional or national basis.

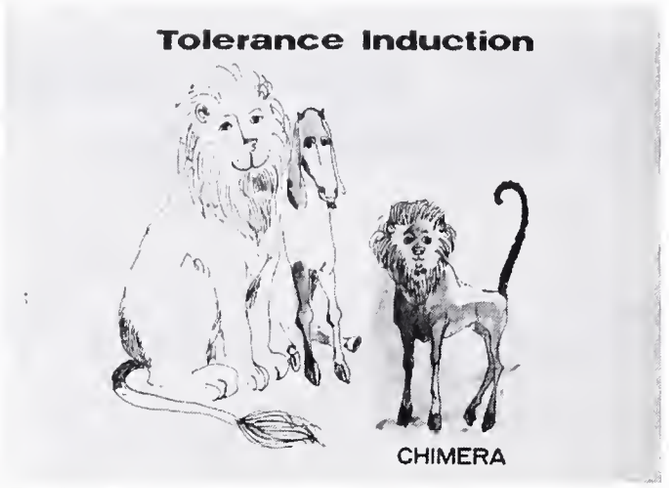


Fig 8. The state of chimerism.

12. Meuwissen HJ, Stutman O, Good RA: Functions of lymphocytes. Seminars in Hematology 4:28-66, 1969.

13. Hersh EM, Openheim JJ: Impaired in-vitro lymphocyte transformation in Hodgkin's disease. New Eng J Med 273: 1006-1012, 1965.

14. Hirschhorn K, Schreibman RR, Bach RH, et al: In-vitro studies of lymphocytes from patients with sarcoidosis and lymphoproliferative diseases. Lancet 2:842-843, 1964.

15. Starzl TE, Marchioro TL, Holmes JH, et al: Renal homografts in patients with major donor-recipient blood group incompatibilities. Surgery 55:195-200, 1964.

16. Bach FH: Transplantation: Problems of histocompatibility testing. Science 159:1196-1198, 1968.

17. Medawar PB: The use of antigenic tissue extracts to weaken the immunological reaction against skin homografts in mice. Transplantation 1:21, 1963.

18. Ogden DA, Porter KA, Terasaki PI, et al: Chronic renal homograft function: Correlation with histology and lymphocyte antigen matching. Amer J Med 43:837-845, 1967.

19. van Rood JJ, Earnisse JG: The detection of transplantation antigens in leukocytes. Seminars in Hematology, 5:187-214, 1968.

20. Simonsen M: Strong transplantation antigens in man. Lancet 1:415-418, 1965.

21. van Rood JJ, Van Leeuwen A, Bruning JW: The relevance of leukocyte antigens for renal allotransplantation. J Clin Path, 1967.

22. Patel R, Mickey MR, Terasaki PI: Serotyping for homotransplantation. XVI. Analysis of kidney transplants from unrelated donors. New Eng J Med 279:501-506, 1968.

23. Manax WG, Lillehei RC: Preservation and storage of mammalian organs, in: Rapaport FT, Dausset J, Eds: Human Transplantation. Grune & Stratton, New York and London, 1968, pp 675-691.

24. Sarles HE, Thomas FD, Remmers AR Jr, et al: Review of the actions and effects of immunosuppressive drugs, Tex Rep Biol Med 27:327-340, 1969.

25. Russell PS, Austen KF, Martin HF, et al: Immunopathology of renal transplantation, in: Miescher PA, Müller-Eberhard HJ, Eds: Textbook of Immunopathology vol 2, New York and London, Grune & Stratton, 1969, pp 152-767.

26. Burnet M: Immunological factors in the process of carcinogenesis. Brit Med Bull 20:154-158, 1964.

27. Penn I, Hammond W, Brettschneider L, et al: Malignant lymphomas in transplantation patients. Transpl Proc 1: 106-112, 1969.

28. Wilson RE, Hager EB, Hampers CL, et al: Immunologic rejection of human cancer transplanted with renal allograft. New Eng J Med 279:478-483, 1968.

29. Starzl TE, Marchioro TL, Porter KA, et al: The use of heterologous antilymphoid agents in canine renal and liver homotransplantation, and in human renal homotransplantation. Surg Gynec Obstet 124:301-308, 1967.

30. Starzl TE, Porter KA, Iwasaki Y, et al: The use of antilymphocyte globulin in human renal homotransplantation, in: Wolstenholme GEW, O'Connor M, Eds: Antilymphocytic Serum. London, Churchill, 1967, pp 4-34.

31. Lance EM: The mechanism of action of anti-lymphocyte serum: Studies of antibody eluate. J Exp Med 130:49-76, 1969.

32. Cooper MD, Gabrielsen AE, Good RA: Role of the thymus and other central lymphoid tissues in immunological disease. Ann Rev Med 18:113-138, 1967.

33. Monaco AP, Wood ML, Russell PS: Some effects of purified heterologous antihuman lymphocyte serum in man. Transplant 5:752-774, 1967.

34. Nossal GJV: Immunological tolerance, in: Rapaport FT, Dausset J, Eds: Human Transplantation. New York, London, Grune & Stratton, 1968, pp 643-654.

35. Gewurz H, Pickering RJ, Muschel LH, et al: Complement-dependent biological functions in complement deficiency in man. Lancet 2:356-360, 1966.

36. Myburgh JA, Cohen I, Gecelter L, et al: Hyperacute rejection in human kidney allografts—Shwartzman or Arthus reaction? New Eng J Med 281:131-135, 1969.

37. Tisdall LH, Garland DM, Wiener AS: Critical analysis of value of addition of A and B group-specific substances to group 0 blood for use as universal donor blood, J Lab Clin Med 31:437-443, 1946.

38. Monaco AP, Wood ML, Russell PS: Studies on heterologous anti-lymphocyte serum in mice. III. Immunologic tolerance and chimerism produced across the H-2 locus with adult thymectomy and anti-lymphocyte serum. Ann N Y Acad Sci 129:190-209, 1966.

39. Woodruff J, Gesner BM: Lymphocytes: Circulation altered by trypsin. Science 161:176-178, 1968.

40. Kirby DRS: Transplantation and pregnancy, in: Rapaport FT, Dausset J, Eds: Human Transplantation. New York, London, Grune & Stratton, 1968, pp 565-586.

41. Weigle WO: Natural and acquired unresponsiveness, in: Williamson CK, Ed: Monographs in Microbiology. Cleveland, New York, World Publishing Co, 1967.

42. Russell PS, Monaco AP: The Biology of Tissue Transplantation. Boston, Little, Brown and Company, 1965.

43. Schwartz RS: Immunosuppressive drug therapy, in: Rapaport FT, Dausset J, Eds: Human Transplantation. New York and London, Grune & Stratton, 1968, pp 440-471.

44. Sarles HE, Fish JC, Remmers AR Jr, et al: The depletion of circulating lymphocytes in preparation for allotransplantation. JAMWA 23:1126-1134, 1968.

45. Woodruff MFA, Gesner BM: The effect of neuraminidase on the fate of transfused lymphocytes. J Exp Med 129: 551-567, 1969.

46. Simonsen M: Graft versus host reactions. Their natural history, and applicability as tools of research. Progr Allerg 6:349-467, 1962.

47. Szulman AE: The histological distribution of blood group substances A and B in man. J Exp Med 111:785-799, 1960.

48. Daniels JC, Ritzmann SE, Levin WC: Lymphocytes: morphological, developmental, and functional characteristics in health, disease, and experimental study—an analytical review. Texas Rep Biol Med 26:5-93, 1968.

The authors, Division of Hematology-Immunology, Shriners Burns Institute, The University of Texas Medical Branch, Galveston, Tex 77550.

Heart Rate Response to Exercise by

Double Master Test

MAURICE E. ROUGRAFF, MD; JOHN C. BAKER, MD

SINCE 1941, WHEN MASTER and Jaffe published their first article on the electrocardiographic (ECG) changes after exercise,[1] the Master and double Master (DMECG) tests have become the most widely known exercise ECG tests in this country. Not only have they been useful in diagnosing coronary artery disease, but the double Master especially has become a prime test for investigating the etiology of "chest pain."

Complaints of pain, pressure, and discomfort in the chest not infrequently prompt a patient to consult his physician. Some of these patients have coronary artery disease; others have no demonstrable organic disorder. It is therefore important not only to diagnose "ischemic" heart disease correctly, but to exclude it with confidence when noncardiac conditions are responsible for the chest pain.[2]

Not all persons with chest pain consult a physician. Of those who do, not all of them complete the diagnostic investigation. However, many people in both groups subsequently apply for life or health insurance, at which point, the etiology of the chest pain becomes of considerable interest to the insurer's medical director.[3]

Like many other physicians, we have ordered hundreds of double Master ECGs to assist us in evaluating the insurance applicant with a history of chest pain or symptoms possibly related to the cardiovascular system. Presumably, we have had our share of "positive" results. We have also received tracings showing little or no increase in heart rate after exercise, post-exercise rates well within the normal range for resting heart rate (70-89 beats/minute) and even post-exercise heart rates slower than the rate before exercise. In these cases, the double Master test has not been as diagnostically helpful as we would have liked.

Since the double Master is ordered as a test of the heart's response to exercise, we have questioned its usefulness in those cases where post-exercise heart rates show little effect of testing. Others have found the test inadequate or unreliable for testing all persons. Doan and others in 1965, using a multistage exercise capacity test on a treadmill, reported the sensitivity of this test to be nine times greater than that of the double Master two-step test in eliciting electrocardiographic evidence of myocardial ischemia in "normal" men over 34 years of age.[4] Ungerleider believes a negative Master's does not preclude a diagnosis of coronary artery disease.[5] Geller has reported his successes in monitoring with the ECG during exercise.[6] The Master two-step test, he says, has detected many cases of silent coronary disease, but maximal or near-maximal exercise testing (heart rates of 150 to 200 beats/minute) increase the effectiveness of exercise testing even more. Dickerson and Sheffield, reporting independently on ECGs and stress tests at the Conference on Coronary Artery Disease in New York in 1967, found more positive test results with the extended or high performance exercise test than with a double two-step test.[7]

Regardless of the actual mechanics of the

Because maximal or near maximal exercise testing seems to produce superior results in evaluating latent ischemic heart disease, 1,350 double Master electrocardiograms on insurance applicants were reviewed for results, heart rate response to exercise, and compared to anticipated heart rate response had a maximal exercise method been employed for the test.

mode of exercise employed, the tests used by Doan and others show two striking common features: (1) their subjects achieve a much faster heart rate, and (2) they have relatively more positive results than persons tested by the double two-step method. Therefore, it appears to us that the closer to maximal heart rate an exercise test can come, the more reliable the test will be.

With this postulation in mind, we have reviewed 1,350 double Master ECG tests to compare the immediate post-exercise heart rates to maximal heart rates at various ages. Averages by decades of age were derived and percentages of maximal rates determined for both the positive and negative test groups.

Method: The authors reviewed 1,350 recent, consecutive, double Master exercise tests. Tests on females and juveniles were not included in the study. Although the tests were received as part of application for insurance, the bulk of them were not routine. The reason for requesting the DMECG was noted for each one. The resting heart rate was measured in the last lead before beginning exercise. The post-exercise heart rate was measured in the first lead after completion of the test. The ECGs were grouped by decades of age at the time the exercise testing was performed, and sub-grouped as to positive or negative results. Interpretation of results was by the Robb method.[8] The two-step post-exercise heart rates were then compared to heart rates predictable after maximal exercise testing.

Results: Insurers usually request DMECGs for one of two reasons: as a routine procedure when a person applies for a large amount of life insurance, or because further evaluation of the heart is needed before underwriting the application. Of these 1,350 DMECGs, 129 were ordered purely as a routine because of the amount of insurance applied for. The remainder were ordered by the medical director because of symptoms referable to the cardiovascular system or related signs on the medical examination. In our group, a history of prior chest pain was the most common symptom which prompted the request for an exercise ECG test. In round numbers then, 90% of the men tested had some history or findings referable to their hearts.

By age, almost half of our applicants (46%) were in the 40 to 50 years group (Table 1). This is in keeping with the junction of two expected age vectors, the age at which most insurance is bought and the age at which signs and symptoms of ischemic heart disease begin. (The very young and old are not the prime purchasers of insurance. Neither is much coronary artery disease proven before age 40.)

It is generally agreed that the incidence of ischemic heart disease increases with the age of the population. The finding of positive DMECG tests should also increase with the age of the tested group. These expected findings were generally confirmed by the percent of positive DMECGs we found by age—13% in the 20 to 30 year group, and 32% in the 60 to 70 year

Age (Years)	% Positive	Total Number
20-30	13	45
30-40	20	336
40-50	16	613
50-60	26	300
60-70	32	56

Table 1. Percent of positive DMECG tests by decades.

group (Table 2). The only deviation from expected results was in the 30 to 40 year category, which had 4% more positive tests than the next older decade.

The average heart rate at rest for the 1,350 applicants was 74 beats per minute (Table 2), the rate being faster in the younger groups and slower with increasing age. However, the two older groups responded with a slightly slower post-exercise heart rate than the younger men.

In all but the oldest group, the average heart rate at rest was always slower in those having a negative exercise test than in those having positive results. The comparison after exercise was even more striking. Here, in each age group, those having positive test results had, on the average, faster heart rates than their contemporaries (Table 2). The average heart rate after exercise for all ages was 105 beats per minute for those with positive DMECG findings, and 97 beats per minute for those with a negative response.

In comparing the post-exercise heart rate of the positive group by decade to predictable maximal heart rate, we see the DMECG test achieved a 53 to 62% of maximum. In the negative DMECGs, the achievement was somewhat less, ranging from 51 to 60%.

Comments: Both of us once believed that a properly performed DMECG test, if negative, was pretty convincing evidence that a patient had no latent coronary artery disease. One of us, however, has personally supervised such a test on two asymptomatic males who, although results of their two-step tests were clearly negative, went on to have proven myocardial infarctions within a relatively short time.[12] We have also seen a number of patients in whom results of two-step tests were normal initially, but became abnormal on reexamination during which a faster heart rate was achieved during the exercise.

Recent (unpublished) studies in Houston verify the advantage of ECG monitoring during exercise. In some persons, S-T segment depressions do occur during the exercise period and return to normal in a few seconds after the patient stops. In these examinees, the slightest delay in recording the immediate post-exercise lead could result in missing the significant S-T changes.

A physician evaluating the function of a certain muscle group would hardly choose a test which requires only 50 to 60% of expected range of motion. In measuring vital capacity, we certainly do not ask the patient to exhale about half of a breath. But for those of us who have been accepting a negative double two-step test as proof of absence of latent coronary artery disease, it appears that we have been reassured by a test which tries only 50 to 60% of maximal heart rate capacity.

However, we have no intention of abandoning the DMECG test. There is a definite place in medicine for this easily available test as well as for the single Master test. But when resting ECGs and two-step ECGs are normal in a symptomatic patient or one with signs of possible latent ischemic heart disease, we would like to see a graded exercise test, using 85% of the maximal age-predicted heart rate inducible by exercise, before considering his evaluation complete. Such graded exercise as described by Sheffield and others is considered not to increase the hazard of testing.[13]

Until such graded exercise tests are readily available, many of us will continue to evaluate the exercise ECGs as submitted to us for interpretation in the light of the clinical history and findings. In doing this, may we suggest paying close attention to the heart rate achieved by the test when compared to maximal expected heart rates for the patient's age. In our opinion, with a negative exercise test, the faster the achieved heart rate the less the probability of latent coronary disease. Conversely, the slower the exercise heart rate response, the greater the possibility of a false negative test result. To accurately measure and record achieved heart rate (and S-T changes), we strongly recommend ECG monitoring during exercise either by the "hard wire" or radiotelemetry methods. Not only does this permit the cardiographer to recognize significant changes as they occur, but

Age Group By Decades and Test Results	20-30 Years Negative	20-30 Years Positive	30-40 Years Negative	30-40 Years Positive	40-50 Years Negative	40-50 Years Positive	50-60 Years Negative	50-60 Years Positive	60-70 Years Negative	60-70 Years Positive
Number of ECGs	39	6	269	67	513	100	221	79	38	18
Heart Rate At Rest (Averages)	77	79	73	77	72	74	71	75	72	68
Heart Rate Immediately After Exercise (Averages)	100	104	100	108	99	108	92	103	96	102
Predictable Maximal Heart Rate (Mean for Age Group)*	195	195	186	186	178	178	171	171	164	164
Percent of Maximal Heart Rate Achieved on DMECG	51%	53%	54%	58%	56%	61%	54%	60%	58%	62%

*Derived from Ellestad, et al,[9] based on figures from Robinson[10] and Astrand and associates.[11]

Table 2. Comparison of heart rates before and after two-step exercise, by decades and with maximal exercise.

it obviates the time loss in reconnecting the patient to the ECG machine during those critical seconds at the end of the test.

Summary: Of the 1,350 DMECGs reviewed, 90% had been ordered because of some sign or symptom referable to the cardiovascular system. As would be expected, there was a higher percent of positive DMECG test results in the older age groups, and the lowest percent was in the youngest age group. Heart rates immediately after exercise, when compared to maximal heart rates at various decades of life, indicate that the two-step tests are achieving only 50 to 60% of maximal. For best evaluation by exercise ECG testing, we recommend the graded exercise method. When this is unavailable, we recommend that credence be given to a negative exercise test result in proportion to the ratio of achieved heart rate on testing to the predicted maximal heart rate for the patient's age.

REFERENCES

1. Master AM, Jaffe HL: The electrocardiographic changes after exercise in angina pectoris. J Mt Sinai Hosp 7:629-632, 1941.

2. Master AM, Rosenfeld I: Exercise electrocardiography as an estimation of cardiac function. Dis Chest 51:374-383, 1967.

3. Rougraff ME: How significant are "exercise" electrocardiograms? J Indiana Med Ass 59:1440-1442, 1966.

4. Doan AE, Peterson DR, Blackmon JR, et al: Myocardial ischemia after maximal exercise in healthy men. A method for detecting potential coronary heart disease? Amer Heart J 69:11-21, 1965.

5. Ungerleider HE: Personal communication.

6. Geller AJ: Panel session, tenth international congress on diseases of the chest. Washington, DC, 1968.

7. Dickerson RB, Sheffield LT: Conference on coronary disease. Trans Assoc Life Ins Med Dir, 1967.

8. Robb GP, Marks HH: Postexercise electrocardiogram in arteriosclerotic heart disease. Its value in diagnosis and prognosis. JAMA 200:918-926, 1967.

9. Ellestad MH, Allen W, Wan MCK, et al: Maximal treadmill stress testing for cardiovascular evaluation. Circulation 39:517-522, 1969.

10. Robinson S: Experimental studies of physical fitness in relation to age. Arbeitsphysiol 10:251-323, 1938.

11. Astrand L, Astrand PO, Rodahl K: Maximal heart rate during work in older men. J Appl Physiol 14:562-566, 1959.

12. Rougraff ME: Myocardial infarction preceded by normal double master electrocardiograms. St Jos Hosp Med Surg J 4:11, 1969.

13. Sheffield LT, Holt JH, Reeves TJ: Exercise graded by heart rate in electrocardiographic testing for angina pectoris. Circulation 32:622-629, 1965.

Dr. Rougraff, Medical Director, Great Southern Life Insurance Company, 3121 Buffalo Speedway, Houston, Tex 77001.

Dr. Baker, Medical Director, American United Life Insurance Company, 30 West Fall Creek Parkway, Indianapolis, Ind 46206.

PROSTHETIC HEART VALVES

LT ROBERT H. RADNICH, MC, USN; WARREN M. JACOBS, MD

RECENT ADVANCES IN cardiovascular surgery have influenced obstetrical management of pregnant cardiac patients. With the development of new prosthetic valvular devices and their application in women of childbearing age, a new type of "pregnant cardiac" will be seen with increasing frequency.

Only 14 pregnancies following prosthetic valve replacement have been reported in the literature (Table 1). Three of these patients have successfully completed their pregnancies with a Hufnagel valve in place, three with a Starr-Edwards aortic valve, and five with a Starr-Edwards mitral valve. The following case is the sixth reported successful delivery in a patient with a Starr-Edwards mitral valve in place.

Case Report: A 21-year-old South American woman, gravida 2, para 0, abortus 1, was first seen at three months' gestation with complaints of vaginal spotting. She had developed rheumatic fever at 9 years of age, and had progressive symptoms of congestive heart failure. In September 1965, at age 19, she was referred to the Methodist Hospital where cardiac evaluation revealed severe mitral valve disease with significant pulmonary hypertension. Her mitral valve was replaced with a #2 Starr-Edwards mitral prosthesis. She was maintained on the cardiopulmonary by-pass for 32 minutes. After an uneventful recovery, she was discharged on a regimen of digitoxin 0.1 mg daily, and warfarin 10-15 mg daily.

The patient obtained good relief from her symptoms and became pregnant shortly after her surgery, but obtained a therapeutic abortion. She became pregnant again in early 1967, and returned to Houston for her prenatal care and parturition. When first seen at three months' gestation, her warfarin was discontinued and she was started on Depo-Heparin, 200 mg twice a day subcutaneously. Her vaginal spotting soon stopped and she was maintained on heparin throughout her pregnancy. She had no difficulties with this mode of therapy other than recurrent ecchymoses at the sites of injection. Her prenatal course was uneventful. Her total weight gain was 17 lb. Her vital signs remained stable. She had no edema or albuminuria. The fetal heart beats were constantly strong and clear.

The patient was admitted on Oct 16, 1967, for discontinuation of the heparin therapy, as her cervix was dilated (4 cm) and the estimated fetal weight was 6½ lb. Later, an active labor mechanism developed spontaneously and an amniotomy was performed. The patient was delivered of a 4 lb, 14 oz girl, Apgar 9, via low forceps and saddle-block anesthesia. Her blood pressure and pulse remained stable throughout. The infant was entirely normal and healthy. The discrepancy in estimated and observed fetal weight was thought to be due to an extremely large placenta. Warfarin therapy was begun four days postpartum, and the patient was discharged in excellent condition.

Discussion: Prosthetic valvular surgery was begun in 1952 when Hufnagel[14] inserted a ball-valve prosthesis in the descending aorta of a patient with aortic insufficiency. Since that time many new prosthetic valves and new operative techniques have been developed, and many thousands of valves have been replaced with these devices.

The relatively small obstetrical experience with these patients, as reported in the literature, can be explained by examining the reported series.[1,3,4,24] More than 70% of the patients have been over 45 years of age. And while the

CASE REPORT, REVIEW: A case of pregnancy and successful delivery of a patient with a Starr-Edwards mitral valve prosthesis in place is presented. Previous reports of pregnancies in patients with prosthetic heart valves are reviewed, as are the hazards of anticoagulation with coumarin derivatives during pregnancy. Anticoagulation with subcutaneous injections of lido-heparin is advocated for all pregnant patients with prosthetic heart valves in place.

IN PREGNANCY

Table 1. Pregnancies with prosthetic valves in place.

Ref. No./Year	Valve Type, Location	Time Interval, Surgical Delivery	Anticoagulant	Anesthesia	Results and Comments
4/1958	Hufnagel (descending aorta)	9 mo PO	No	Not stated	Premature, viable infant; postpartum convulsion
6/1959	Hufnagel	2 yr PO	No	Not stated	Normal infant, cesarean
10/1962	Hufnagel	13 mo PO	No	N_2O	Normal term infant
28/1966	S-E aortic	10 mo PO	Not stated	N_2O	Congestive heart failure at 30 weeks gestation; normal term infant
30/1966	S-E aortic	12 mo PO	No	Epidural	Normal term infant
	S-E aortic	16 mo PO	No	Epidural	Normal term infant
22/1964	S-E aortic	4 mo	Not stated	Not stated	Fetal death
16/1966	S-E mitral	16 mo PO	Warfarin, discontinued at 8 mo	Spinal	Normal term infant
	S-E mitral	17 mo PO	Warfarin, discontinued at 8 mo	Spinal	Normal term infant
30/1966	S-E mitral & aortic	Not stated	Warfarin	Not stated	Spontaneous abortion at 10 weeks; patient completely asymptomatic
7/1966	S-E mitral	13 mo PO	Warfarin, heparin 38 wk, discontinued in labor	Epidural	Premature, viable infant; mentally retarded, blind, nasal hypoplasia
12/1967	S-E mitral	7 mo	Warfarin, heparin 28 wk, discontinued in labor	Epidural	Normal term infant
17/1968	S-E mitral	21 mo PO	Warfarin, heparin 31 wk	Caudal	Term infant; nasal hypoplasia; ? mentally retarded
25/1968	McGovern aortic	27 mo PO	Warfarin, heparin 16 wk	N_2O	Normal term infant; total breech extraction

sex ratio for mitral valve replacement is fairly equal,[2] there is a greater than 5:1 male predominance in aortic valve replacement.[24]

Numerous studies have shown that the valves are capable of sustaining an adequate cardiac output.[3,13,18,23] The two patients reported by Ueland[30] with Starr-Edwards aortic valves in place had hemodynamic studies performed during pregnancy showing normal resting cardiac outputs, and an increase of over 2 liters/min with mild exercise. In nonpregnant patients, Björk[2] has recorded cardiac outputs of up to 14.1 liters/min with prosthetic mitral valves in place. Only one patient has been reported to have developed any symptoms of congestive heart failure during pregnancy after Starr-Edwards valve replacement. This occurred following an aortic valvular replacement, and was complicated by mitral stenosis and atrial fibrillation.[28]

The main obstetrical problem in the management of these patients is the continuation of anticoagulant therapy during the gestational period. Because of a 5-10% incidence of embolic complications after aortic valve replacement, and a 20-56% incidence after mitral replacement, most cardiac surgeons routinely employ anticoagulants for all such patients indefinitely.[1,5] Adding to this hazard, pregnancy and the postpartum period are associated with a state of hypercoagulability.[26,27] Although this incidence of thromboembolic phenomena is unpredictable, and without any direct relationship to anticoagulant therapy, many series have shown a significantly lower incidence of such complications in those patients on anticoagulant therapy.[8,9,11,15,20]

The danger of anticoagulation in pregnancy has been the subject of many reports in the recent literature.[17,19] Mahairas,[21] in 1963, reported on a total of 12 fetal deaths secondary to anticoagulant therapy—all associated with bishydroxycoumarin or warfarin. Villasanta[31] has reported a perinatal mortality of 18.4% in patients treated with coumarin derivatives.

Bishydroxycoumarin, with a molecular weight of 1,000, has been shown to readily pass into the fetal circulation and cause intrauterine fetal bleeding. Heparin, on the other hand, has a molecular weight of 20,000 and is apparently incapable of crossing the placental barrier.[21] No fetal or perinatal deaths have been ascribed to heparin.

Of the five previously reported deliveries with Starr-Edwards mitral valve prostheses in place, all had received coumarin derivatives until the last month of gestation. Three of the infants were described as normal, but two have been reported with similar congenital anomalies. In 1966, DiSaia[7] reported delivery of an infant with hypoplasia of the nasal structures, bilateral optic atrophy, and mental retardation. The mother had been on warfarin throughout her pregnancy. In 1968, Kerber and associates[17] reported a similar case and postulated that warfarin was a teratogenic agent.

The decision whether to employ anticoagulation during pregnancy must remain with the cardiac surgeon, but the obstetrician must decide which type of drug should be used. Because of the complications of coumarin derivatives, we think that these medications should not be used during pregnancy. If anticoagulation is necessary, the patient should be maintained on lido-heparin (Depo-Heparin) administered subcutaneously into the abdominal fat pad or lateral thigh. Dosage must be individualized to maintain the clotting time two to three times the normal control, but is usually in the range of 5,000-10,000 units (40-100 mg) every eight hours.

No major difficulty has been reported with this regimen other than mildly painful ecchymoses at the sites of injection. Otterson[25] has reported persistent anorexia, vomiting, and weight loss beginning about three weeks after initiation of heparin therapy, but the etiology of these symptoms is unknown.

REFERENCES

1. Beall AC Jr, Bricker DL, Cooley DA, et al: The use of valve replacement in the management of patients with acquired valvular heart disease. Amer J Surg 110:834-844, 1965.

2. Björk VO, Malers E: Total mitral valve replacement: late results. J Thorac Cardiov Surg 48:625-634, 1964.

3. Bristow JD, Starr A, McCord CW, et al: Clinical and hemodynamic results of aortic valve replacement with a ball-valve prosthesis. Circulation 28:695, 1963.

4. Canfield MC, Edgar AL, Kimball AP: Successful completion of pregnancy in a patient with a Hufnagel valve. Calif Med 88:54-55, 1958.

5. Cooley DS, Nelson TG, Beall AC, et al: Total prosthetic replacement of mitral and aortic valves. Amer J Cardiol 13: 102-103, 1964.

6. Crockett JE, Kittle CF, Dimond EG: Relief of angina and congestive heart failure by Hufnagel valve: subsequent term pregnancy. Amer Heart J 57:144-148, 1959.

7. DiSaia PJ: Pregnancy and delivery of a patient with a Starr-Edwards mitral valve prosthesis. Obstet Gynec 28:469-472, 1966.

8. Effler DB, Groves LK, Favaloro R: Aortic and mitral valve replacement; experience with Starr-Edwards prostheses. Arch Surg (Chicago) 88:145-154, 1964.

9. Gadboys HL, Litwak RS, Niemetz J, et al: Role of anticoagulants in preventing embolization from prosthetic heart valves. JAMA 202:282-286, 1967.

10. Gorman JF: Pregnancy and aortic insufficiency. Term pregnancy in a patient with a Hufnagel valve. Obstet Gynec 20:238-242, 1962.

11. Herr R, Starr A, McCord CW, et al: Special problems following valve replacement: embolus, leak, infection, red cell damage. Ann Thorac Surg 1:403-415, 1965.

12. Harthorne JW, Buckley MJ, Grover JW, et al: Valve replacement during pregnancy. Ann Intern Med 67:1032-1034, 1967.

13. Hubis HJ, Hultgren HN: Cardiac dysfunction following prosthetic replacement of the mitral valve. Circulation 32: Suppl 2:116-117, 1965.

14. Hufnagel CA, Conrad PW: Comparative study of some prosthetic valves for aortic and mitral replacement. Surgery 57:205-210, 1965.

15. Hughes RK: Complications of Starr-Edwards mitral valve replacement. J Thorac Cardiov Surg 49:731-738, 1965.

16. Johnson AS, Meyers MP, Eckhous AS, et al: Successful pregnancies in patients with prosthetic mitral valves. Mich Med 65:718-719, 1966.

17. Kerber IJ, Warr OS III, Richardson C: Pregnancy in a patient with a prosthetic mitral valve. Associated with a fetal anomaly attributed to warfarin sodium. JAMA 203:223-225, 1968.

18. Kloster FE, Bristow JD, Starr A, et al: Serial cardiac output and blood volume studies following cardiac valve replacement. Circulation 33:528-539, 1966.

19. Kraus AP, Perlow S, Singer K: Danger of dicumarol treatment in pregnancy. JAMA 139:758-762, 1949.

20. Lillehei CW, Levy MS, Lillehei RC, et al: Mitral, aortic, and tricuspid valve replacement with the ball valve. Surgery 57:184-204, 1965.

21. Mahairas GH, Weingold AB: Fetal hazard with anticoagulant therapy. Amer J Obstet Gynec 85:234-237, 1963.

22. Mannix EP Jr, Mahajan DR: Open-heart surgery during pregnancy. A report of three cases. J Thorac Cardiov Surg 53:592-601, 1967.

23. Morrow AG, Clark WD, Harrison DC, et al: Prosthetic replacement of the mitral valve. Operative methods and the results of preoperative and postoperative hemodynamic assessments. Circulation 29:Suppl 2-13, 1964.

24. Mulder DG, Mazzei EA, MacAlpin RN: Ball-valve replacement for aortic valvular disease. A follow-up evaluation. J Thorac Cardiov Surg 52:76-85, 1966.

25. Otterson WN, McGranahan G, Freeman MV: Successful pregnancy with McGovern aortic prosthesis and long-term heparin therapy. Obstet Gynec 31:273-275, 1968.

26. Pechet L, Alexander B: Increased clotting factors in pregnancy. New Eng J Med 265:1093-1097, 1961.

27. Sise HS, Moschos CB, Becker R: On the nature of hypercoagulability. Amer J Med 33:667-678, 1962.

28. Strickland NR, Mount J: Pregnancy after treatment of aortic stenosis and insufficiency with a Starr-Edwards valve. Obstet Gynec 27:508-510, 1966.

29. Ueland K: Cardiac surgery and pregnancy. Amer J Obstet Gynec 92:148-162, 1965.

30. Ueland K: Pregnancy and prosthetic heart valves. Report of successful pregnancies in 2 patients with Starr-Edwards aortic valves. Obstet Gynec 27:257-260, 1966.

31. Villasanta U: Thromboembolic disease in pregnancy. Amer J Obstet Gynec 93:142-160, 1965.

Lieutenant Radnich, 5603 Roosevelt St, Bethesda, Md 20034.

Dr. Jacobs, Suite 1009 Medical Towers, Houston, Tex 77025.

DISTAL EARLY WARNING:

"BALD TOES"

Well, not completely bald.

But there is less hair on the toes of one foot than on the other. Loss of hair on the toes may be an early sign of peripheral vascular disease.

So, too, other distal early warning signs such as mild calf pain, postural color changes, slow or unusual toenail growth, shiny skin and cold sensitivity may suggest an impaired peripheral circulation.

Early diagnosis can mean more viable smooth musculature more capable of responding to vasospasmolytic therapy with Cyclospasmol.

□ Cyclospasmol lowers peripheral resistance in limb vessels... improves distal run-off, facilitates development of collateral circulation.

□ is a musculotropic without significant adrenergic or cardiostimulant effects.

□ is unrelated to epinephrine, papaverine or nicotinic acid.

A program of progressive walking exercise, cessation of smoking, foot care, proper diet and Cyclospasmol can be of long-term value to many patients with early occlusive disease.

Before arteriosclerosis obliterans becomes painfully evident

Cyclospasmol® (cyclandelate)

For long-term enhancement of peripheral circulation

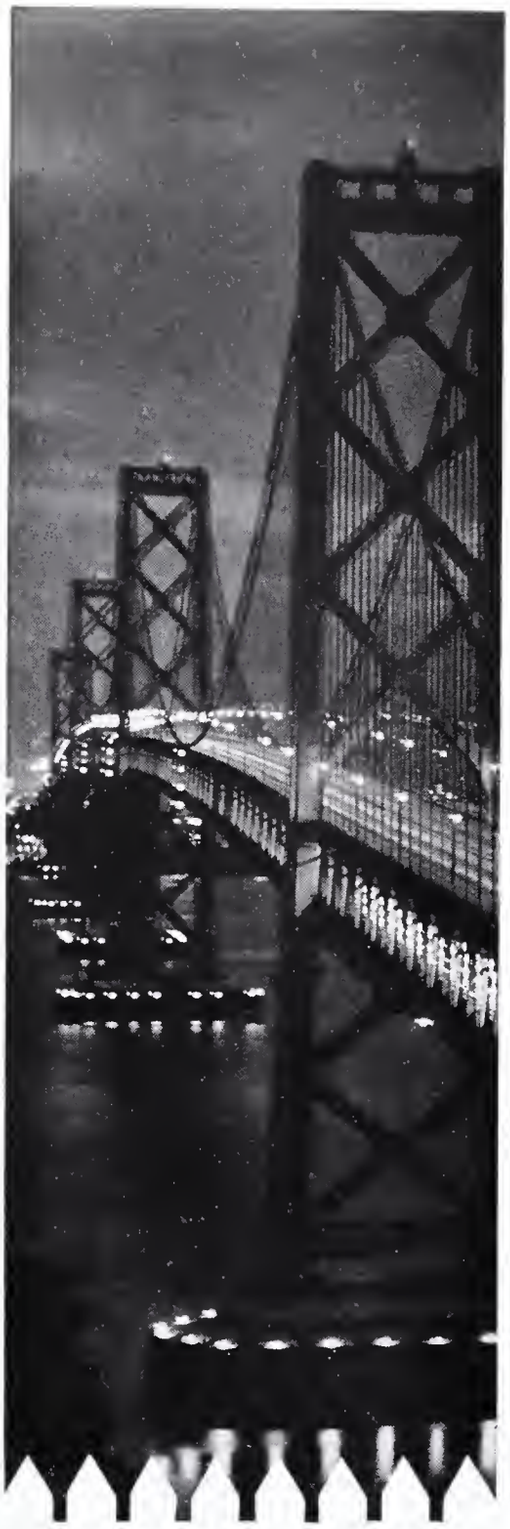
Photograph professionally posed | See facing page for Brief Summary

Cyclospasmol (cyclandelate)

ACTIONS: Cyclospasmol (cyclandelate) is an orally effective peripheral spasmolytic and vasodilator that acts directly on the vascular smooth musculature to produce a gradual and progressive relaxation that enhances the peripheral and cerebral blood flow. **INDICATIONS:** For adjunctive therapy in occlusive and vasospastic diseases of the vascular system associated with an impaired circulation, such as: intermittent claudication; arteriosclerosis obliterans; thrombophlebitis (to control associated vasospasm and muscular ischemia); nocturnal leg cramps; local frostbite; Raynaud's phenomenon; as an aid to encourage healing of diabetic and trophic ulcers of the legs; and for selected cases of ischemic cerebral vascular disease. A faster response may be expected in conditions in which vasospasm is predominant in the pathological process. The drug is not intended to substitute for an adequate medical or surgical program in the treatment of peripheral or cerebral vascular disease. It is imperative that the patient continue to follow established therapy, e.g., foot care, discontinuance of smoking, etc., while taking Cyclospasmol. Since cerebrovascular disease is diagnosed most frequently only after destruction of nerve tissue, it cannot be expected that signs and symptoms arising from an interruption of neuronal function can be completely reversed by correcting the exciting cause. Nevertheless, restoration of blood flow towards more normal levels with cyclandelate may often produce marked relief from such signs and symptoms as head noises, ringing in the ears, a feeling of weakness, unsteady gait, mental confusion, temporary fluctuations in hearing acuity, poor memory and slurred speech. More important, the drug may provide prophylaxis against further circulatory embarrassment, particularly if the diminished circulation is associated with spasm of the vascular wall. **CONTRAINDICATIONS:** Cyclospasmol is contraindicated in cases of known hypersensitivity to the drug. **WARNINGS: 1.** Cyclandelate should be used with extreme caution in patients with severe obliterative coronary artery or cerebral vascular disease, since there is a possibility that these diseased areas may be compromised by vasodilatory effects of the drug elsewhere. **2. USE IN PREGNANCY:** The safety of cyclandelate for use during pregnancy or lactation has not been established; therefore, it should not be used in pregnant women or in women of childbearing age unless, in the judgment of the physician, its use is deemed absolutely essential to the welfare of the patient. **3.** Although no prolongation of bleeding time has been demonstrated in humans in therapeutic dosages, it has been demonstrated in animals at very large doses. Therefore, the hazard of a prolonged bleeding time should be carefully considered when administering cyclandelate to a patient with active bleeding or a bleeding tendency. **PRECAUTIONS:** Since Cyclospasmol is a vasodilator, it should be used with caution in patients having glaucoma. Consult direction circular before prescribing. **ADVERSE REACTIONS:** Gastrointestinal distress (pyrosis, pain and eructation) may occur with Cyclospasmol. These symptoms occur infrequently and are usually mild. Relief can often be obtained by taking the medication with meals or by the concomitant use of antacids. Mild flush, headache, feeling of weakness or tachycardia may occur, especially during the first weeks of administration. **SUPPLIED:** 200 mg. blue capsules in bottles of 100 and 500; 100 mg. orange tablets in bottles of 100 and 500.

May we send you reprints, detailed literature or professional samples?

IVES LABORATORIES INC.
685 Third Avenue, New York, N.Y. 10017



Your neighbors left the lights on.

Looking for a bright vacation idea? America has all the man-made and scenic splendor you could ask for.

And it's all in your own backyard.

DISCOVER AMERICA IT'S SOME BACKYARD

An intraluminal venous angioma has not been described before. Although of minor importance, it is of interest as a rare curiosity.

Intraluminal Venous Angioma

ROBERT L. SEWELL, MD

VENOUS ANGIOMAS are most uncommon, and are extraluminal in nature. The majority of those which do occur are in the meninges of the brain and spinal cord.[1] Their discovery is usually secondary to bleeding or pressure.[2,3,5]

Cushing and Bailey[4] point out that most venous angiomas are closely related to arteriovenous angiomas, but may be distinguished from them.

Olivecrona and Riives[6] believe that the only difference between the venous and the arteriovenous angioma is a simple physiological one and depends simply on the extent of the participation by the arterial system.

Case Report: This 49-year-old white woman was seen for the first time on Nov 9, 1965. For about a month, she had been aware of a "lump in the vein" in her neck. There had been no trauma nor, for that matter, any associated symptoms of any kind.

Examination of the neck revealed a small, nontender lump undoubtedly in the right external jugular vein at 7 cm above the clavicle. A local anesthetic was administered and the lump was removed along with 1 cm of vein, after ligating above and below.

No untoward symptoms attended the procedure, and healing was uneventful.

A complete physical examination, performed after the lesion had been identified, was not remarkable in any phase. Close examination of all peripheral veins showed no abnormalities.

Pathological Report: The gross specimen was a small, nodular portion of tissue measuring up to 0.4 cm in greatest dimension. It was soft, rubbery, and pink-white. Microscopically, the specimen from the external jugular vein was nodular in configuration, and had a compact, fibrous composition. A multinodular mass of closely arranged capillary vascular spaces was present. The lesion was circumscribed but nonencapsulated, and was devoid of atypical changes. The pathologic diagnosis was benign intraluminal capillary hemangioma with no demonstrable anaplastic changes.

REFERENCES

1. Therkelsen J: Angioma racemosum venosum medullae spinalis. Acta Psychiat Neurol Scandinav 33:219-231, 1958.

2. Rosner S: Venous angioma as a cause of cerebral birth palsy. J Nerv Ment Dis 122:276-281, 1955.

3. Nagel LR, Wagner JA: Venous angioma as the cause of cerebellar apoplexy. Bull School Med Univ Maryland 41:64-69, 1956.

4. Cushing H, Bailey P: Tumors arising from the blood vessels of the brain. Springfield, Ill. Charles C Thomas, 1938.

5. Alfano JE, Reese DR: Cerebral arteriovenous angioma; an unusual case of unilateral exophthalmos. Amer J Opthal 45:589-597, 1957.

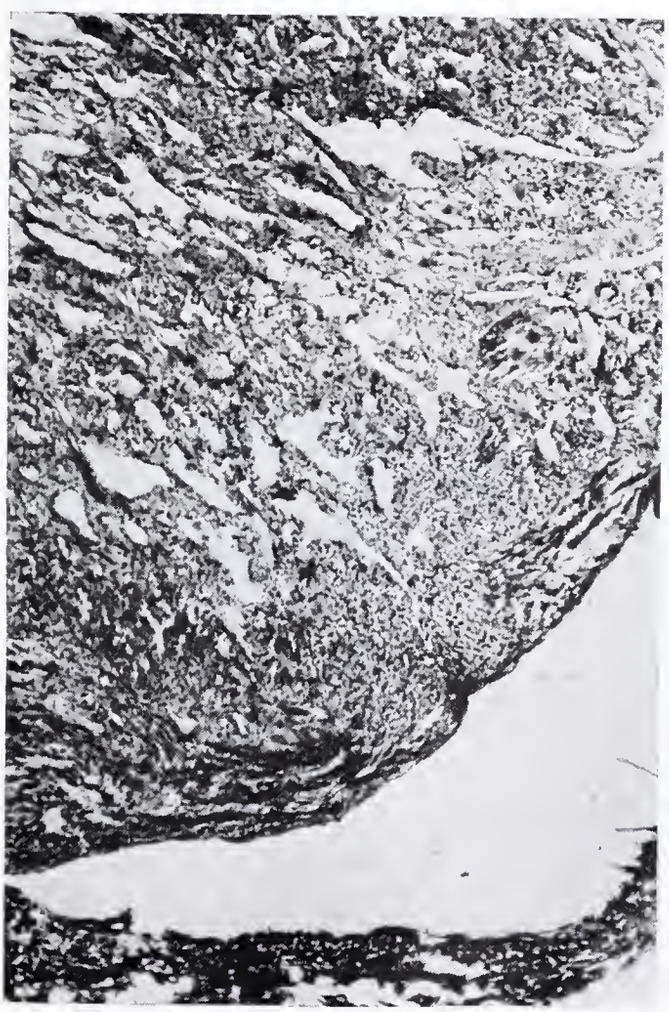
6. Olivecrona H, Riives J: Arteriovenous aneurysms of the brain. Arch Neurol 59:567-602, 1948.

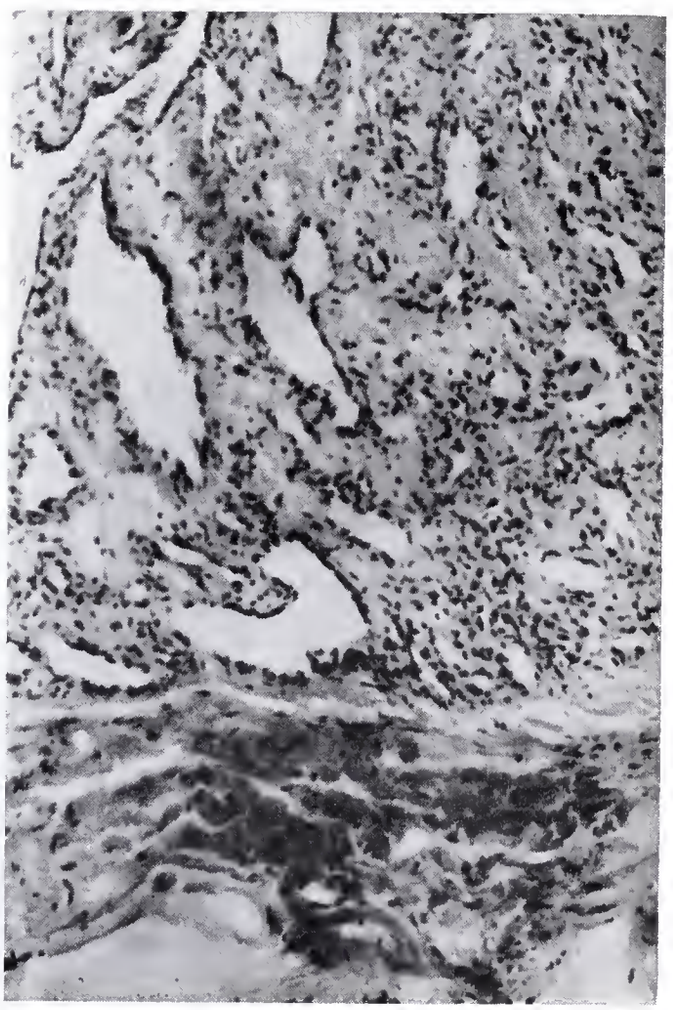
Dr. Sewell, The Fort Worth Clinic, 1221 W Lancaster Ave, Fort Worth, Tex 76102.

Fig 1. Intraluminal venous angioma; section taken through stalk.

Fig 2. Below, left. Section taken 0.5 cm from stalk.

Fig 3. Below, right. Higher power view of angioma.





Diagnosis & Treatment of

DENNIS M. KING, MELVYN H. SCHREIBER, MD

The hemodynamic effects of arteriovenous fistulas are due to the decrease in peripheral resistance they produce. Cardiac, renal, and peripheral vascular adjustments compensate for this change. Trauma usually is responsible for arteriovenous fistulas, and arteriography establishes the diagnosis and defines the morphological alterations produced. Therapy is surgical.

AN ARTERIOVENOUS FISTULA decreases peripheral resistance. Subsequent compensatory cardiovascular adjustments tend to correct the decreased mean systemic arterial pressure. The cardiovascular mechanisms required for compensation depend primarily upon the size of the fistula.

In experimental arteriovenous fistulas with flows of less than 20% of the control cardiac output, an increase in cardiac output alone can compensate for the fistula flow as well as the decrease in mean arterial pressure.[4] The increased cardiac output under these conditions is the result of increased left ventricular emptying due to decreased diastolic pressure and delayed closure of the aortic valve, increased venous return, reflex rise in mean circulatory pressure which augments venous return,[5] and reflex increase in heart rate and myocardial contractility.

With larger fistulas the resulting increase in cardiac output is inadequate to accommodate the increase in fistula flow, and peripheral vasoconstriction is necessary to maintain mean arterial pressure. The total peripheral resistance remains low, however, because of the shunting effect of the fistula.

In chronic arteriovenous fistulas, the peripheral vascular resistance gradually returns to control values. An increased blood volume sufficiently augments the venous return so that the cardiac output becomes adequate to cope with both total body and fistula flow requirements.

The increase in blood volume incident to an arteriovenous fistula is secondary to increased sodium and water reabsorption by the kidney. Experimentally, the renal plasma flow (RPF) decreases while there is no significant change in mean aortic pressure. In addition, there is no significant change in glomerular filtration rate; hence, the filtration fraction (GFR/RPF) is increased.[6] These alterations represent increased renal vascular resistance probably localized to the efferent arterioles. As a result of increased efferent arteriolar vascular resistance, the hydrostatic pressure is reduced and the plasma

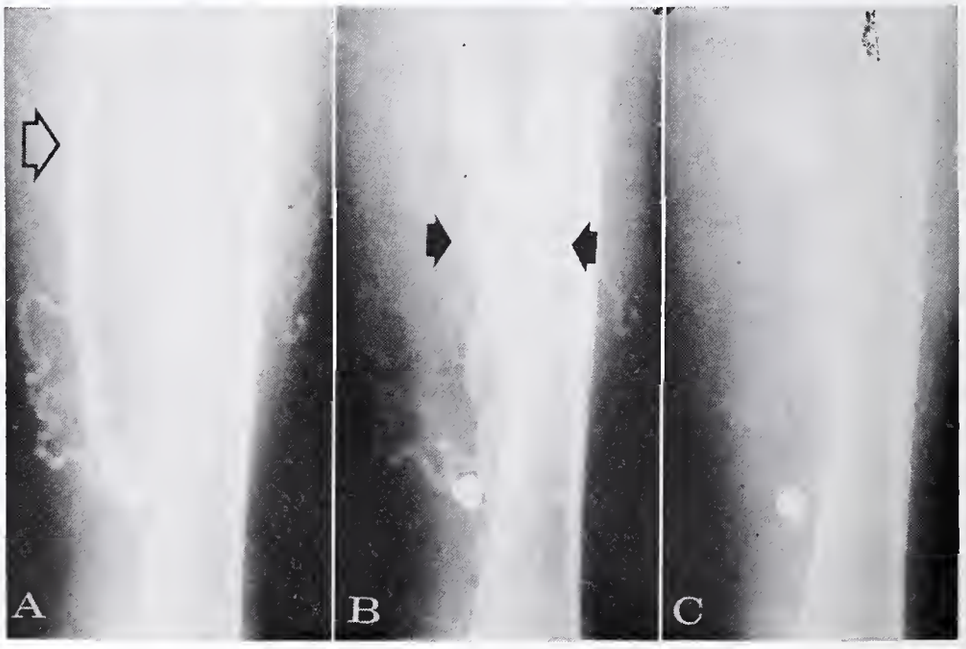


Fig 1. Traumatic arteriovenous fistula of the thigh. The altered anatomy is displayed by femoral arteriography. A. The hollow arrow points to the femoral artery in the proximal part of the thigh. The fistulous connection is located at the level of the bullet. B. The greatly dilated femoral vein is seen between the solid arrows. There are also many dilated collateral venous channels in the vicinity. C. A delayed film shows the contrast material lingering in the dilated venous structures.

Arteriovenous Fistulas

oncotic pressure is increased in the peritubular capillary network. It has been hypothesized in the case of hydrostatic pressure, and demonstrated for oncotic pressure, that changes in the peritubular capillaries may result in increased passive uptake of sodium from the tubules, with a subsequent increase in net tubular reabsorption.[3] Whether or not this is the exact or even the predominant renal mechanism acting to increase sodium and water reabsorption, the excretion of these materials is reduced following the opening of an arteriovenous fistula[6] and, as such, represents the compensatory renal response tending to reestablish renal as well as total body flow.

Most clinically significant arteriovenous fistulas are caused by penetrating wounds, usually from a bullet or knife. An arteriovenous fistula is infrequently due to blunt trauma, and may rarely be an accidental sequel of lumbar disc surgery[10] or renal biopsy.[2] They are artificially created for patients on chronic hemodialysis regimens. Congenital arteriovenous fistulas may occur in any organ system, including the brain and lungs. Occasionally, vascular malignant neoplasms such as renal cell carcinomas may contain large arteriovenous connections.[9]

Diagnosis: The diagnosis usually is rather simple with the clear history, a continuous thrill and bruit with systolic accentuation over the fistula, slowing of the heart rate with compression over the area of the fistula (Branham's sign), increased width and warmth of the involved extremity and, if prior to epiphyseal closure, increased length of the extremity. The patient may show signs of complications with limitation of activity, coldness, intermittent claudication, or gangrene in the case of arterial insufficiency; and with varicose veins, venous ulceration, and edema in the case of venous insufficiency. The patient may even develop congestive heart failure, the etiology of which at first may not be obvious.

Angiography is a useful adjunct to the management of an arteriovenous fistula, for it establishes the diagnosis, determines the exact site of the fistula, and outlines the local topography and morphology of the affected vessels. The angiographic technique will vary with the site of the lesion. At times, simple needle puncture of the feeding artery and injection of contrast material will opacify the lesion adequately (for example, carotid arteriography for cerebral arteriovenous fistulas). When the lesion is inaccessible to a needle, selective catheterization is required (as in renal arteriovenous fistulas). In any case, rapid serial filming is necessary to show the altered anatomy, particularly because of the rapidity of venous filling. Delayed films may be needed to show emptying of the fistula and the vessels distal to the arteriovenous connection.

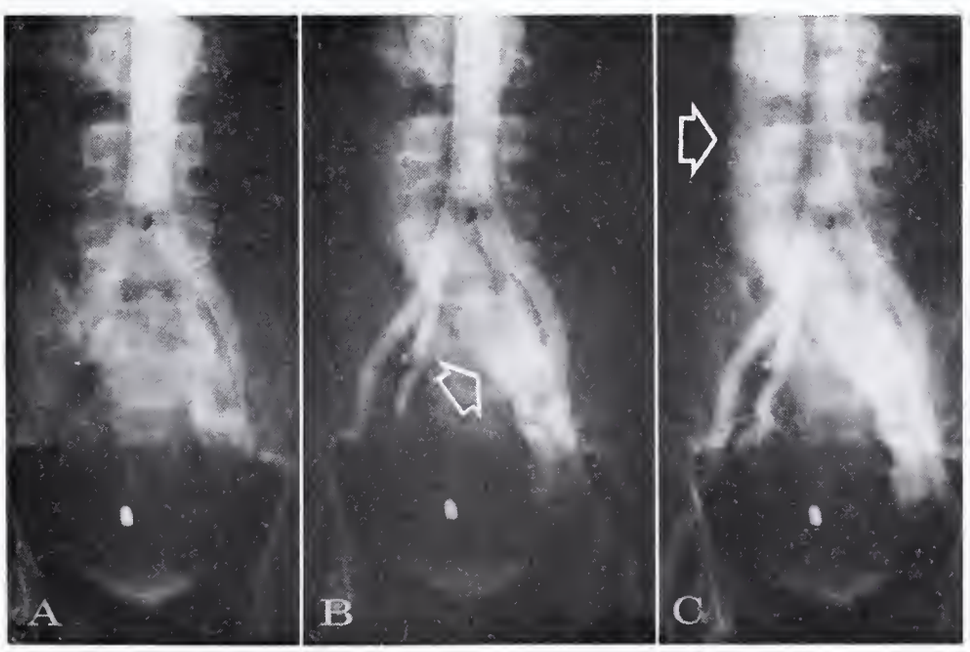


Fig 2. Post-traumatic arteriovenous fistula between the hypogastric artery on the left and the adjacent iliac vein. The bullet responsible for the vascular injury is seen in the pelvis. A. Contrast material has been injected through a catheter into the abdominal aorta. B. Immediate filling of the dilated left common iliac vein through a small fistulous tract (arrow) is seen. C. A moment later, the vena cava is filled while contrast material is still present in the aorta. The rapidity of filling of the dilated venous structures is characteristic of an arteriovenous connection

The contrast material should produce little irritation of vascular endothelium. Methylglucamine diatrizoate (Renografin 60) is satisfactory.

Treatment: The treatment is surgical, and prior to the Korean War quadruple ligation and excision was the treatment of choice. This approach required a delay to allow development of an adequate collateral circulation; nevertheless, there was a high incidence of arterial insufficiency involving the affected limb. Since the development of modern arterial reconstructive surgery, the delay is no longer necessary.[1]

The type of repair depends upon the vessels involved, and quadruple ligation and excision is acceptable for minor vessels. If in an inaccessible location, proximal and distal ligation may be accomplished for minor vessels, also.

Arterial reconstructive surgery for major vessels is necessary to avoid the complications of arterial insufficiency. The surgical procedure of choice in the latter instance involves excision of the arteriovenous fistula or aneurysm with either lateral repair of artery and vein or end-to-end anastomosis of the artery and lateral repair of the vein.[1] With end-to-end arterial anastomosis, tension must be avoided in order to prevent narrowing of the lumen and thrombosis at the anastomotic site subsequent to extension of the joint in the involved extremity. If tension is inevitable, a graft must be employed. Single interrupted sutures are preferable to either continuous or mattress sutures, since the latter are more likely to result in stenosis at the site of union.[7]

Hughes and Janke examined the results of surgical treatment in a five-year follow-up study of 215 traumatic arteriovenous fistulas and aneurysms in Korean War casualties. When major vessels were involved, reconstructive vascular surgery resulted in good to excellent results in almost all patients. Ligation and excision, on the other hand, gave poor results, with a significant degree of arterial insufficiency in 50% of the cases.[8] When small vessels were involved, ligation and excision produced satisfactory results except in lesions involving the profunda femoris artery. All four patients who had lesions in this artery developed claudication after ligation and excision despite the presence of ankle pulses.

Repair of major veins involved in arteriovenous fistulas was shown to be of great importance. Venous insufficiency, with varicosities and swelling of the involved extremity, developed only in those patients in whom venous ligation was performed.[8]

REFERENCES

1. Beall, AC, Harrington OB, Crawford ES, et al: Surgical management of traumatic arteriovenous aneurysms. Amer J Surg 106:610-618, 1963.

2. Bennett AR, Weiner SN: Intrarenal arteriovenous fistula and aneurysm. A complication of percutaneous renal biopsy. Amer J Roentgen 95:372-382, 1965.

3. Earley LE, Daugharty TM: Sodium metabolism. New Eng J Med 281:72-86, 1969.

4. Frank CW, Hsneh-Hwa W, Lammerant Jr, et al: Experimental study of immediate hemodynamic adjustments to acute arteriovenous fistulae of various sizes. J Clin Invest 34:722-731, 1955.

5. Guyton AC, Sagawa K: Compensations of cardiac output and other circulatory functions in areflex dogs with large A-V fistulas. Amer J Physiol 200:1157-1163, 1961.

6. Hilton JG, Kanter DM, Hays DR, et al: The effect of acute arteriovenous fistula on renal functions. J Clin Invest 34:732-736, 1955.

7. Holman E: New Concepts in Surgery of the Vascular System, Springfield, Ill, Charles C Thomas, 1955.

8. Hughes CW, Jahnke EJ: The surgery of traumatic arteriovenous fistulas and aneurysms: a five-year follow-up study of 215 lesions. Ann Surg 148:790-797, 1958.

9. Nicoloff DM: Renal arteriovenous fistula: occurrence in renal cell carcinoma. Amer J Surg 108:82-84, 1964.

10. Schreiber MH, Wolma FJ, Morettin LB: Angiographic findings in arteriovenous fistulas following lumbar disk surgery. Amer J Roentgen 101:957-960, 1967.

The authors, Department of Radiology, The University of Texas Medical Branch, Galveston, Tex 77550.

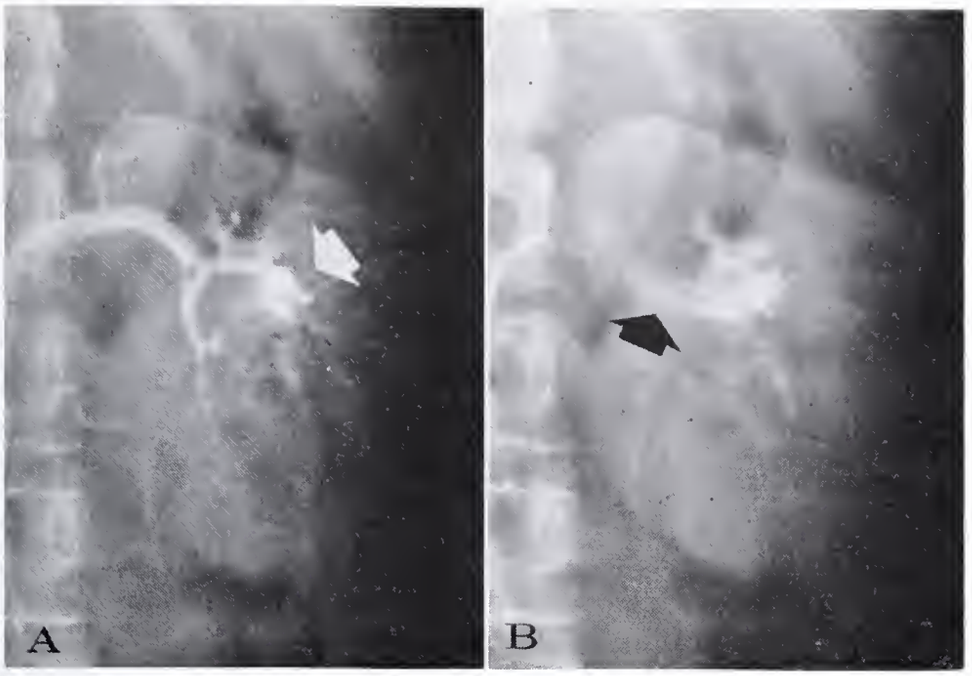


Fig 3. Arteriovenous fistula following renal biopsy. A selective left renal arteriogram has been performed. A. The arrow shows prompt filling of a dilated arterial structure. B. A delayed film shows early drainage through a dilated vein to which the arrow points.

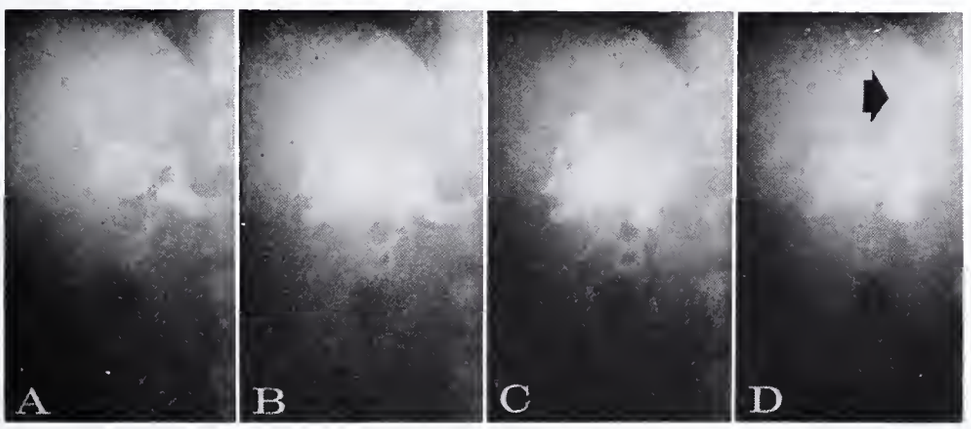


Fig 4. Arteriovenous shunt within a large vascular adenocarcinoma of the kidney. A selective right renal arteriogram has been performed. A. Filling of the dilated renal artery and its branches. B and C. Numerous arterial and venous channels fill. D. Early venous filling and drainage from the kidney are manifested radiographically by opacification of the inferior vena cava (arrow).

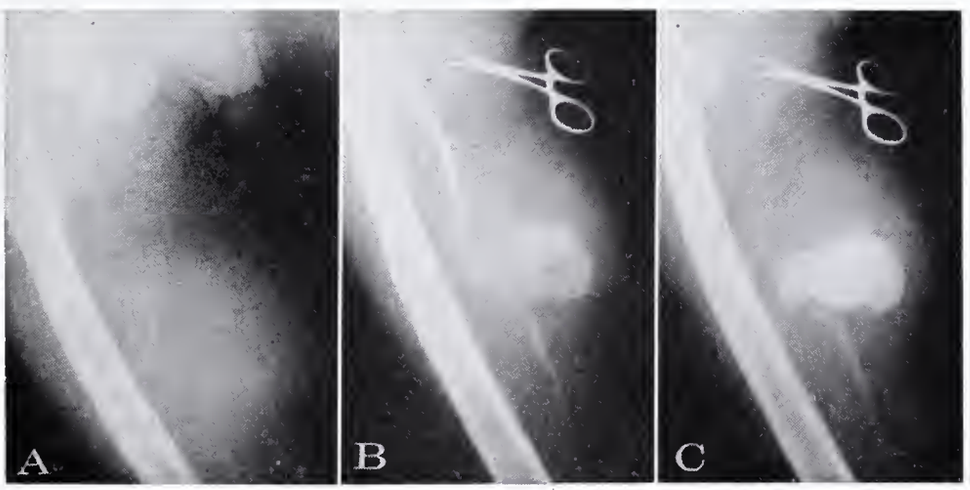


Fig 5. False aneurysm of the femoral artery. Arteriovenous fistulas are to be distinguished from false aneurysms without direct venous connection which may follow penetrating injuries. A. A large, soft tissue mass is seen on the medial aspect of the thigh of this patient who had been stabbed in this area some months previously. B. An early film from the femoral arteriogram shows narrowing of the midportion of the femoral artery and filling of a large dilated chamber representing the false aneurysm. C. The lumen of the false aneurysm is seen, as well as the distal portion of the femoral artery. There is no early venous filling and no significant venous injury.

WICHITA FALLS CLINIC-HOSPITAL

GENERAL SURGERY
W. E. Crump, M.D., F.A.C.S.
James T. Lee, M.D.
Charles H. Wilson, M.D., F.A.C.S.

ORTHOPEDIC SURGERY
Jack E. Maxfield, M.D., F.A.C.S.
Clyde W. Parsons, M.D.
Mark E. Huff, Jr., M.D.

ORAL SURGERY
R. A. Mitchell, D.D.S.
Larry J. Cason, D.D.S.

RADIOACTIVE ISOTOPES
Claude D. Wilson, M.D., D.A.B.R.
Joe D. Steed, M.D., D.A.B.R.
Julian H. Acker, M.D.
David D. Salmon, M.D., D.A.B.R.

PEDIATRICS
George W. Slaughter, III, M.D., F.A.A.P.
Joseph Bilder, Jr., M.D.

LABORATORIES
Claude D. Wilson, M.D., D.A.B.R., Radiology
Joe D. Steed, M.D., D.A.B.R., Radiology
David D. Salmon, M.D., D.A.B.R., Radiology

MEDICINE
W. B. Whiting, M.D., Cardiology
R. F. Knox, M.D., Endocrinology
P. K. Smith, M.D., F.A.C.P., Diagnosis & Internal Medicine
I. L. Humphrey, Jr., M.D., Diagnosis & Internal Medicine
Julian H. Acker, M.D., Diagnosis & Internal Medicine
Preston McCall, M.D., Diagnosis & Internal Medicine
Jullan C. Sleeper, M.D., Cardiology
Eugene Jackson, M.D., Diagnosis & Internal Medicine

GENERAL PRACTICE
J. B. Hathorn, Jr., M.D.
Melvin Horany, M.D.
John E. Worthen, Jr., M.D.

UROLOGY
Owen C. Berg, M.D., F.A.C.S.

OBSTETRICS AND GYNECOLOGY
W. L. Parker, M.D., F.A.C.S.
Warren T. Kable, M.D.
Frank J. Lee, M.D.

ADMINISTRATIVE OFFICER
Bertha McNeill, Administrator
Jesse E. Dobbs, Jr., Asst. Administrator

All I can do is ask.

Remember, only you can prevent forest fires.

ADVERTISING COUNCIL

Synthroid®
(sodium levothyroxine)

Indications: SYNTHROID (sodium levothyroxine) is specific repla ment therapy for diminished or absent thyroid function resulti from primary or secondary atrophy of the gland, congenital defe surgery, excessive radiation, or antithyroid drugs. Indications SYNTHROID (sodium levothyroxine) **Tablets** include myxeden hypothyroidism without myxedema, hypothyroidism in pregnan pediatric and geriatric hypothyroidism, hypopituitary hypothyro ism, simple (non-toxic) goiter, and reproductive disorders associat with hypothyroidism. SYNTHROID (sodium levothyroxine) **Injecti** is indicated in myxedematous coma and other thyroid dysfunctio where rapid replacement of the hormone is required. When a p tient does not respond to oral therapy, SYNTHROID (sodium le thyroxine) injection may be administered intravenously to avoid a question of poor absorption by either the oral or the intramuscu route.

Precautions: As with other thyroid preparations, an overdosa may cause diarrhea or cramps, nervousness, tremors, tachycard vomiting and continued weight loss. These effects may begin aft four or five days or may not become apparent for one to three wee Patients receiving the drug should be observed closely for signs thyrotoxicosis. If indications of overdosage appear, discontin medication for 2-6 days, then resume at a lower dosage level. patients with diabetes mellitus, careful observations should be ma for changes in insulin or other antidiabetic drug dosage requir ments. If hypothyroidism is accompanied by adrenal insufficiency, Addison's Disease (chronic subcortical insufficiency), Simmonds Disease (panhypopituitarism) or Cushing's syndrome (hyperadre alism), these dysfunctions must be corrected prior to and durin SYNTHROID (sodium levothyroxine) administration. The dru should be administered with caution to patients with cardiovascul disease; development of chest pains or other aggravations of ca diovascular disease requires a reduction in dosage.

Contraindications: Thyrotoxicosis, acute myocardial infarction.

Side effects: The effects of SYNTHROID (sodium levothyroxin therapy are slow in being manifested. Side effects, when they o occur, are secondary to increased rates of body metabolism: swea ing, heart palpitations with or without pain, leg cramps, and weig loss. Diarrhea, vomiting, and nervousness have also been observe Myxedematous patients with heart disease have died from abru increases in dosage of thyroid drugs. Careful observation of th patient during the beginning of any thyroid therapy will alert th physician to any untoward effects.

In most cases with side effects, a reduction in dosage followed b a more gradual adjustment upward will result in a more accurat indication of the patient's dosage requirements without the appea ance of side effects.

Dosage and Administration: The activity of a 0.1 mg. SYNTHROI (sodium levothyroxine) TABLET is equivalent to approximately on grain thyroid, U.S.P. Administer SYNTHROID tablets as a singl daily dose, preferably after breakfast. In hypothyroidism withou myxedema, the usual initial adult dose is 0.1 mg. daily, and may b increased by 0.1 mg. every 30 days until proper metabolic balance i attained. Clinical evaluation should be made monthly and PB measurements about every 90 days. Final maintenance dosage wil usually range from 0.2-0.4 mg. daily. In adult myxedema, startin dose should be 0.025 mg. daily. The dose may be increased to 0.0 mg. after two weeks and to 0.1 mg. at the end of a second two weeks The daily dose may be further increased at two-month intervals b 0.1 mg. until the optimum maintenance dose is reached (0.1-1.0 mg daily).

Supplied: Tablets: 0.025 mg., 0.05 mg., 0.1 mg., 0.15 mg., 0.2 mg., 0.3 mg., 0.5 mg., scored and color-coded, in bottles of 100 and 500. Injec tion: 500 mcg. lyophilized active ingredient and 10 mg. of Mannitol N.F., in 10 ml. single-dose vial, with 5 ml. vial of Sodium Chloride Injection, U.S.P., as a diluent.

SYNTHROID (sodium levothyroxine) INJECTION may be adminis tered intravenously utilizing 200-400 mcg. of a solution containing 100 mcg. per ml. If significant improvement is not shown the follow ing day, a repeat injection of 100-200 mcg. may be given.

FLINT LABORATORIES
DIVISION OF TRAVENOL LABORATORIES, INC.
Morton Grove, Illinois 60053

Doctor Watson exposes a double agent

Fog on the Embankment. Two figures emerge into silhouette against a haloed street lamp. The flare of a match reveals the profile of Sherlock Holmes. As he lights his calabash, his companion speaks:

"By Jove, Holmes, that amazing intuition of yours has proved right again. What we're looking for is a single entity. I thought we were dealing with several others—even twins. But now—I'd say we've uncovered a double agent."

"Tell me more, Watson, and be quick about it!"

(Watson withdraws a folded paper from inside his greatcoat, and reads aloud from it):

"The key to the whole cypher is SYNTHROID (sodium levothyroxine)"...

"Shhh! Watson, not so loud! You'll alert our quarry."

(Watson continues): "A single entity that serves two functions."

"A master stroke, Watson."

"Follow along, Holmes. In the neighborhood of 95% of the circulating thyroid hormone is levothyroxine—T_4 as you call it. T_4 is bound to thyroxine-binding proteins in the serum. It becomes available only gradually to tissue cells—as free thyroxine."

"Is that why there's such a smooth, predictable response, Watson?"

"Quite! With agent T_4, SYNTHROID, the chances of a precipitous rise in metabolic rate are lessened."

"But how does 'free' thyroxine fit into the picture?"

"Well, Holmes, you might call it the tissue thyroid hormone—because 'free' thyroxine (that is, thyroxine not bound to protein) is active at the tissue level. It is gradually released from thyroxine-binding proteins. Each daily dose of SYNTHROID is mostly bound to thyroid-binding proteins, and slowly released as 'free' thyroxine—the form in which it is metabolically active."

"Magnificent, Watson! So protein-bound thyroxine is the major form of circulating thyroid hormone, and it is released as 'free' thyroxine. And that's why SYNTHROID is able to simulate the normal process so artfully. Q.E.D."

"Not so fast, Holmes. SYNTHROID works for the *physician*, too. Because its dosage is more precisely controllable, and because response is so smooth and predictable, the *doctor* gets fewer phone calls in the wee hours from agitated patients. Both parties get more sleep!"

"Comforting, my dear doctor, to know that SYNTHROID, the 'single agent,' cleverly does the job of two."

Synthroid® (sodium levothyroxine)

HAND

WHAT TO DO, WHAT NOT TO DO.

Although hand injuries are frequent and result in much disability, most physicians receive comparatively little training in how to handle them. In the initial treatment, acts of omission or commission may mean the difference between recovery and disability, or may affect the degree of either. This article focuses on some of the more common problems encountered, and specifies what should and should not be done during primary treatment.

Fig 1. The functional, or "ready" position from which the hand moves most efficiently.

GERALD S. AHERN, MD

AN INTERN MAY SPEND comparatively little time in observing how to care for injured hands, although in practice he will be expected to handle most of the hand injuries that come under his care. Therefore, he at least should be able to differentiate between simple and serious or potentially serious injuries.

This article reviews some of the more common problems of the injured hand which might be influenced by acts of omission or commission in their management, but complete coverage of the subject is not intended.

Psychological Factors: The semiskilled or skilled technician's future employment may be jeopardized and his standard of living endangered by a diminution of hand strength or finger agility. Soon after a hand injury, the poorly educated or unskilled worker will become aware, if he wasn't before, that strong, agile hands are his primary asset in a competitive labor market. It is important to take steps to combat this source of anxiety, and it takes only a few moments to enlighten the patient as to what he may reasonably expect in line of pain, how much time is likely to be needed for healing or return to work, and a guarded opinion as to any likelihood of permanent impairment. Most patients will adjust to the known factors. It is the unknown or misunderstood element which produces anxiety or apprehension which may, in turn, result in prolonged disability even from minor injuries and prompt the patient to seek the opinions of additional physicians or the nearest lawyer, or both.

Fracture Management: How long should a fractured hand be immobilized? Hand fractures should be immobilized until firm, painless, fibrous union develops, *not* until radiographs show evidence of complete union. This is an exception to the general rule applicable to fractures of other tubular bones of the body. Rigid fixation of hand fractures until bone bridging is visible on roentgenograms will result in much unnecessary stiffness in adjacent joints. The stage of healing is determined by actual gentle

INJURIES

manipulation of the fracture site. The fracture feels stable and the patient denies pain. The inherent "glue" of the healing process has fixed the bone ends and it is time to begin guarded movement. This may be as early as two weeks after stable fractures through the vascular ends of bones, but most shaft fractures will require three to four weeks.

What about position? The preferred position of immobilization is the so-called position of function, because the majority of fractures are most stable in this position and any permanent limitation of motion from this position will cause minimal disability (Fig 1). In modern treatment of hand fractures, there is no place for the tongue blade splint or its partner in infamy, the banjo splint, which immobilize in the unphysiological position of complete extension.

Fractures of the distal phalanx usually are secondary to crushing injury, and often the accent in management is placed on the wrong tissue. The anatomical positioning of the multiple comminuted bone fragments is relatively unimportant compared to the status of the soft tissue. The salvage or replacement of the latter should command the best efforts of the surgeon. The nail bed should be meticulously replaced if possible, and the nail itself should be replaced by suture if necessary to splint and mold the healing soft tissue. Too often, the surgeon "removes the nail and debrides the soft tissues," which is another way of saying that he destroys the best possible local splint and possibly much of the viable nail bed. It is extremely important that any chip fracture in this area be evaluated carefully before it is considered of little consequence. From the dorsum it may represent an avulsion of the insertion of the extensor tendon at the base of the distal phalanx, which will result in the annoying or disabling "baseball" or "mallet" finger. Less common, but potentially more disabling, is the "chip" from the palmar surface which may be the insertion of the long flexor tendon into the

Fig 2. Retracted bony insertion of the long flexor tendon.

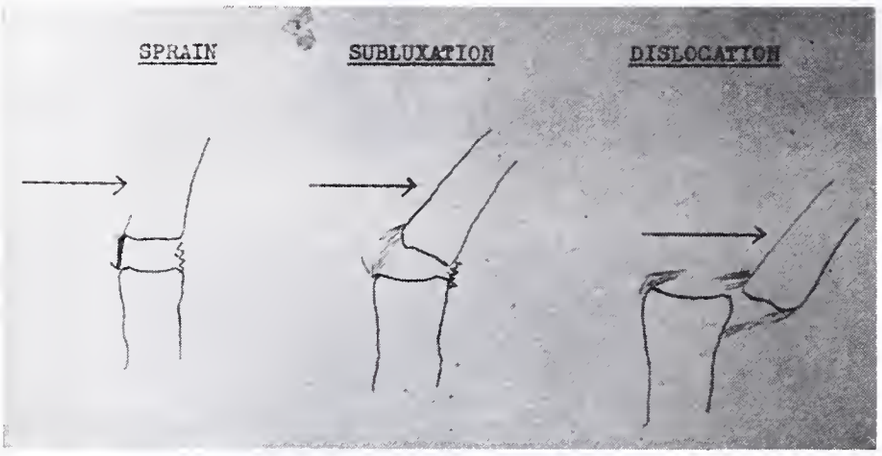


Fig 3. The force of the trauma may only stretch, tear, or completely disrupt the restraining ligaments.

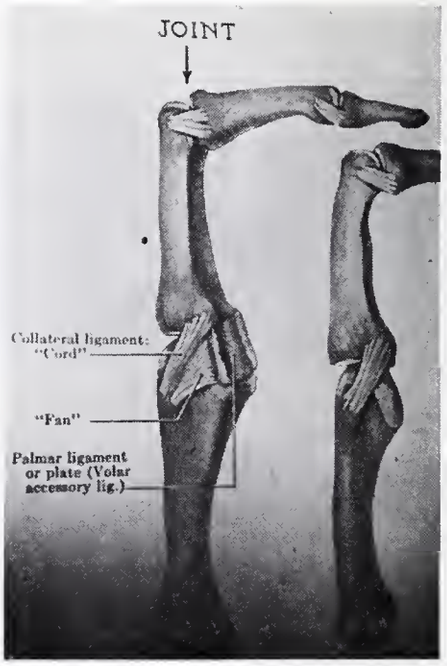


Fig 4. The intimate anatomical relationship between collateral ligaments and volar plate.

flexor side of the base of the distal phalanx (Fig 2). Diagnosis here is confirmed by the patient's inability to flex the distal phalanx. Open fixation of the avulsed long flexor insertion is imperative if active flexion of the distal joint is to be restored.

Difficulties in treatment of fractures of the middle and proximal phalanges arise chiefly from failure to obtain and maintain near anatomical reduction without which the intricate balance between long flexors, extensors, and intrinsic muscles is easily upset. Failure to get a true lateral x-ray film may influence the surgeon to accept inadequate reduction. The more easily obtained oblique view may not reveal the actual degree of angular deformity. Fortunately, in most cases satisfactory results may be achieved by reduction and immobilization on a simple splint in flexion. A small percentage of fractures are unstable enough to demand continuous traction or open fixation. If traction is used, the apparatus must be inspected frequently, as is true when this technique is used for fractures of the long bones. There is one important difference: In the hand, traction is not used to *obtain* reduction, but only to *maintain* it after manipulating the fracture into acceptable position. The apparatus is prone to migrate. Pressure areas develop quickly and, if not recognized, go on to tissue necrosis with the tragedy of exposed tendons and joints.

In metacarpal fractures the chief problem is angulation, which again may be apparent only in the true lateral x-ray view. The oblique view may be misleading. It should be kept in mind that there is a big difference between the *inner* metacarpals (ring and middle) and the *border* metacarpals (index and little). The former are blessed with the built-in stability of intact adjacent struts on both sides, while the latter are not. Hence with the former, reduction and simple splinting will usually suffice. It should be attempted in the border metacarpals also, but instability here may demand open fixation.

Sprains and Dislocations: The physician must differentiate degrees of severity. Was there just a mild stretching of the supporting ligaments, or did the deforming force cause actual tearing or avulsion of one or more ligaments? A severe sprain actually may have been a momentary, self-reducing dislocation (Fig 3). In any case, an x-ray film is mandatory to rule out a fracture or an avulsion of one of the bone insertions of a supporting ligament. Splinting in the functional position is essential for a minimum of ten days in the milder cases and three weeks in the more severe cases to permit sound healing. Unless splinting is used, these unhappy patients will be seen three or more months later with boggy, painful, stiff joints. Then, the physician has little to offer except condolences. If he did not treat the injury initially, he may spend his time trying to allay the patient's irritation and anger toward the physician who did. A recall of our joint anatomy should remind us that with a complete dislocation, severe disruption of the volar plate and one or both collateral ligaments must occur (Fig 4). Even with splint-

Fig 5. Normal relationship of fingers in rest position.

Fig 6. Both flexors are cut in middle and ring fingers; in the index finger, only the short one is cut.

ing in slight flexion for three weeks recovery takes months and, without it, a lifetime.

Open Wounds: The fate of an injured hand is frequently determined by the first physician who treats it. If he concentrates on basic procedures that will promote *primary healing without infection,* he renders a real service and fulfills his *main obligation* to the patient. The "occasional" hand surgeon is rarely justified in attempting prolonged reparative procedures in the presence of open wounds. The experienced surgeon seldom tries, for he knows the tragedy of tipping the odds in favor of infection and is aware of the advantages of secondary repair or reconstruction under more favorable conditions.

Bleeding from hand wounds should be controlled by *compression* and *elevation,* not by blind grasping into a pool of blood with a hemostat. The proximity of vessels and nerves makes it impossible to grasp the one and miss the other under such circumstances.

A good rule to follow is to inspect the wound and assume that everything deep to it is cut. Then proceed, tissue by tissue, to prove they are intact. First, inspect the position of the finger. When the hand is relaxed, palm up, on a hard surface, the index finger should be the least flexed and each succeeding finger should be in an increasingly flexed position, ending with the little finger being the most flexed (Fig 5). A laceration of one or both flexor tendons in a finger alters this relationship of adjacent fingers (Fig 6). If there is any doubt, the other hand is usually available for comparison. When a finger is held in an abnormal position after trauma, it has either a fracture, dislocation, or cut tendon. Sensory loss and motor weakness are tested in the conventional manner. Probing around the unsterile wound should be avoided; it is not necessary if the tissue-by-tissue evaluation is carried out as described. After completing wound care, the surgeon should call into service his three main postoperative aids: *compression, splinting,* and *elevation.* If these three are ignored, the finest wound handling technique may be wasted. Bleeding and edema of the injured tissues are the wound's greatest enemies. An individually tailored plaster of paris splint adds only a few moments to the operating room time and is much more comfortable than the usual commercial splint.

Conclusion: Statistics show that hand injuries consistently rank at the top in frequency of occurrence and as a cause of permanent disability. The patient feels the direct social and economic impact of these injuries; society as a whole feels their cumulative effects. The final outcome, in terms of permanent disability, often is influenced by the initial—perhaps emergency—treatment. For that reason, all physicians need a good working knowledge of the more frequent problems in hand injuries, and of the techniques which should and should not be used. Also, they should be able to recognize more serious or potentially serious injuries and seek consultation when necessary.

Dr. Ahern, 2433 Morgan, Corpus Christi, Tex 78405.

CINE-RADIOGRAPHY IN A COMMUNITY HOSPITAL

CINERADIOGRAPHY, or more precisely, cinefluorography, is becoming an accepted diagnostic tool of almost routine nature. This technique was first developed in the early 1950s and was made feasible by the image intensifier tube. The use of cine has followed the path of other new and useful medical modalities. After 10 to 15 years of use in research and medical centers, its reliability, availability, and cost are now such that this sophisticated equipment is being found in small hospitals, clinics, and even in private offices.[1]

Our experience with cine was gained with the equipment at Harris Hospital in Fort Worth. This is a 550-bed general hospital in a community of 350,000. The hospital is not directly connected with a teaching institution, and it no longer has a significant intern or residency teaching program. The medical staff has a large percentage of specialists; otherwise it is similar to that found in other comparable urban hospitals.

The present radiology department was constructed in 1962 and has been occupied and in use since mid-1963. The department has eight diagnostic rooms, four of which are equipped with nine-inch image intensifier fluoroscopic devices. Two of these have attached cine cameras. One is a 35 mm, located in a special cardiac catheterization room, and one is a 16 mm in an additional special procedure room. The latter is also used for routine fluoroscopic examinations. We do not have video tape recording apparatus. Although the cine equipment has been available for almost five years, it was never fully utilized until an automatic film processor was purchased. Before this, film processing was done either through standard-speed X-omats, or else sent out to a commercial laboratory. When using the X-omats the film was processed in the evening and reviewed the following day. After rapid process conversions to the X-omats, all of the film was sent to a commercial laboratory and this meant a delay of 36 to 48 hours. The disposition of the case usually had been made before the film was ever available for viewing, and frequently the referring physician had lost all interest. Using such sophisticated equipment, there is a rather high degree of failure, and it was discouraging to repeat an examination a day or two later and then wait another two days to review the second study. Once this happened to a referring doctor, he usually was reluctant to request an additional cine study. Following the purchase of an Eastman-Kodak Prostar processor, processing delays have been eliminated almost entirely, and cine studies can be reviewed within 15 minutes of the examination. This processor is relatively inexpensive, compact, simple to operate and maintain, and does not require a dark room. Many thousands are in use in banks and other businesses where they are used for microfilming documents. Automatic processing of cine film has been discouraged by many authors because of a loss of detail inherent in the high temperature developing which is necessary for rapid processing.[2] In our experience, this has not been a valid objection in the great majority of the examinations. As in all other radiographic techniques there is a compromise between speed and detail.

There is no question that cine studies are extremely useful and even mandatory with examinations such as angiocardiography and coronary arteriography. However, in a community hospital, of what further use are cine studies? These studies frequently can be useful wherever

JAMES W. BUICE, MD

Once available only in large medical centers, cinefluorography now can be used by physicians in small hospitals and clinics. It is useful in consultations, conferences, and teaching; it provides a permanent record of fluoroscopic examination. An automatic processor enables physicians to review the study within 15 minutes, and this has greatly increased the usefulness of the equipment.

fluoroscopy is utilized and it is desirable to have a cine camera available for filming during fluoroscopic examinations. We have found that recording complex examinations is of definite value when the study can be reexamined later at leisure. A review of the cine examination with the referring physician is by far the most satisfactory way of describing and actually demonstrating the fluoroscopic findings and the reasons for one's impression. We have noticed that many of the younger physicians, who have used cine during their residencies, are sometimes reluctant to accept the radiologist's impression without first reviewing the cine with him. The cine provides a permanent record which can be mailed easily to other medical centers for consultation. It provides a ready comparison with previous fluoroscopic examinations. This is particularly important if different observers have done the examinations. Our hospital is covered by a large group of radiologists and there is a frequent rotation of personnel. This sometimes makes the cine studies of even routine fluoroscopic examinations of inestimable value when a previous examination is readily available for comparison.

The cine studies are used for producing teaching films for our paramedical personnel. One movie shows examples of practically all routine fluoroscopic examinations. This is shown to our first-year technician students after they have completed two or three months' training. Only one of our rooms is equipped with closed-circuit television, and many of the students do not rotate through this room during their first year. After a month or so, they are extremely curious as to what the radiologist is seeing at fluoroscopy, and this movie has stimulated a great deal of interest on their part, and is useful in helping them to appreciate the fluoroscopic techniques and procedures. One of our radiologists made an additional movie utilizing a cine of a barium enema for showing to the hospital aides and nurses. Having been an aide himself during medical school, he realized that many of the people who prepare the colon for barium enemas have little or no knowledge of what they are doing or of the importance of the cleansing preparations. He produced a short movie showing filling of the colon with barium, the positions the patient is placed in, and the importance of having a clean colon for a good examination. This movie has been shown to the ward personnel at our hospital as well as other hospitals, and it has been received with much enthusiasm and appreciation. In return we have been rewarded with much better patient preparation.

Constantly available cine is extremely useful in recording those "once-in-a-lifetime" fluoroscopic observations such as intracardiac foreign body, intravasations of contrast media, intermittent intussusceptions and volvuli.

Cine has been extremely helpful in cardiac fluoroscopy, particularly in cases of pericardial and intracardiac calcifications.

Probably one-half or more of our cine studies concern the esophagus. These studies are useful not so much in making a diagnosis as in recording the alteration in physiology associated with the anatomical defect.[3] With the exception of the esophagus, the gastrointestinal tract is rarely examined with cine. I think this is because we have so few cases of small-bowel lesions and a relatively low incidence of suspected lesions of the head of the pancreas.[4] The recording of altered physiology following surgical procedures upon the bowel is the most

frequently requested. Moreover, it is the most useful examination for evaluating functional disturbances such as the "dumping" syndrome. We have found the cine studies to be quite helpful in delineating the course of fistulous tracts where there was small-bowel communication. These sometimes are extremely difficult to evaluate at fluoroscopy or on subsequent radiographs due to the overlapping of the fistulous tracts and the multiple loops of bowel. If one can inject the fistulas during the cine filming, the study can be reviewed later in slow motion and the exact communications and course of the sinus tract is much better appreciated.

At the request of many urologists, cines of the urinary system and examinations such as cystourethrograms were made. After an initial period of enthusiasm we decided that these gave little additional information, and were not worth the increase in patient exposure. Consequently, within the past year or so, use of the cine technique for voiding cystourethrograms has become rare. Routine overhead films or minimal fluoroscopy with spot films have taken its place.

Our orthopedic surgeons frequently refer patients for a lateral cine of the cervical spine showing flexion and extension. This examination has useful medicolegal aspects and is sometimes helpful in evaluation of preoperative and postoperative cervical fusions.

Following the work of Gyepes and Abrams, we have tried using the cine technique with peripheral arteriography. However, our experience shows that even a 10- to 15-minute delay in reviewing the film is too long while arterial catheterization is being performed. Video tape recording and its instantaneous review is necessary for utilizing this modality for peripheral arteriography.[5]

Summary: Cineradiography, although it remains relatively expensive, is now a practical and highly desirable method of radiographic examination. Cine studies should no longer be reserved for "special procedures" but should be constantly available whenever fluoroscopy is indicated. After almost five years of use, we have found the utilization of cinefluorography to be greatly increased with an automatic processor which allows viewing of the study within 15 minutes. We have found cinefluorography to be most useful with consultations, conferences, and teaching. The cine has provided us with a permanent record of our fluoroscopic examination. This, in turn, has not only enhanced the diagnosis, but has allowed us to compare the examination with previous studies which may have been done by different radiologists. It has allowed us to send the examination film to different cities and medical centers where the patient may have moved or gone for further workup or therapy. Last, but not least, the constant availability of the cine has allowed us to record those "once-in-a-lifetime" fluoroscopic observations.

REFERENCES

1. Ramsey GHS, Watson JS Jr, Tristan T, et al: Cinefluorography. Springfield, Ill, Charles C Thomas, 1960.

2. Barrett GC: Cinefluorography of the urinary tract: methods and clinical applications. Radiol Clin N Amer 3:163-169, 1965.

3. Stilson WL: Cinefluorography in the study of esophagus and gastric introit. Amer Surg 31:669-678, 1965.

4. Adler DC, Meyers HL: Cineradiographic examination of the upper gastrointestinal tract in obstructive jaundice. JAMA 199:709-713, 1967.

5. Gyepes MT, Abrams HL: Peripheral cine arteriography. Radiology 88:736-739, 1967.

Dr. Buice, 1217 West Cannon St, Fort Worth, Tex 76104.

Campbell's Soups... wide variety...for limited appetites

Many people lose interest in food as they grow older. Some of them are fussy eaters—with only a few favorite foods. Others become indifferent to foods—because planning and preparing meals becomes a chore. Here Campbell's Soups can help —for these four very good reasons:

Appeal With a variety of tastes, textures, aromas, and colors, Campbell's Soups can add interest and appetite appeal. And they're easy to eat—ingredients are tender, bite-size. Even patients on special diets will find soups they can enjoy among the more than 50 different varieties available.

Nourishment Campbell's Soups contain selected meats and sea foods, best garden vegetables—carefully processed to help retain their natural flavors and nutritive values.

Convenience Within 4 minutes a bowl of delicious soup is heated and ready to eat.

Economy Campbell's Soups are inexpensive—an important consideration to those whose budgets are limited.

Recommend Campbell's Soups . . . and, of course, enjoy them yourself. Remember, *there's a soup for almost every patient and diet . . . and for every meal.*

This is the "answering service" your patient takes home with her.

included in her Compackage™ sample of

Helpful booklet saves unnecessary phone calls—Reminds her of your directions concerning her oral contraceptive schedule . . . contains supportive instructions for "Sunday starting" . . . explains in simple language many aspects of "the pill."

Packaging helps her stay on schedule—The Ovulen Compack®, with each tablet designated by day and week of cycle, shows at a glance the last day on which a tablet was taken.

Each white Ovulen tablet contains 1 mg. ethynodiol diacetate and 0.1 mg. mestranol.
Each pink tablet is a placebo, containing no active ingredients.

Ovulen®-21
Ovulen®-28
"the convenient one"

NOTE: For the budget-minded woman specify Triopak™, a three-month supply (1 Compack and 2 Refills).

Actions—Ovulen acts to prevent ovulation by inhibiting the output of gonadotropins from the pituitary gland. Ovulen depresses the output of both the follicle-stimulating hormone (FSH) and the luteinizing hormone (LH).

Special note: Oral contraceptives have been marketed in the United States since 1960. Reported pregnancy rates vary from product to product. The effectiveness of the sequential products appears to be somewhat lower than that of the combination products. Both types provide almost completely effective contraception.

An increased risk of thromboembolic disease associated with the use of hormonal contraceptives has now been shown in studies conducted in both Great Britain and the United States. Other risks, such as those of elevated blood pressure, liver disease and reduced tolerance to carbohydrates, have not been quantitated with precision.

Long-term administration of both natural and synthetic estrogens in subprimate animal species in multiples of the human dose increases the frequency of some animal carcinomas. These data cannot be transposed directly to man. The possible carcinogenicity due to the estrogens can be neither affirmed nor refuted at this time. Close clinical surveillance of all women taking oral contraceptives must be continued.

Indication—Ovulen is indicated for oral contraception.

Contraindications—Patients with thrombophlebitis, thromboembolic disorders, cerebral apoplexy or a past history of these conditions, markedly impaired liver function, known or suspected carcinoma of the breast, known or suspected estrogen-dependent neoplasia and undiagnosed abnormal genital bleeding.

Warnings—The physician should be alert to the earliest manifestations of thrombotic disorders (thrombophlebitis, cerebrovascular disorders, pulmonary embolism and retinal thrombosis). Should any of these occur or be suspected the drug should be discontinued immediately.

Retrospective studies of morbidity and mortality in Great Britain and studies of morbidity in the United States have shown a statistically significant association between thrombophlebitis and pulmonary embolism and the use of oral contraceptives. There have been three principal studies in Britain[1-3] leading to this conclusion, and one[4] in this country. The estimate of the relative risk of thromboembolism in the study by Vessey and Doll[3] was about sevenfold, while Sartwell and associates[4] in the United States found a relative risk of 4.4, meaning that the users are several times as likely to undergo thromboembolic disease without evident cause as nonusers. The American study also indicated that the risk did not persist after discontinuation of administration, and that it was not enhanced by long-continued administration. The American study was not designed to evaluate a difference between products. However, the study suggested that there might be an increased risk of thromboembolic disease in users of sequential products. This risk cannot be quantitated, and further studies to confirm this finding are desirable. Retrospective studies in Great Britain and the United States have shown a statistically significant association between cerebral thrombosis and embolism and the use of oral contraceptives.

Discontinue medication pending examination if there is sudden partial or complete loss of vision, or if there is a sudden onset of proptosis, diplopia or migraine. If examination reveals papilledema or retinal vascular lesions medication should be withdrawn.

Since the safety of Ovulen in pregnancy has not been demonstrated, it is recommended that for any patient who has missed two consecutive periods pregnancy should be ruled out before continuing the contraceptive regimen. If the patient has not adhered to the prescribed schedule the possibility of pregnancy should be considered at the time of the first missed period.

A small fraction of the hormonal agents in oral contraceptives has been identified in the milk of mothers receiving these drugs. The long-range effect to the nursing infant cannot be determined at this time.

Precautions—The pretreatment and periodic physical examinations should include special reference to the breasts and pelvic organs, including a Papanicolaou smear since estrogens have been known to produce tumors, some of them malignant, in five species of subprimate animals. Endocrine and possibly liver function tests may be affected by treatment with Ovulen. Therefore, if such tests are abnormal in a patient taking Ovulen, it is recommended that they be repeated after the drug has been withdrawn for two months. Under the influence of progestogen-estrogen preparations preexisting uterine fibromyomas may increase in size. Because these agents may cause some degree of fluid retention, conditions which might be influenced by this factor, such as epilepsy, migraine, asthma, cardiac or renal dysfunction, require careful observation. In breakthrough bleeding, and in all cases of irregular bleeding per vaginam, nonfunctional causes should be borne in mind. In undiagnosed bleeding per vaginam adequate diagnostic measures are indicated. Patients with a history of psychic depression should be carefully observed and the drug discontinued if the depression recurs to a serious degree. Any possible influence of prolonged Ovulen therapy on pituitary, ovarian, adrenal, hepatic or uterine function awaits further study. A decrease in glucose tolerance has been observed in a significant percentage of patients on oral contraceptives.

The mechanism of this decrease is obscure. For this reason, diabetic patients should be carefully observed while receiving Ovulen therapy. The age of the patient constitutes no absolute limiting factor, although treatment with Ovulen may mask the onset of the climacteric. The pathologist should be advised of Ovulen therapy when relevant specimens are submitted. Susceptible women may experience an increase in blood pressure following administration of contraceptive steroids.

Adverse reactions observed in patients receiving oral contraceptives—A statistically significant association has been demonstrated between use of oral contraceptives and the following serious adverse reactions: thrombophlebitis, pulmonary embolism and cerebral thrombosis.

Although available evidence is suggestive of an association, such a relationship has been neither confirmed nor refuted for the following serious adverse reactions: neuro-ocular lesions, e.g., retinal thrombosis and optic neuritis.

The following adverse reactions are known to occur in patients receiving oral contraceptives: nausea, vomiting, gastrointestinal symptoms (such as abdominal cramps and bloating), breakthrough bleeding, spotting, change in menstrual flow, amenorrhea during and after treatment, edema, chloasma or melasma, breast changes (tenderness, enlargement and secretion), change in weight (increase or decrease), changes in cervical erosion and cervical secretions, suppression of lactation when given immediately post partum, cholestatic jaundice, migraine, rash (allergic), rise in blood pressure in susceptible individuals and mental depression.

Although the following adverse reactions have been reported in users of oral contraceptives, an association has been neither confirmed nor refuted: anovulation post treatment, premenstrual-like syndrome, changes in libido, changes in appetite, cystitis-like syndrome, headache, nervousness, dizziness, fatigue, backache, hirsutism, loss of scalp hair, erythema multiforme, erythema nodosum, hemorrhagic eruption and itching.

The following laboratory results may be altered by the use of oral contraceptives: hepatic function: increased sulfobromophthalein retention and other tests; coagulation tests: increase in prothrombin, Factors VII, VIII, IX and X; thyroid function: increase in PBI and butanol extractable protein bound iodine, and decrease in T^3 uptake values; metyrapone test and pregnanediol determination.

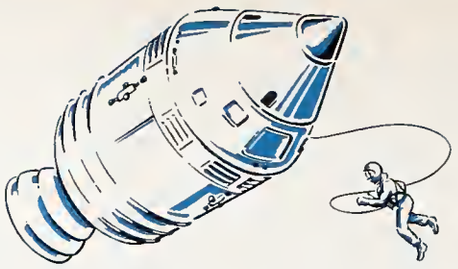
References: 1. Royal College of General Practitioners: Oral Contraception and Thrombo-Embolic Disease, J. Coll. Gen. Pract. *13*:267-279 (May) 1967. **2.** Inman, W. H. W., and Vessey, M. P.: Investigation of Deaths from Pulmonary, Coronary, and Cerebral Thrombosis and Embolism in Women of Child-Bearing Age, Brit. Med. J. *2*:193-199 (April 27) 1968. **3.** Vessey, M. P., and Doll, R.: Investigation of Relation Between Use of Oral Contraceptives and Thromboembolic Disease. A Further Report, Brit. Med. J. *2*:651:657 (June 14) 1969. **4.** Sartwell, P. E.; Masi, A. T.; Arthes, F. G.; Greene, G. R., and Smith, H. E.: Thromboembolism and Oral Contraceptives: An Epidemiologic Case-Control Study, Amer. J. Epidem. *90*:365-380 (Nov.) 1969.

SEARLE

Where "The Pill" Began

976

G. D. Searle & Co., P. O. Box 5110, Chicago, Illinois 60680



Man in space, now fait accompli, re-emphasizes the importance of Uro-Phosphate therapy. Research into the effect of space travel on the astronaut reveals that weightlessness causes loss of bone calcium. As the bones are required to bear less and less of the weight of the body they lose calcium, increasing the calcium content of the urine. When physical activity is reduced, the acidity of the urine should be adjusted to keep increased calcium in solution . . . . a prophylaxis to prevent kidney or bladder calculi.

Uro-Phosphate®

NOW A SUGAR-COATED TABLET

Each tablet contains: METHENAMINE, 300 mg.; SODIUM ACID PHOSPHATE, 500 mg.

Uro-Phosphate gives comfort and protection when inactivity causes discomfort in the urinary function. It keeps calcium in solution, preventing calculi; it maintains clear, acid, sterile urine; it encourages complete voiding and lessens frequency when residual urine is present.

Uro-Phosphate contains sodium acid phosphate, a natural urinary acidifier. This component is fortified with methenamine which is inert until it reaches the acid urinary bladder. In this environment it releases a mild antiseptic keeping the urine sterile.

Uro-Phosphate is safe for continuous use. There are no contra-indications other than acidosis. It can be given in sufficient amount to keep the urine clear, acid and sterile. A heavy sugar coating protects its potency.

Dosage:

For protection of the inactive patient 1 or 2 tablets every 4 to 6 hours is usually sufficient to keep the urine clear, acid and sterile.

2 tablets on retiring will keep residual urine acid and sterile, contributing to comfort and rest.

A clinical supply will be sent to physicians and hospitals on request.

WILLIAM P. POYTHRESS & COMPANY, INC., RICHMOND, VIRGINIA 23217

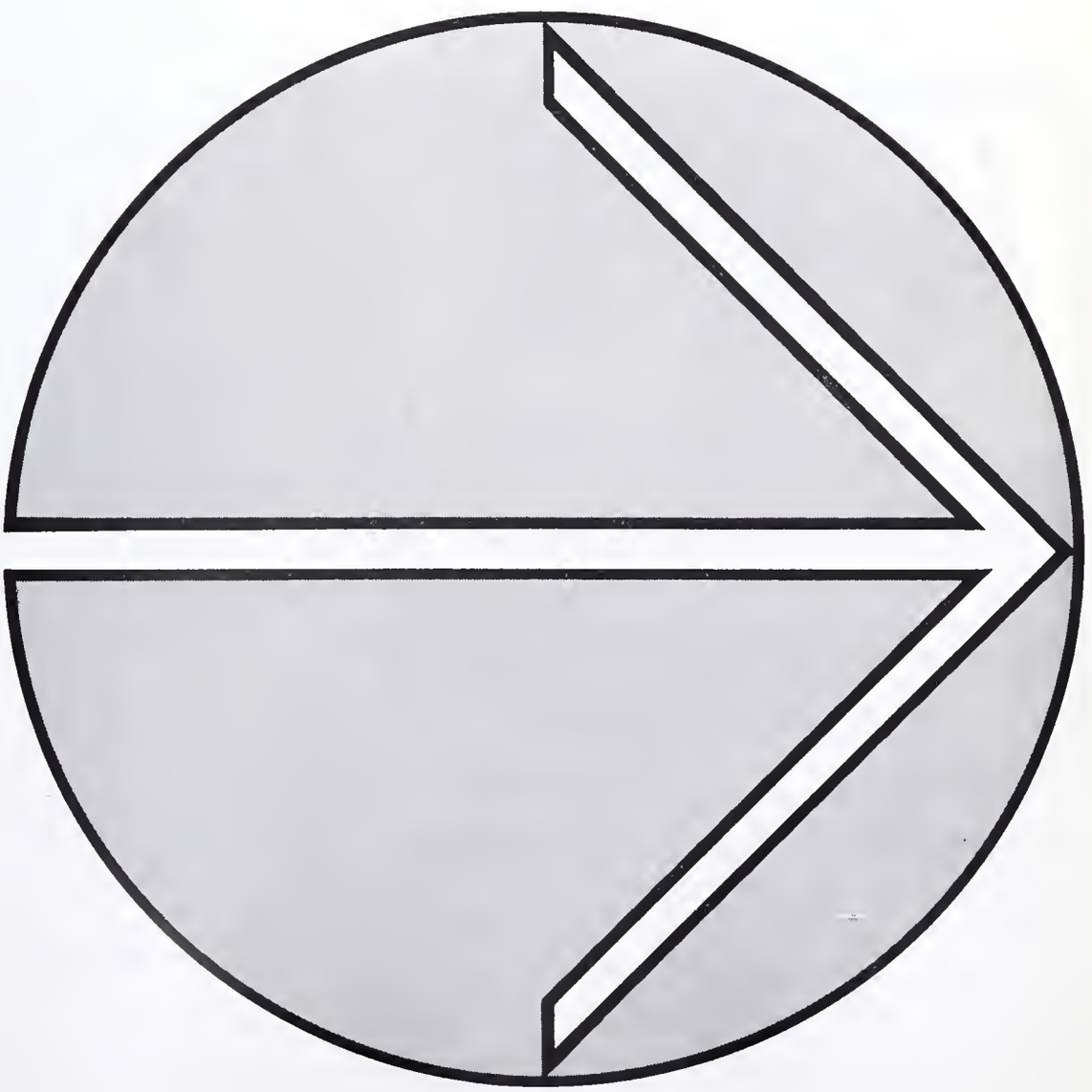
Manufacturers of Ethical Pharmaceuticals

A LOOK AT TEXAS MEDICINE TODAY

ONE OF A SERIES

Coming Meetings Section

Get away to a meeting or a continuing education course—almost any week there's a good one that will lift your morale and refresh your scientific knowledge. WHO CAN TELL YOU ABOUT ALL THESE MEETINGS? TEXAS MEDICINE can. The monthly journal of the Texas Medical Association regularly lists highlights of more than 100 Texas and national meetings. It is, in fact, the only major source of medical meeting information in the state. Meetings and postgraduate courses get a prominent up-front position in the journal. Whether you need the stimulation of your specialist colleagues or the liberalization of a cross-section of experts in other fields, you can locate the type of meeting to suit your purpose. You can count on us for the information each month, and if you know about a Texas medical meeting which we're not listing, write us today. We don't want to leave you out. Whatever you do, read our comprehensive meetings section and then get away to a meeting. The refreshment will be all yours.



Ef-
fic-
iency

Dicarbosil®

ANTACID

Your ulcer patients and others will confirm it. Specify DICARBOSIL 144's—144 tablets in 12 rolls.

ARCH LABORATORIES
319 South Fourth Street, St. Louis, Missouri 63102

T. ROWE PRICE GROWTH STOCK FUND, INC.

Est. 1950

A NO-LOAD FUND

Investing in stocks carefully selected for long term growth possibilities

Individuals & institutions are invited to request free prospectus

NO SALES CHARGE

T. Rowe Price Growth Stock Fund, Inc.
One Charles Center, Dept. F-1
Baltimore, Md. 21201 Phone (301) 539-1992

Name _____

Address _____

_____ Zip _____

Brief Summary of Prescribing Information— 9-9/22/69. For complete information consult Official Package Circular.

Indications: Essential hypertension. Use cautiously in patients with renal insufficiency, particularly if they are digitalized.

Contraindications: Anuria, oliguria, active peptic ulceration, ulcerative colitis, severe depression or hypersensitivity to its components contraindicates the use of Salutensin.

Warnings: Small-bowel lesions (obstruction, hemorrhage, perforation and death) have occurred during therapy with enteric-coated formulations containing potassium, with or without thiazides. Such potassium formulations should be used with Salutensin only when indicated and should be discontinued immediately if abdominal pain, distension, nausea, vomiting or gastrointestinal bleeding occurs. Use cautiously, and only when deemed essential, in fertile, pregnant or lactating patients. *Use in Pregnancy:* Thiazides cross the placenta and can cause fetal or neonatal hyperbilirubinemia, thrombocytopenia, altered carbohydrate metabolism and possibly electrolyte disturbances. Fatal reactions may occur with reserpine during electroshock therapy; discontinue Salutensin 2 weeks before such therapy. Increased respiratory secretions, nasal congestion, cyanosis and anorexia may occur in infants born to reserpine-treated mothers.

Precautions: Azotemia, hypochloremia, hyponatremia, hypochloremic alkalosis and hypokaliemia (especially with hepatic cirrhosis and corticosteroid therapy) may occur, particularly with pre-existing vomiting and diarrhea. Potassium loss or protoveratrine A may cause digitalis intoxication. *Potassium loss responds to potassium-rich foods, potassium chloride or, if necessary, discontinuation of therapy. Stop therapy if protoveratrine A induces digitalis intoxication.* Serum ammonia elevation may precipitate coma in precomatose hepatic cirrhotics. Discontinue therapy 2 weeks before surgery or if myocardial irritability, progressive azotemia or severe depression occur. Exercise caution in patients with chronic uremia, angina pectoris, coronary thrombosis or extensive cerebral vascular disease *or bronchial asthma* and in those with a history of peptic ulceration or bronchial asthma; in post-sympathectomy patients; in patients on quinidine; and in patients with gallstones, in whom biliary colic may occur. Patients who have diabetes mellitus or who are suspected of being prediabetic should be kept under close observation if treated with this agent.

Adverse Reactions: Hydroflumethiazide: Skin rashes (including exfoliative dermatitis), skin photosensitivity, urticaria, necrotizing angiitis, xanthopsia, granulocytopenia, aplastic anemia, orthostatic hypotension (potentiated with alcohol, barbiturates or narcotics), allergic glomerulonephritis, acute pancreatitis, liver involvement (intrahepatic cholestatic jaundice), purpura plus or minus thrombocytopenia, hyperuricemia, hyperglycemia, glycosuria, malaise, weakness, dizziness, fatigue, paresthesias, muscle cramps, skin rash, epigastric distress, vomiting, diarrhea and constipation. *Reserpine:* Depression, peptic ulceration, diarrhea, Parkinsonism, nasal stuffiness, dryness of the mouth, weight gain, impotence or decreased libido, conjunctival injection, dull sensorium, deafness, glaucoma, uveitis, optic atrophy, and, with overdosage, agitation, insomnia and nightmares. *Protoveratrine A:* Nausea, vomiting, cardiac arrhythmia, prostration, blurring vision, mental confusion, excessive hypotension and bradycardia. (Treat bradycardia with atropine and hypotension with vasopressors.)

Usual Dose: 1 tablet b.i.d.

Supplied: Bottles of 60, 600, and 1000 scored 50 mg. tablets.

Salutensin®

hydroflumethiazide, 50 mg./reserpine, 0.125 mg. protoveratrine A, 0.2 mg.

BRISTOL LABORATORIES
Division of Bristol-Myers Company
Syracuse, New York 13201

The antihypertensive therapy that is easy to live with.*

When successive blood pressure readings confirm essential hypertension, consider Salutensin for:

Easy-to-live-with control. Gradual reduction of blood pressure leading to decisive, comfortable control is the common clinical response.

*Salutensin is usually well-tolerated (however, serious side effects can occur; see adjacent column for brief summary of prescribing information).

Easy-to-live with dosage. Two tablets a day usually achieves control. One to two tablets a day often maintains control without need for additional antihypertensive agents.

Easy-to-live with cost of therapy. The one to two tablets a day maintenance dose makes Salutensin economical to stay with. Important, because long-term control calls for long-term therapy.

Salutensin®

hydroflumethiazide, 50 mg./reserpine, 0.125 mg. protoveratrine A, 0.2 mg.

THE HIGHEST OF STANDARDS

FRANCIS HOSPITELS INCORPORATED

FRANCIS CONVALESCENT CENTERS
DIVISION OF FRANCIS HOSPITELS, INC.

FRANCIS HOSPITELS, INC., 7129 Highway 290 East, Austin, 512 454-2725

FRANCIS HOSPITELS—WACO: Francis Hospitel, 2501 Maple Avenue, Ph. 752-0311 **FRANCIS CONVALESCENT CENTERS**—AUSTIN: Retirement Inc., 6909 Burnet Road, Ph. 452-5719; FORT WORTH: Francis Convalescent Center, 1000 6th Avenue, Ph. 335-1903; CORPUS CHRISTI: Francis Convalescent Center, 3050 Sunnybrook, Ph. 853-9981; LONGVIEW: Highland Pines, 1100 N. 4th Street, Ph. 753-7661; SAN ANTONIO: San Pedro Manor, 616 West Russell, Ph. 732-5181 **FRANCIS MANAGEMENT**—PORT ARTHUR: The Golden Triangle Convalescent Center, 3900 Highway 365, Ph. 727-1651.

Clinicopathologic Conference

Ellwood Jones, MD; Thomas Curry, III, MD;
C. Gunnar Blomquist, MD; Stuart D. Tauber, MD;
Floyd Rector, Jr, MD; Lawrence S. Cohen, MD;
Bruce D. Fallis, MD; Edwin H. Eigenbrodt, MD, Guest Editor

This 45-year-old Negro man entered the hospital because of hip, pleuritic, and abdominal pain. At the time of admission, his serum calcium level was remarkably elevated.

CASE PRESENTATION: *Dr. Jones:* This 45-year-old Negro man was admitted to Parkland Memorial Hospital with the chief complaint of chest pain. He had been in excellent health until four months prior to admission when an intermittent sharp, severe pain, which became worse with motion, developed in his right hip. He also began having pain in both sides of the lower chest, and this was intensified by deep breathing or coughing. Both pains progressed, and three weeks before admission he was unable to walk. For one week prior to admission he had continuous pleuritic chest pain. During his illness, he had been treated by a local physician with shots for arthritis. There was no preceding history of arthritis. He had a 20-30 lb weight loss, but had a good appetite. His cough was productive of sputum occasionally tinged with blood, and he noted an occasional blood-streaked stool. At the time of admission he had been constipated for one week. He denied chills, fever, and night sweats. He had smoked one pack of cigarettes per day for 25 years. Polyuria and polydipsia had been present for about one month.

His one previous hospital admission had been ten years ago for electrical burns. At that time, a roentgenogram of his chest showed calcified granulomatous changes and moderate emphysema.

On admission his blood pressure was 100/70 mm Hg; pulse rate 100/min; respiratory rate 16/min; and temperature 98.2 F. He appeared to be chronically ill, wasted, and in moderately severe pain. He had ptosis on the left side and questionable anisocoria, the right pupil being the larger. There were bilateral hard, fixed, nontender cervical and supraclavicular nodes, more prominent on the left. Chest auscultation and percussion revealed scattered wheezing and rhonchi with no consolidation or friction rubs detected. The patient had generalized tenderness over the left and right lower chest walls. There was no cardiomegaly, heart murmur, friction rub, or gallop rhythm. Abdominal tenderness was especially prominent in the left upper quadrant, and bowel sounds were diminished. He had minimal clubbing of the digits and muscle wasting. A guaiac test for occult blood was positive (2+), and mild prostatic hypertrophy was noted.

The day following admission, laboratory studies revealed a calcium value of 19.4 mg/100 ml,* which was confirmed, and a regimen of saline infusion, diuretics, and hydrocortisone (intravenously) was started. The patient also received isoniazid and pyridoxine. His initial alkaline phosphatase value was elevated. During the second hospital day he was started on a modified Albright diet, prednisolone 100 mg

*There is a variation between this value and that shown in Table 1. These calcium determinations were done in two laboratories, and different techniques were utilized.

every day by mouth, and sodium phosphate 25 cc every six hours. A supraclavicular node biopsy was reported to contain cheesy material, and ethambutol and streptomycin were added in spite of negative results of skin tests and acid-fast bacilli smears of the node and sputum. On the third day the patient was started on tetracycline for nonspecific purulent sputum and rhonchi which were heard in his chest. Four days after admission, pulmonary edema developed. Diuretics were increased, and slow digitalization was started with good results. Hypokalemia was noted, and was treated with potassium chloride, 160 mEq/day, parenterally, for the duration of hospitalization. During the fifth day, the lymph node biopsy specimen was reported to be epidermoid carcinoma. Diuretics, sodium phosphate, and prednisolone were continued. The patient also had hypokalemic alkalosis. He was azotemic and had a progressively rising creatinine value in face of 2-5 liter/day urinary output. His condition progressively deteriorated, and he died during the evening of the tenth hospital day.

Radiological Findings: *Dr. Curry:* The patient had a normal liver scan on the fifth hospital day. A film of the abdomen, made in connection with the liver scan, did not show abnormality. A view of the right hip was not very good technically, but there was no evidence of fracture or tumor.

A chest film made on the fourth hospital day showed a normal cardiac silhouette. There was linear streaking extending into the posterior segment of the right upper lobe, which was evident on both the anterior-posterior and lateral views. This type of stranding may be seen with pulmonary tuberculosis; however, it is also seen with lymphatic dissemination of tumor along perivascular and peribronchial lymphatics. Less likely causes would include lymphoma and sarcoidosis.[1] A hilar mass was not identified. In a patient with hypercalcemia, an elevated alkaline phosphatase level, and a normal liver scan, one must look carefully for bone lesions. Faintly seen was evidence of a soft-tissue mass adjacent to the lateral aspect of the right eighth and ninth ribs. There was slight irregularity of the medial margin of the right eighth or ninth rib, where the two ribs overlap. This was an extrapleural or pleural mass, raising the possibilities of myeloma or metastatic tumor. The patient had a high blood urea nitrogen level and no proteinuria, which speaks against myeloma. Therefore, this probably represented metastatic tumor to the rib with a small extrapleural mass or a metastasis directly to pleura with secondary rib involvement. The visualized bones showed no evidence of hyperparathyroidism.

In summary, the patient had a normal liver scan, and a chest film which showed linear streaking in the posterior segment of the right upper lobe consistent with tuberculosis or lymphangial spread of tumor. There was evidence of an extrapleural mass related to the right eighth and ninth ribs.

Electrocardiographic Findings: *Dr. Blomquist:* The patient's electrocardiogram (ECG) during his first admission ten years ago showed an unusually vertical frontal plane axis for his age, but was within normal limits.

The initial ECG during his present admission showed sinus tachycardia with a rate of 100 beats/min, a borderline right axis deviation, and deep S waves in leads $V_{5\text{-}6}$ compatible with some degree of right ventricular hypertrophy. The most striking finding was a short Q-T interval, 0.28 second, strongly suggesting hypercalcemia. Junctional ST depressions and generally low T amplitudes—nonspecific changes—were noted also.

An ECG five days later showed the same changes, as well as an after-potential and prominent U waves consistent with a combination of hypercalcemia and hypokalemia.

His final ECG retained the ST-T wave changes of hypercalcemia and hypokalemia. More prominent ST depressions and negative T-wave amplitudes in vertical leads, suggestive of ischemia, were also present.

Clinical Discussion: *Dr. Tauber:* The prominent features in this case include a rather sudden illness characterized by a right hip pain, pleuritic chest pain, and a productive cough, developing on the long background of cigarette smoking and prominent weight loss in a young man. In addition, polyuria and polydipsia developed during the past month; on physical examination, hard, fixed cervical nodes, clubbing of his digits, and signs of muscle wasting as well as tissue wasting were seen. Ptosis of the left upper lid and miosis of that pupil were noted.

The major laboratory findings showed a profound hypercalcemia, hypokalemic alkalosis, evidence of increasing renal insufficiency, and an elevated alkaline phosphatase value on the first measurement. All these features in this

case lead directly to the impression of malignancy associated with hypercalcemia; this, in fact, is borne out by the biopsy of the lymph node.

The remaining diagnostic question is, what is the etiology of the hypercalcemia? The patient could have a malignancy in the presence of a functioning parathyroid adenoma. A malignancy might exist in association with bony metastases, or there could be a malignancy without bony metastases but associated with profound hypercalcemia. This latter configuration has been referred to by the eponym Plimpton-Gellhorn syndrome[2] or its longer title.

The most common signs and symptoms associated with hypercalcemia are gastrointestinal. Generally, nausea, vomiting, anorexia, and constipation occur in at least 75% of patients with malignancy and hypercalcemia. This patient had none of these symptoms, except possibly constipation. The central nervous system signs are the second most common group; generally they include lethargy and drowsiness, stupor, and, finally, disorientation. When he was seen on the ward, this patient was certainly drowsy and lethargic, although he was oriented as to time, place, and person. Muscle weakness and dysphagia with absent reflexes and positive Babinski signs also are well-known features of severe hypercalcemia, and they were present to a lesser degree in this patient. Finally, in about 15% of patients, dehydration, polydipsia, and polyuria are prominent findings. These were clearly present in this case, and give us a clue that this patient probably had been hypercalcemic for at least one month. I would suggest that the elevation in the serum calcium level came on gradually, since the patient did tend to remain lucid throughout the final period of his illness.

Other renal effects of hypercalcemia per se are portrayed by this case. Hypokalemic alkalosis has been recognized as a consequence of severe hypercalcemia. In addition, there are profound losses of magnesium and sodium into the urine. We don't have any measure of such losses, which are almost always associated with a concentrating defect; there was little or no evidence of such a defect in this case. Hypercalciuria per se occurs in a peculiar way as the serum calcium is elevated. When there is evidence of increased circulating parathyroid hormone, there is an increase in the reabsorption of calcium to the point where hypercalciuria does not ensue. However, as the hypercalcemia progresses the hypercalciuria continues, whether it be in the presence of excessive circulating parathyroid hormone or not. This perplexing and paradoxical association has never been well explained.

There is a well recognized lag phase in the development of azotemia and the fall in the creatinine clearance. In the presence of hypercalcemia, some observers believe that azotemia does not develop unless there is some other underlying renal disease. I think this point can be contested. Many physicians have observed azotemia and a decrease in renal function in a patient with a functioning parathyroid adenoma, only to see these signs revert with the surgical removal of the tumor. In this case, we know from the time of admission that the patient had azotemia and an elevated serum creatinine level. Both parameters tended to progress over the seven or eight days in the hospital, most likely associated with the patient's further general deterioration.

What is the nature of the hypercalcemia per se? Exceedingly high levels of serum calcium are rarely associated with a benign functioning parathyroid adenoma. They usually are associated with parathyroid carcinoma or metastatic disease. In our laboratory we did a number of serum calcium partitions on this man, both initially and during the time that he was being treated.

Table 1 shows that the ionized calcium level was just as elevated as the total calcium level. The normal ionized calcium value tends to run between 4.5 to 5.2 mg/100 ml in our laboratory. These data suggest an absence of any profound variations of the serum calcium due to changes in the protein binding by a slightly depressed serum albumin. Throughout the entire time that the patient was being treated with oral phosphate, we were never able to completely reduce his total serum calcium value to normal; however, we did bring it down to the range of 13 mg/100 ml.

On the basis of these observations, I would eliminate the possibility of a functioning parathyroid adenoma. My two remaining choices are either a malignancy producing parathormone, or a malignancy which is metastatic to and destroying bone. A decision between these two is aided by a review of other cases of Plimpton-Gellhorn syndrome.

Table 1. Ionized calcium, total calcium, and phosphorus determinations.

Hospital Day	Hour	Ionized Calcium mg/100 ml	Total Calcium mg/100 ml	Phosphorus mg/100 ml
1		9.74	16.37	4.80
2		8.94	15.70	5.15
3	0730	9.98	15.70	5.05
	1330	10.10	16.00	4.80
	1930	9.38	15.10	5.51
4	0800	8.49	13.50	5.51
	1330	8.70	13.02	5.51
	2100	8.74	13.28	5.60
5	0200	8.64	12.81	5.60
	0730	8.64	13.02	5.33
	1330	8.74	13.28	5.25

Generally, in cases associated with parathyroid-like hormone production (bronchogenic carcinoma, for example), the phosphorus level is normal to low. When this patient was first admitted, the phosphorus level was 4.8 mg/100 ml—just at the highest level of normal. This would tend to favor a tumor that is perhaps secreting parathyroid hormone which would, even in the face of moderate renal insufficiency, lead to some phosphaturia and maintain a low-to-normal serum phosphorus level. On the other hand, in patients who have metastatic disease to bone, the phosphorus and the calcium are both high since the apatite is dissolved from the cortical bone and the minerals are liberated into the circulation. In bone disease directed by parathyroid hormone the bone minerals are resorbed on one aspect of the spicule while at the same time bone synthesis takes place on the spicule's opposite surface. As a result, the alkaline phosphatase level tends to be elevated, the serum calcium level rises, and the phosphorus is driven into the urine. In fact, we had one elevated alkaline phosphatase measurement at first in this patient; in the Plimpton-Gellhorn syndrome, the alkaline phosphatase tends to be elevated. The common tumors associated with this syndrome generally are renal cell carcinoma and bronchogenic carcinoma.

This patient had a malignancy; I would choose bronchogenic carcinoma with metastases to lymph nodes, but no metastases to the bone.

Finally, with regard to the therapy of hypercalcemia, it has been said since the time of Albright that serum calcium levels of about 17.5 mg/100 ml are lethal. This certainly has not been my experience of late. Successful therapy can be given as steroids in large doses, diuretics such as furosemide with administered sodium chloride solutions to produce a persistent and prominent diuresis, and the use of some complexing agent such as sodium sulfate or phosphate. Previously, we have found the use of phosphate or sulfate solutions intravenously to be uniformly hazardous. I think it has been an unjust form of therapy. However, the oral use of these agents seems (1) to be generally successful, and (2) to be less hazardous. However, there is no question that if the serum calcium level is reduced, it undoubtedly is being complexed and deposited in extraskeletal sites. I am not going to go into the therapy further except to say that I believe that the patient was

appropriately treated. He was receiving 3.1 gm of phosphorus daily, which certainly would be adequate to reduce the serum calcium.

Finally, a word on the mode of death: One clinical test as to the adequacy of the phosphate solution is, unfortunately, the development of diarrhea, which I am sure contributed to the patient's hypokalemia. In the presence of hypercalcemia and hypokalemia, digitalization is always a dangerous procedure. I wonder if this patient's demise wasn't associated with an arrhythmia resulting from digitalis intoxication.

Dr. Rector: I agree with Dr. Tauber's summary of the possible diagnoses in this case, and shall comment specifically about therapy.

Serum calcium concentration above 15 to 16 mg/100 ml is dangerous. Not only may it cause coma and slow death, but also sudden unexplained death. Thus, there is some urgency in trying to reduce the calcium level as quickly as possible.

In the past few years it has become apparent that salt depletion aggravates hypercalcemia. Whatever the underlying disease—milk alkaline syndrome, hyperparathyroidism, sarcoidosis—all patients with hypercalcemia can be made much worse by salt depletion. This is a serious problem because as hypercalcemia develops it tends to suppress tubular reabsorption of salt and water, thus causing salt depletion; as salt depletion progresses, the hypercalcemia becomes worse. Therefore, one of the first principles of treating a patient with hypercalcemia is to replace any salt deficits.

There are a number of additional procedures that might be done to reduce serum calcium levels rapidly. If the underlying disease is one that responds to steroids, such as metastatic carcinoma of the breast, multiple myeloma, lymphoma, or sarcoidosis, then certainly steroid therapy is indicated and will be one of the most rapid and effective ways of reducing serum calcium. There will be some exceptions to this.

In patients who have either primary hyperparathyroidism or parathormone-secreting tumors, steroids rarely are effective and some other therapy is indicated. At one time EDTA was used, but it proved to be relatively ineffective and nephrotoxic. Several years ago, Goldsmith suggested that as a substitute for EDTA, chelating salts such as phosphate be infused intravenously to lower the serum calcium level. As Dr. Tauber indicated, we had some disastrous consequences secondary to rapid metastatic calcification, particularly in the lungs. In one case, autopsy showed diffuse precipitation of calcium salts in the alveoli. As a result of this complication, we stopped giving intravenous sodium phosphate and instead used saline and diuretics such as Lasix.

I would like for Dr. Cohen to comment on the problem of digitalization in a patient such as this, and whether or not he thought there was any good evidence for pulmonary edema in this relatively young man who had no previous history of heart disease.

Dr. Cohen: Dr. Tauber and Dr. Rector commented on the possibility of digitalis intoxication, and that topic always perks up a cardiologist's ears. The other aspect of this case is hypercalcemia.

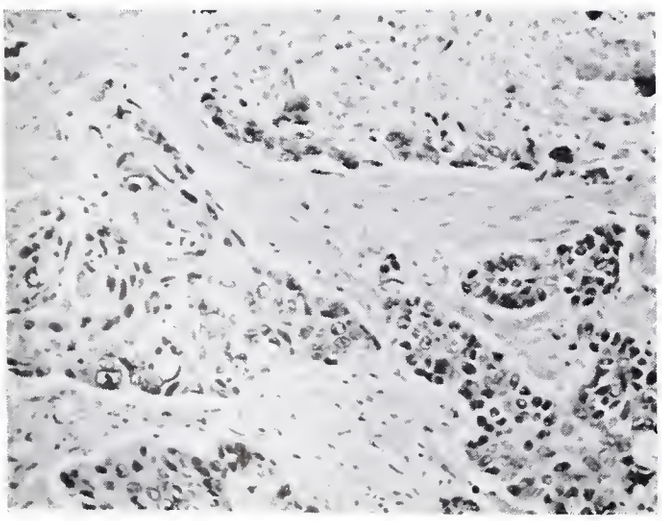
I think the question of digitalis intoxication in a patient with hypercalcemia is a complex one. Certain inferential bits of evidence are worth comment, but I cannot say definitely whether or not this patient died from digitalis intoxication.

One should dissociate the electrophysiological effects of digitalis from its mechanical effects on the heart. In the latter it is quite clear that in a fully digitalized experimental animal, a calcium infusion will increase contractility. The most recent thinking on one of the mechanisms, or perhaps the only mechanism, of digitalis' effect upon the heart is related to the interaction of calcium, actin, and myosin in the sarcoplasmic reticulum; and it is not unreasonable to suggest that hypercalcemic states or a calcium infusion might potentiate the mechanical effects of digitalis. Even in a patient or an animal who has been digitalized to therapeutic levels, one can increase contractility as measured by an augmented left ventricular rate of pressure rise by giving calcium.

The question about whether or not digitalis-induced arrhythmias can be potentiated by hypercalcemia is not quite that clear. The inferential evidence suggests that hypercalcemia would increase a patient's susceptibility to digitalis intoxication. At one time, many published reports advocated EDTA treatment for digitalis intoxiciation arrhythmias such as paroxysmal atrial tachycardia with heart block. Serum ionized calcium levels would show a measurable decrease, and not infrequently the altered rhythm would revert to normal. To my knowledge, the reverse experiment has never been done in an intact animal. If the animal were

Fig 1. Gross photograph of the right lung. The black arrow indicates the primary tumor mass and the white arrow indicates a mediastinal lymph node replaced by caseous necrotic metastatic tumor.

Fig 2. High-power photomicrograph of primary bronchogenic carcinoma shows the sheet-like growth of poorly differentiated squamous cells.



made hypercalcemic to the degree manifested by the patient under discussion today, and if digitalis were given at that point, one could determine whether or not a given level of digitalis would result in symptoms of intoxication. I think it is likely, although unproved, that hypercalcemia does potentiate digitalis-induced arrhythmias. I think it is possible that this patient, whose ionized calcium level was 9 to 10 mg/100 ml, may have died from digitalis intoxication; however, the evidence is highly speculative.

Dr. Rector: Do you have any thoughts as to why this man might have developed pulmonary edema on the fourth day?

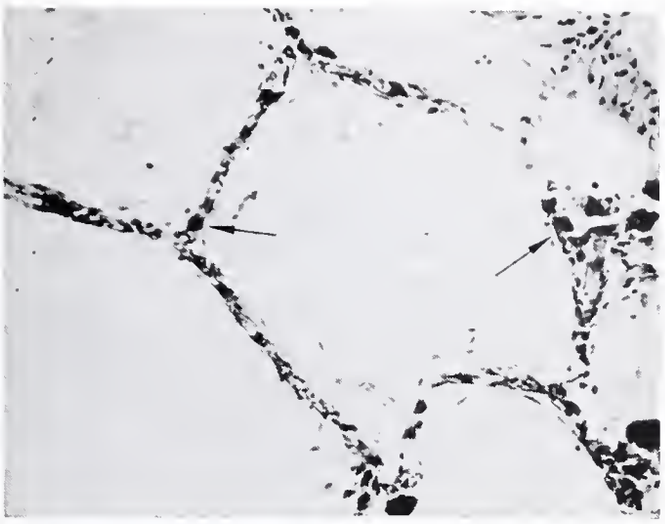
Dr. Cohen: The case history as presented suggested pulmonary edema, but it would be difficult to make that diagnosis on the basis of the x-ray that Dr. Curry showed. If indeed it was pulmonary edema, one would have to look for a mechanism. In this patient, the degree of hypercalcemia could interfere with cardiac contractility and almost cause tetany of the heart. However, that really is fishing pretty far, and I am somewhat skeptical as to whether or not pulmonary edema ever was present.

Pathological Findings: *Dr. Fallis:* Autopsy showed obvious cachexia and slight clubbing of the fingers. As Dr. Curry anticipated, a poorly demarcated, firm, grayish-white mass roughly 3 cm in diameter involved the right upper lobe of the lung replacing a right upper lobe bronchus. The hilar nodes on the right side and the mediastinal nodes were filled with similar firm, chalky tumor. There was lymphatic carcinomatosis spreading from the primary lesion, which was a poorly differentiated squamous carcinoma arising in the right upper lobe bronchus. In addition, there was blood vessel invasion as well as the extensive lymphatic invasion.

I might add that in the mediastinal nodes you could see chalky, and in fact caseous, areas of tumor. It is well to emphasize that caseation is a common phenomenon occurring in tumors, and the gross description "caseous necrosis" by no means implies infectious granuloma.

Microscopic examination of the cancer revealed the pattern of poorly differentiated squamous carcinoma—sheet-like growth of cells with areas of pinkish keratinization. In some areas the keratinized pattern was more clear-cut, with the cells flattening and forming keratin pearls. In other areas there was a considerable degree of nuclear pleomorphism and hyperchromatism,

Fig 3. High-power photomicrograph of lung shows extensive metastatic calcification in the alveolar walls. Arrows indicate several of the larger masses of calcium.



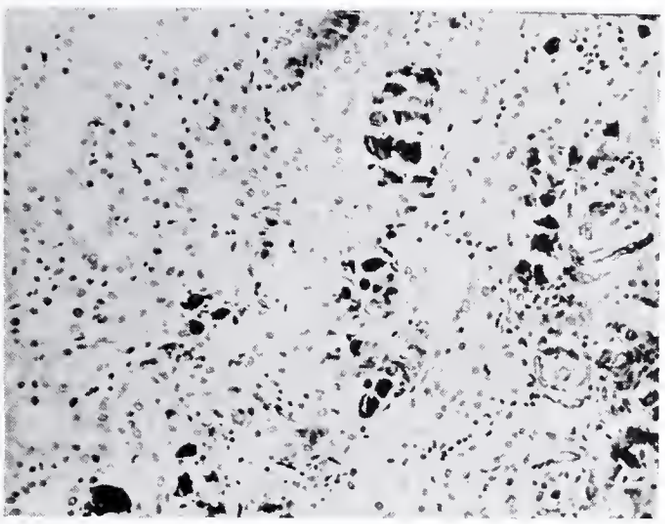


Fig 4. High-power photomicrograph of renal cortex shows metastatic calcification present in the pars radiata.

Fig 5. Low-power photomicrograph of myocardium. Arrow indicates masses of metastatic calcification within wall of small blood vessel.

Fig 6. High-power photomicrograph of myocardium. Arrow indicates metastatic calcification within myocardial fibers.

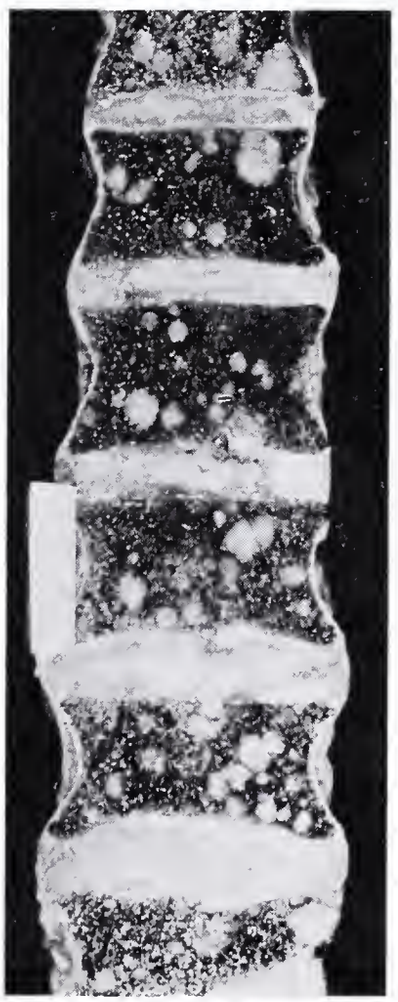


Fig 7. Gross photograph of cut surface of vertebral column shows numerous pale osteolytic metastatic lesions within vertebral bodies.

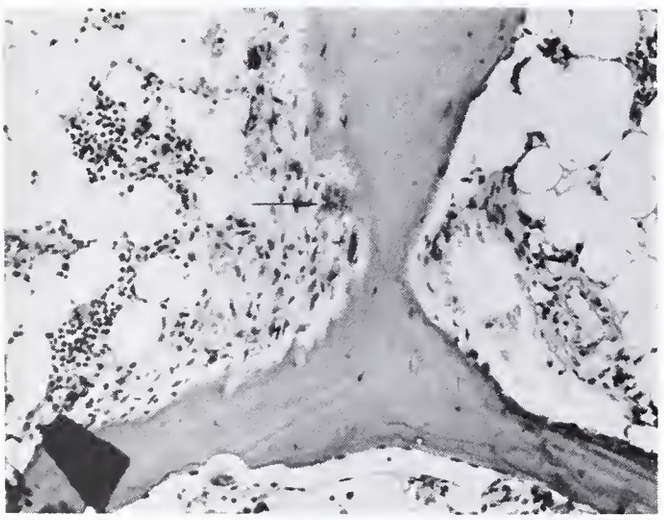


Fig 8. Low-power photomicrograph of bone marrow away from metastatic tumor shows severe changes of osteitis fibrosa. Arrow indicates osteoclast in Howship's lacunae.

so the pattern was that of an undifferentiated large-cell type bronchogenic carcinoma without keratinization.

The fact that the tumor was a poorly differentiated squamous carcinoma is particularly germane if we tend to ascribe the hypercalcemia to the Plimpton-Gellhorn syndrome. Histologically, the bronchogenic carcinomas which have produced hypercalcemia with secretion of parathormone-like substance have been squamous carcinomas. This is curious in view of the fact that other histologic types are associated with other phenomena, for example, oat-cell carcinomas are associated with Cushing's syndrome.[3]

The lungs were heavy and showed severe pulmonary edema. In addition, they were the seat of severe panlobular obstructive emphysema. The septa between the bullous-like air spaces were yellowish, and the lung felt quite rigid or board-like. On cutting the lung, a gritty sensation reflected profound metastatic calcification. Microscopic examination confirmed severe metastatic calcification in the alveolar septa. The entire tracheobronchial tree was filled with turbid, yellowish-gray pus. Obviously this patient had profound rigidity of the lungs resulting from calcium superimposed on chronic panlobular emphysema, and it is difficult to imagine how he could have had anything resembling an effective cough. The immediate cause of death, I think, was probably secondary to this collection of purulent material.

The kidneys were enlarged and had a yellowish mottling on the external surface. On the cut surface, particularly in the cortex, there was yellowish speckling and streaking characteristic of severe metastatic calcification. Microscopically the calcium was seen only in the cortex. In the medulla there was no calcium deposited. It is interesting that in the literature there seems to be a considerable amount of error as to the exact site of involvement by metastatic calcification in the kidneys. Many persons contend that it involves primarily the medulla, whereas careful studies usually reveal that the calcification of the kidneys is dominantly or, as in this case, exclusively within the renal cor-

tex. In this case it tended to involve the pars radiata of the cortex, which includes the distal parts of the ascending limbs of Henle's loop, the distal part of the proximal tubules, and small collecting tubules.

In addition to the severe metastatic calcification of the lungs and the kidney, there was also metastatic calcification demonstrable microscopically in fine blood vessels throughout the body and, furthermore, within the heart.

The myocardium showed a distinct yellowish speckling diffusely over the normally reddish-brown cut surface. Rubbing the finger gently over the myocardium produced a distinctly gritty sensation. This is the only instance where I have been able to recognize the metastatic calcification grossly in the myocardium, although it is a well-known microscopic finding. The calcium was deposited both in the walls of small blood vessels and within the myocardial muscle cells.

In the vertebral column there were innumerable whitish deposits, quite soft, which represent osteolytic tumor metastases. In addition to the obvious metastatic tumor, sections taken through the vertebral bodies at a reasonable distance away from the metastases displayed the characteristic findings of osteitis fibrosa. The bone trabeculae showed irregular jagged margins with numerous osteoclasts and fibrosis in the Howship's lacunae. This degree of involvement usually is seen only with severe hyperparathyroidism; however, there were no abnormalities found in the parathyroid glands. No other distant metastases were present.

This case was particularly interesting since, so far as I know, it is the first recorded instance of hypercalcemia which reflects the results of a combined lesion—metastatic deposits of tumor with osteolytic destruction of bone, and secretion of parathormone by a squamous bronchogenic carcinoma. I think the question as to which component was the more important is irrelevant. However, I suspect that the parathormone-like effect probably was the more important by virtue of the severity of the osteitis fibrosa and profundity and severity of the hypercalcemia. The effects of the Plimpton-Gellhorn syndrome with the parathormone-like substance apparently are identical to those of ordinary hyperparathyroidism. Such differences that do exist almost unquestionably reflect the shortness and severity of the disease rather than any intrinsic or fundamental difference in the parathormone substance.[4] In most cases of Plimpton-Gellhorn syndrome, one does not find histologic evidence of osteitis fibrosa, probably because of the short duration and the severity of the hypercalcemia. However, in a recent issue of the *New England Journal of Medicine,* there was a case report of Plimpton-Gellhorn syndrome caused by a squamous carcinoma of the bronchus and osteitis fibrosa was seen histologically, so the lesion here is not unique.[5]

This was as severe a case of metastatic calcification as I have ever seen, but whether it resulted from the drugs or simply the severity of the original hypercalcemia is difficult to say. Given the severity of the hypercalcemia, I think calcification could well have occurred even without administration of sodium phosphate solution.

In summary, the patient had a squamous bronchogenic carcinoma causing death through hypercalcemia which resulted from both bony metastases and secretion of parathormone-like substance.

REFERENCES

1. Shanks SC, Kerley P, Eds: A Textbook of X-Ray Diagnosis, ed 3, vol 2, Philadelphia and London, W B Saunders Company, 1962, p 991.

2. Plimpton CH, Gellhorn A: Hypercalcemia in malignant disease without evidence of bone destruction. Amer J Med 21:750-759, 1956.

3. Azzopardi JG, Whittaker RS: Bronchial carcinoma and hypercalcemia. J Clin Path 22:718-724, 1969.

4. Omenn GS, Roth SI, Baker WH: Hyperparathyroidism associated with malignant tumors of nonparathyroid origin. Cancer 24:1004-1012, 1969.

5. Castleman B, McNeely BU, Eds: Case records of the Massachusetts General Hospital. New Eng J Med 282:269-275, 1970.

Drs. Fallis, Blomquist, Tauber, Rector, Cohen, and Eigenbrodt, The University of Texas (Southwestern) Medical School at Dallas, 5323 Harry Hines Boulevard, Dallas, Tex 75235.

Drs. Curry and Jones, Parkland Memorial Hospital, 5201 Harry Hines Boulevard, Dallas, Tex 75235.

WHEN IT COMES TO LIFE AND HEALTH INSURANCE NEEDS

IT DOES PAY TO PUT ALL YOUR EGGS IN ONE BASKET

TEXAS MEDICAL ASSOCIATION GROUP PLANS

LIFE INSURANCE • LONG-TERM DISABILITY INSURANCE

OFFICE OVERHEAD INSURANCE • PERSONAL ACCIDENT INSURANCE

MAJOR MEDICAL INSURANCE

For Further Information on Enrollment, Contact Your Texas Medical Association Office at 1801 North Lamar Blvd., Austin, Texas 78701

UNDERWRITTEN BY

THE PRUDENTIAL
SOUTHWESTERN HOME OFFICE

INSURANCE COMPANY OF AMERICA
HOUSTON, TEXAS

NEWS

Drug Problem Center Informs Troubled San Antonians

Separating fact from fancy about drugs is one goal of the new San Antonio Drug Problem Center established in February by the Bexar County Medical Society, Bexar County Pharmaceutical Association, and Bexar County Psychological Association.

In operation 24 hours a day, seven days a week, the center is a telephone number for persons needing advice about drugs or narcotics to call for help—a place where drug information may be obtained free of bias and emotion, according to Donald V. Williams, assistant executive director of Bexar County Medical Society. It provides factual information rather than therapy for drug abusers, although that may be arranged through referrals.

The development of the center grew out of a combined speakers bureau composed of physicians, pharmacists, and psychologists and designed to educate the community on the subject of drugs and narcotics. Dr. Jerry Newton, chairman of the Bexar County Medical Society's drug abuse committee and one of the principal organizers of the speakers bureau, decided, however, that, effective as the education program was, some method still had to be devised so that help could be immediately available to those with urgent needs. Dr. Newton reasoned that since the telephone is the means most often used in cases of emergency, it could also serve to deal with the crises evoked by drugs. Thus the Drug Problem Center was born. During its development the Bexar County Medical Society sent out news releases to the local media to make the public aware of its availability; and 200 large, 16- by 20-inch posters were prepared and distributed to schools and supermarkets throughout the county.

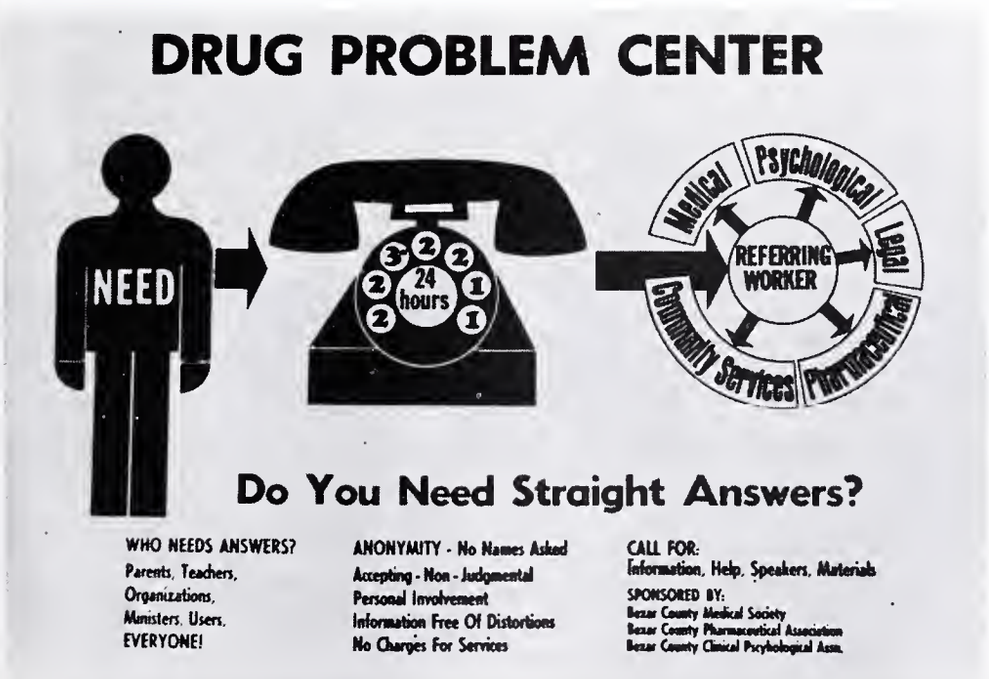
The center's switchboard is located at a local medical exchange where physicians, psychologists, and pharmacists are assigned to work as drug counselors for single 24-hour periods. The participant in the counseling program receives a duty roster showing what dates he is to be on duty and a daily log on which he transcribes his day's calls and the nature of each. Upon completion of his daily assignments he forwards the log to the medical society office, where it is filed for permanent record and is used for both historical and statistical purposes.

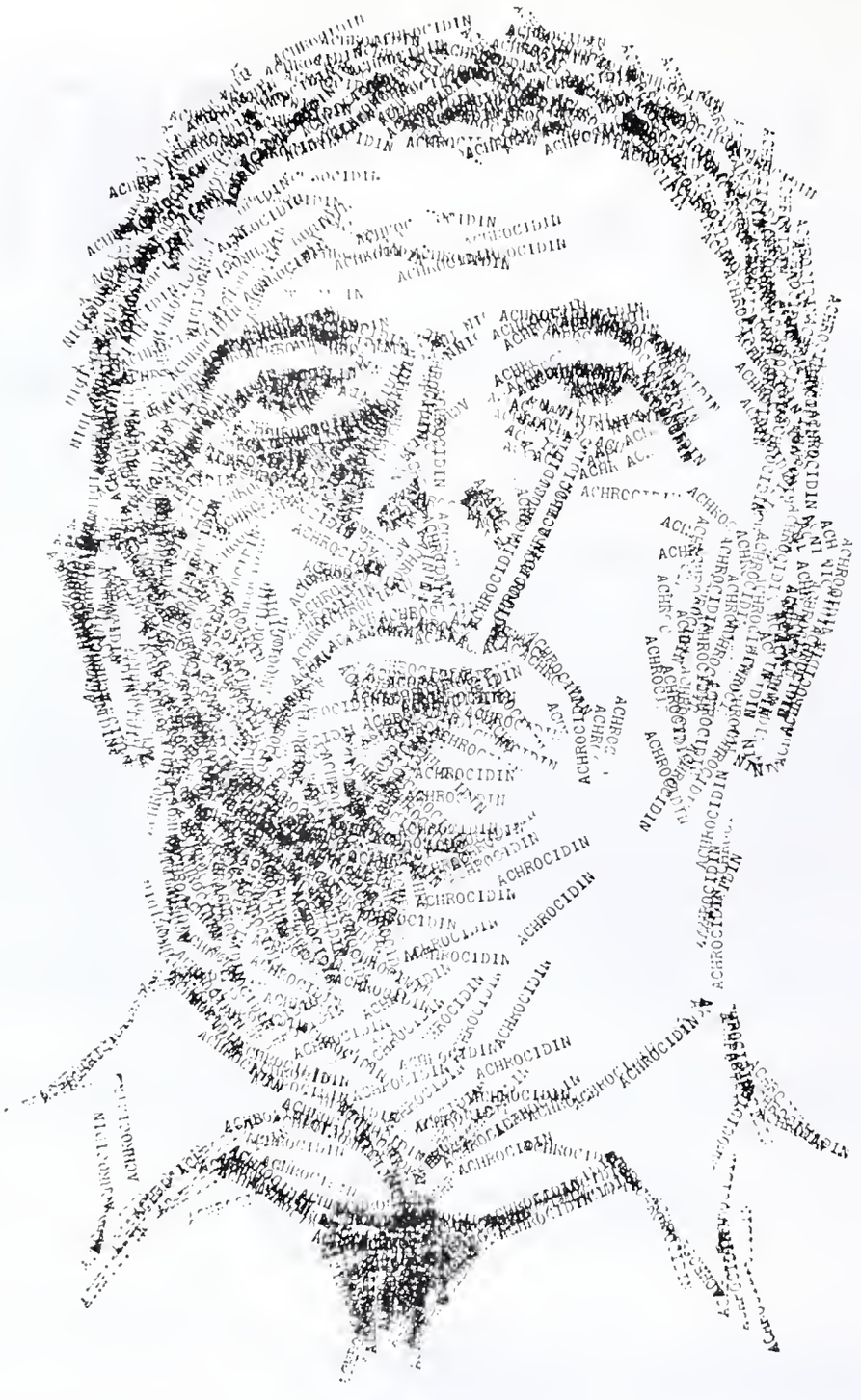
Since its opening, the center has received an average of more than 100 calls per week and may be termed a success; but Williams says that improvements in the operation are still being made. For example, when a caller asks to speak with a drug authority, the counselor on duty at the time may be temporarily occupied or may be talking on another line. Therefore, it is sometimes necessary to ask the caller to leave his telephone number (names are never asked but are taken down if volunteered) so that his call may be returned; but for a variety of reasons the caller may be reluctant to leave his number, or he may be calling from a pay telephone. To eliminate such problems, the medical society is currently developing a method to put calls straight through from caller to drug expert without delay. There may be a brief hold, Williams said, but the caller will feel that he or she is about to receive help.

According to Williams, the Drug Problem Center is by no means a final answer to the drug threat; it is merely one of many steps that have been taken to retard the drug culture momentum. Another is the medical society's endorsement and financial backing of a group of medical students from The University of Texas Medical School at San Antonio who are establishing a Drug Information Center.

Set up in an unused portion of a church building and operated by the students themselves, this center provides a place for drug-plagued young people actually to visit and discuss their problems with sympathetic persons nearer their own age. The medical students, well researched in the field of drugs, can also provide competent counsel to those not seriously ill enough to require therapy.

Also planned by the organizations sponsoring the telephone center, said Dr. Newton, is a drug information center where people may come rather than call to receive information. He said that the proposed center would have factual literature available for distribution, drug experts to provide counsel, and perhaps films on specific drugs and their dangers to be viewed at the center or loaned to schools, churches, or other interested organizations.





Achrocidin® Tablets and Syrup

Tetracycline HCl—Antihistamine—Analgesic Compound

Each tablet contains: ACHROMYCIN® Tetracycline HCl 125 mg.; Phenacetin 120 mg.; Caffeine 30 mg.; Salicylamide 150 mg.; Chlorothen Citrate 25 mg.

ACHROCIDIN Tetracycline HCl—Antihistamine—Analgesic Compound Tablets and Syrup are recommended for the treatment of tetracycline-sensitive bacterial infection which may complicate vasomotor rhinitis, sinusitis and other allergic diseases of the upper respiratory tract, and for the concomitant symptomatic relief of headache and nasal congestion. For children and elderly patients you may prefer caffeine-free ACHROCIDIN Syrup. Each 5 cc contains: ACHROMYCIN Tetracycline equivalent to Tetracycline HCl 125 mg.; Phenacetin 120 mg.; Salicylamide 150 mg.; Ascorbic Acid (C) 25 mg.; Pyrilamine Maleate 15 mg.

Contraindications: Hypersensitivity to any component.

Warning: In renal impairment, since liver toxicity is possible, lower doses are indicated; during prolonged therapy consider serum level determinations. Photodynamic reaction to sunlight may occur in hypersensitive persons. Photosensitive individuals should avoid exposure; discontinue treatment if skin discomfort occurs.

Precautions: Drowsiness, anorexia, slight gastric distress can occur. In excessive drowsiness, consider longer dosage intervals. Persons on full dosage should not operate vehicles. Nonsusceptible organisms may overgrow; treat superinfection appropriately. Treat beta-hemolytic streptococcal infections at least 10 days to help prevent rheumatic fever or acute glomerulonephritis. Tetracycline may form a stable calcium complex in bone-forming tissue and may cause dental staining during tooth development (last half of pregnancy, neonatal period, infancy, early childhood).

Adverse Reactions: *Gastrointestinal*—anorexia, nausea, vomiting, diarrhea, stomatitis, glossitis, enterocolitis, pruritus ani. *Skin*—maculopapular and erythematous rashes; exfoliative dermatitis; photosensitivity; onycholysis, nail discoloration. *Kidney*—dose-related rise in BUN. *Hypersensitivity reactions*—urticaria, angioneurotic edema, anaphylaxis. *Intracranial*—bulging fontanels in young infants. *Teeth*—yellow-brown staining; enamel hypoplasia. *Blood*—anemia, thrombocytopenic purpura, neutropenia, eosinophilia. *Liver*—cholestasis at high dosage.

Upon adverse reaction, stop medication and treat appropriately.

Lederle LEDERLE LABORATORIES, A Division of American Cyanamid Company, Pearl River, New York 10965

535-9

Board Screens Licensing Of Handicapped Drivers

The first cases submitted to the newly established Medical Advisory Board for Driver Licensing were screened on April 23, and further processing sessions are scheduled bi-monthly.

The board was established by the 1969 Texas legislature to provide a medical opinion concerning the advisability or inadvisability of allowing persons with medical handicaps to drive. Acting as a link between the licensing agency of the Texas Department of Public Safety and this advisory board, the Texas State Department of Health administers the processing of cases submitted for medical evaluation.

Cases referred to the board originate from the Department of Public Safety when (1) during application for a driver license an applicant admits to limitation on the DPS form; an officer checks observable limitation; a parent, friend, or physician who has treated the applicant testifies that there is a limitation; or the computer at DPS shows criminal record limitation, narcotics conviction, or convictions in other states or when, (2) during application for renewal of a driver license or (3) during suspension, revocation, or other action, the previously mentioned criteria exist or the computer at DPS shows, in addition, motor vehicle operation convictions, including administrative action resulting from repeated DWI convictions and motor vehicle incidents for which the subject invoked a medical condition as an excuse.

When board members have reviewed the medical history of a person with a disability that might affect his safe operation of a motor vehicle, they may recommend one of the following seven opinions to the State Health Department for referral to the Department of Public Safety: subject has no medical limitation to driving; subject should never operate a motor vehicle; subject should never operate a motor vehicle that requires a commercial or chauffeur license; subject should only operate a motor vehicle if a regimen prescribed by his physician is observed and (optional) if his case is reviewed periodically by the board; subject must appear before a panel of three physicians as specified by the board at a specified future date for further medical evaluation; subject should not drive at this time, and further observation of his medical condition should be continued for a specified time period and then reviewed again by the board; it is necessary that additional examination of the subject's condition be made (such as psychiatric interview) and results be presented to the board for further study.

Chairman of the board is Dr. Otto Lippmann, and vice-chairman is Dr. Albert A. Tisdale. Board members, appointed for a two-year period, are Drs. H. Kent Beasley; John A. Boston, Jr.; Charles B. Dildy; Matthew F. Kreisle, Jr.; Stuart S. Nemir, Jr.; Philip M. Overton; Robert M. Rothen; Lee F. Scarborough; Hardy E. Thompson, Jr.; J. Phillip Thomson; and Albert F. Vickers.

Medical Schools Receive Grants from AMA-ERF

Medical schools in the United States and Canada are now receiving grants totaling $956,909.64 as a result of contributions made to the American Medical Association Education and Research Foundation for 1969, according to an article in the March 23 issue of AMA *News*.

The gifts were from physicians and the AMA Woman's Auxiliary, AMA-ERF President Dr. Robert C. Long announced.

Texas medical schools receiving grants include The University of Texas Medical Branch at Galveston, $6,846.23; Baylor College of Medicine, $6,054.38; The University of Texas Southwestern Medical School at Dallas, $4,651.82; and The University of Texas Medical School at San Antonio, $3,761.28.

Laboratory Facilities Accredited By AALAC

The American Association for Accreditation of Laboratory Animal Care (AALAC), as of March 16, has accredited a total of 140 laboratory animal facilities. This figure represents a net increase of 21 fully accredited facilities since March 16, 1969, when the total stood at 119.

However, in spite of the almost 18% increase, Dr. Leslie Burrows, chairman of AALAC's board of trustees, feels that a much wider participation by animal research facilities in AALAC's voluntary accreditation program is urgently needed; and he outlined the accreditation procedure. After an institution has voluntarily applied for accreditation, he said, two specialists in laboratory animal care inspect the facility. Depending on their report the facility is either fully or provisionally accredited, or accreditation is withheld. An annual report is requested of all accredited facilities, and follow-up site visits are made periodically.

Environmental Science To Be Studied at Park

The designation of two areas near Buescher State Park in Bastrop County as The University of Texas System Environmental Science Park was recently approved by the system's board of regents.

Dr. R. Lee Clark, chairman of the administrative council of the UT Medical School at Houston and president of M. D. Anderson Hospital and Tumor Institute, recommended approval of the 1,091-acre science park.

The acquisition of land suitable for research and scientific studies in ecology and environmental health as well as for a genetics animal resource and field laboratories for all of the units of the UT System has been under way for several years.

At the request of the citizens of Smithville and on the approval of the Texas Parks and Wildlife Commission, the 60th State Legislature authorized transfer in April, 1967, of 717.3 acres of land in Buescher State Park to the UT System. An additional 373.99 acres of land in the Camp Swift area, located about 10 miles from the park, have been leased by the UT System from the Texas State Department of Health.

According to Dr. J. P. Kennedy, associate professor in the department of anatomy at the UT Graduate School of Biomedical Sciences at Houston, the biomedical units within the UT System and other institutions, including the State Department of Health, Baylor College of Medicine, and Texas A&M University, will work with the professional staff of the Parks and Wildlife Department on problems of mutual interest for the ultimate benefit of all Texans.

Some areas of mutual study will include planning for the wise and economical development of future recreational centers; the probing into complex questions of ground compaction, erosion, and air pollution; and determination of means to reduce the inadvertent destruction of national resources and beauty through constant usage of state park facilities.

An additional meeting in Buescher State Park was held April 25 to discuss

Senior Consultants
Perry C. Talkington, M.D.
Charles L. Bloss, M.D.

Psychiatrist-In-Chief
Howard M. Burkett, M.D.

Medical Director
James K. Peden, M.D.

Associate Psychiatrists
Jerry M. Lewis, M.D.
Claude L. Jackson, M.D.
Dode Mae Hanke, M.D.
Thomas H. Allison, M.D.
Maurice S. Green, M.D.
Doyle I. Carson, M.D.
Stanley L. Seaton, M.D.
Keith H. Johansen, M.D.
Charles G. Markward, M.D.
Joe W. King, M.D.
Claude R. Nichols, M.D.
Larry E. Tripp, M.D.
Aretta J. Rathmell, M.D.
Donald N. Offutt, M.D.

Clinical Psychology
David H. Lipsher, Ph.D.
John T. Gossett, Ph.D.
Dale R. Turner, Ph.D.
Robert W. Hagebak, Ph.D.

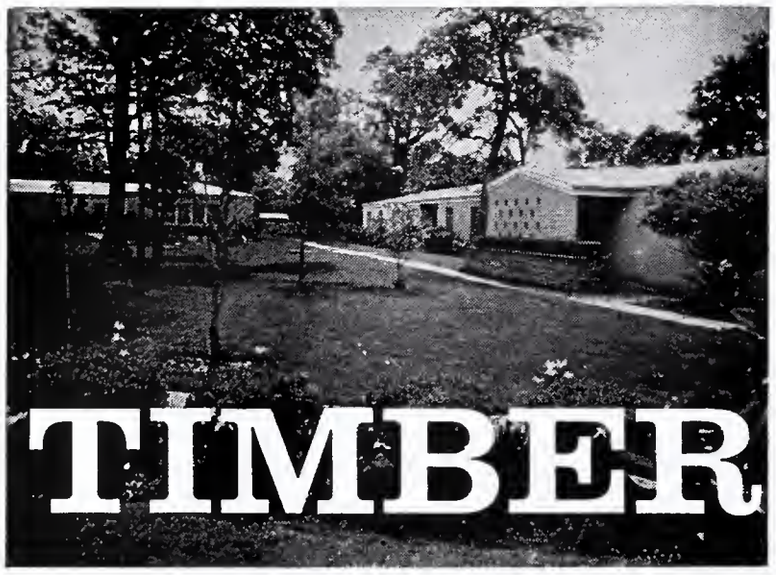
Social Work
Sally Stansfield, M.S.W.
Robert O'Connor, M.S.S.W.
Kathleen Wood, M.S.W.
Margie W. Buell, M.S.S.W.
Robert P. Stewart, M.S.S.W.
Cecilia Coffelt, M.S.S.W.

Occupational Therapy
Geraldine Skinner, B.S., O.T.R., Director

Recreational Therapy
Lois Timmins, Ed.D., Director

Director of Nurses
Mae Belle James, R.N.

Business Manager
Ralph M. Barnette, B.B.A.



PSYCHIATRIC HOSPITAL

DAY HOSPITAL

DEPARTMENT OF OUT PATIENT PSYCHIATRY

DEPARTMENT OF ADOLESCENT PSYCHIATRY

Narcotic Cases Not Admitted

TIMBERLAWN
PSYCHIATRIC HOSPITAL

381-7181 Dallas, Texas 75223 P. O. Box 11288

KELSEY-SEYBOLD CLINIC

6624 FANNIN STREET HOUSTON, TEXAS 77025

526-2671

INTERNAL MEDICINE

Endocrine and Metabolic Diseases
Mavis P. Kelsey, M.D., F.A.C.P.
Alfred E. Leiser, M.D., F.A.C.P.

Pulmonary Diseases
H. Irving Schweppe, Jr., M.D., F.A.C.P.
Stanton P. Fischer, M.D., F.A.C.P.

Gastrointestinal Diseases, Gastroscopy
John R. Kelsey, M.D., F.A.C.P.
Philip S. Bentlif, M.D., F.A.C.P.
Ralph D. Eichhorn, M.D., F.A.C.P.
F. Scott O'Neil, M.D. F.A.C.P.
James W. McBee, M.D., F.A.C.P.

Heart Disease and Cardiac Catheterization
Earl F. Beard, M.D., F.A.C.P.
Efrain Garcia, M.D., F.A.C.P.
Wayne E. Dear, M.D.

Arthritis and Rheumatic Diseases
James W. Kemper, M.D., F.A.C.P.

Hypertension and Peripheral Vascular Diseases
Gene E. Burke, M.D.

Cancer Chemotherapy
Carlos F. Taboada, M.D.

Nephrology
Francis X. Schloeder, M.D., F.A.C.P.

Hematology
Jerome B. Bart, M.D.

Infectious Diseases
Stuart Riggs, M.D., F.A.C.P.

Occupational Health Services
Paul E. Wright, M.D., M.P.H., F.A.C.P.
Maurice B. Johnston, M.D., F.A.C.Pr.M.
Richard M. Fenno, M.D., M.P.H., F.A.C.P.
Cannon A. Owen, M.D., F.A.C.S.
Edward A. Anderson, M.D., F.A.C.Pr.M.
William E. Froemming, M.D., F.A.C.Pr.M.

GENERAL & THORACIC SURGERY
William D. Seybold, M.D., F.A.C.S.
James D. McMurrey, M.D., F.A.C.S.
Jerry L. Doggett, M.D.

OBSTETRICS & GYNECOLOGY
Melville L. Cody, M.D., F.A.C.S.
William A. Johnson, III, M.D.

PSYCHIATRY
Chester G. Cochran, M.D.
*Ricardo Daichman, M.D.
William H. Boylston, M.D.

PEDIATRICS

Rheumatology
Earl J. Brewer, Jr., M.D., F.A.A.P.

Allergy
Charles W. Ewing, M.D., F.A.A.P.

OTO-LARYNGOLOGY
J. Charles Dickson, M.D., F.A.C.S.
James L. Smith, M.D., F.A.C.S.
Joseph S. Weycer, M.D.

NEUROLOGY
Robert R. Pierce, M.D.

DERMATOLOGY
Wilson M. Fraser, M.D., F.A.A.P.
Donald W. Owens, M.D.

UROLOGY
Don W. Pranke, M.D., F.A.C.S.
J. David Wright, M.D.

ORTHOPEDIC SURGERY
W. Malcolm Granberry, M.D.
Jesse H. Dickson, M.D.

OPHTHALMOLOGY
Henry E. Wahlen, M.D., D.A.B.O.

RADIOLOGY
David M. Rulfs, M.D.
John D. Brooks, M.D.

PATHOLOGY
Robert A. Jordan, M.D.

DENTISTRY
Eugene W. Gray, D.D.S.

PSYCHOLOGY
Mrs. Ruth Blackman, M.A.
Robert de von Flindt, Ph.D.
Cheryl McBride, M.A.

SPEECH PATHOLOGY AND AUDIOLOGY
Donna R. Fox, Ph.D.
Carolyn C. Garcia, M.S.

CONSULTANTS

Maxillo Facial Surgery
Edward C. Hinds, M.D., D.D.S., F.A.C.S.

Psychiatry
Albert Owers, M.D.

Nuclear Medicine
John A. Burdine, Jr., M.D.

Gastrointestinal Diseases, Gastroscopy
Theodore Hersh, M.D.

Occupational Medicine
Valliant C. Baird, M.D., F.A.C.Pr.M.

Podiatry
Levitt A. Peters, D.P.M.

SPECIAL FACILITIES
Radioisotope Laboratory
Registered Dietitian
Electroencephalography
Electrocardiography
Vectorcardiography
Registered Physiotherapist
Pulmonary Function Laboratory
Regional Immunization Center
FAA Examinations
Complete Endoscopy
Audiology Laboratory
Electrolysis

ADMINISTRATOR
James A. Bakken

*Military Service

the future development of the science park and to review the third phase of a feasibility study conducted by Professor Richard Swallow of the UT at Austin School of Architecture. Included in the plans studied at that meeting were the following:

—Total development of a recreational and camping park for the public, with the scientific aspects of the park plotted as a "living museum" or "interpretation center of science."

—Utilization of the park as a field research site (ecology study area) for educational purposes. Studies that would be ill-suited for urban areas would be undertaken in the science park, as would ecological and geological studies.

—Development of a "think tank" to be designated as a work-study retreat for students, physicians, scientists, and other interested groups.

Houston MD Appointed Rare Books Curator

Dr. John P. McGovern of Houston has received an honorary appointment as curator of rare books for the Houston Academy of Medicine Library for the Texas Medical Center.

An alumnus of Duke University School of Medicine, Dr. McGovern attributes his early interest in the history of medicine to his association, while a student at Duke, with Dr. Wilburt Cornell Davison and with Miss Judith Farrar, librarian. He became an avid Oslerian, and his interest in the Trent Rare Books Collection has continued through the years. Dr. McGovern recalls that a summer spent at Harvard working with Miss Anna C. Holt, librarian of the Harvard Library of Medicine and Public Health, prompted him to become a collector of historic materials; and during his internship at Yale University School of Medicine he seriously began to build his own Osler collection. He now owns one of the finest private Oslerian collections in the country and has honored his professor at Duke by naming his private library the Davison Library.

The author of many books, including *William Osler: The Continuing Education,* Dr. McGovern was instrumental in organizing an Osler symposium in Galveston April 21-22. He is currently clinical professor of pediatric allergy at Baylor College of Medicine, professor and chairman of the department of history of medicine at The University of Texas Graduate School of Biomedical Sciences at Houston, chairman of the Texas Allergy Research Foundation, and director of the McGovern Allergy Clinic.

JAMA Reports Study Of Diphtheria Outbreak

An article on the clinical and epidemiological aspects of the Austin, Tex., diphtheria outbreak from October, 1967, through April, 1969, appeared in the March 30 issue of *JAMA*. Authors of the report are Drs. Victor M. Zalma, J. Justin Older, and George F. Brooks.

Methods of analysis and definitions of terms, the outbreak, clinical features, laboratory aspects, carrier studies and transmission, relapse and reinfection, and epidemiology and control measures are discussed.

The article reports that during the 19-month period cited, an outbreak of 88 cases of diphtheria occurred in Austin, most of which were considered mild. Severe illness, including three deaths, affected only poorly immunized persons; however, cases continued to occur in spite of a mass immunization campaign at the height of the epidemic. According to the article, the outbreak probably began from endemic foci and spread partially as a result of incomplete immunizations, lack of immunizations, crowding, and poor environmental and personal hygiene. Evidence gathered in the authors' study suggests that a level of immunization above 90% for all age groups could prevent community-wide diphtheria.

Agency Conducts Study On X-radiation Exposure

A national study to obtain information on population exposure to diagnostic and therapeutic x-radiation is being conducted by the HEW Public Health Service. Planned with the advice of radiologists and physicists representing the American College of Radiology, the study began April 13 and is being made jointly by the Bureau of Radiological Health and the National Center for Health Statistics.

The study follows two earlier national x-ray surveys by Public Health Service agencies. The first was conducted in 1961 to estimate the volume of medical and dental x-ray visits in the United States. A more comprehensive study was made in 1964 to extend the x-ray visit data to include exposure and dose estimates for the US population in that year.

The 1970 study will use the same collection and analysis methods employed in the 1964 survey so that results of the investigations will be directly comparable and the effectiveness of programs to improve x-ray practice and reduce unnecessary exposure may be evaluated. The 1970 study will aid in establishing guidelines for future programs.

The new study will be conducted in the following three phases:

—A household interview survey to obtain the x-ray visit experience of a representative sample of the US population. This phase began April 13 and will run through Oct. 12; it will cover about 20,000 households and 65,000 persons.

—A follow-up questionnaire to obtain examination data from x-ray facilities identified in the household survey. From May through December, approximately 5,000 facilities will be asked to supply these details. Authorization to request the information will be obtained in advance from household respondents.

—An x-ray equipment survey to provide physical measurements in a selected sub-sample of x-ray facilities. This phase will be conducted by specially trained state and federal radiological health personnel.

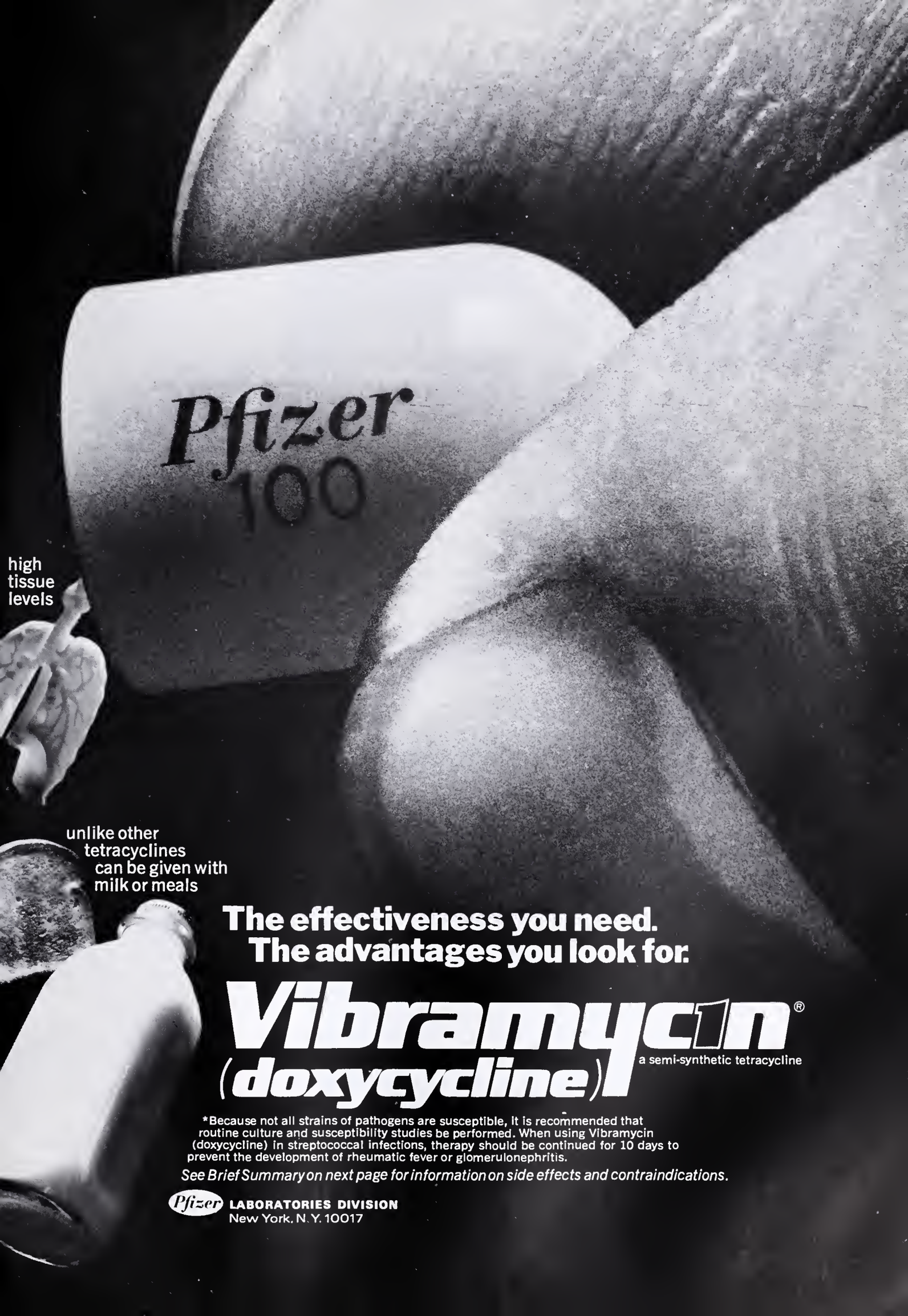
Based on data obtained during the household and facility surveys, a descriptive analysis of the population's x-ray experience in 1970 will be prepared. The information, which will be categorized by pertinent demographic and facility characteristics, will include estimates of numbers and rates for: (1) persons x-rayed, (2) x-ray visits, and (3) x-ray examinations and exposures.

Estimates of gonadal and genetically significant doses will be derived from the study findings by applying mathematical models developed at the Johns Hopkins and Emory universities in collaboration with the 1964 study. It is also planned to extend these data into dose estimates for other selected body organs through the use of related research results.

Because this study is based on a small representative sample, the cooperation of each practitioner contacted in the follow-up phase is essential to meet the study objectives. All information pertaining to individual patients, practitioners, and facilities will be treated confidentially. Only statistical summaries will be made available for publication.

Additional information about plans for the survey may be obtained from the Bureau of Radiological Health, 1901 Chapman Ave., Rockville, Md. 20852.

Pfizer
100
real broad spectrum,
including
susceptible strains of
Pneumococcus*
"Staph"* "Strep"*
H. influenzae*
M. pneumoniae (PPLO)*
N. gonorrhoeae*
low incidence
of diarrhea
outstanding record
of clinical success
therapeutic blood levels
usually persisting
around-the-clock
24



The effectiveness you need.
The advantages you look for.

Vibramycin® (doxycycline)

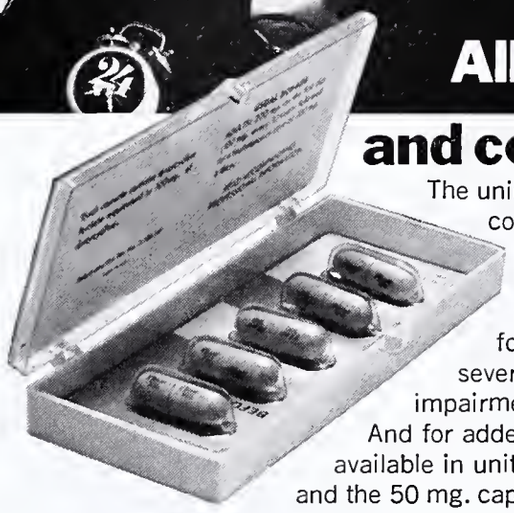
a semi-synthetic tetracycline

*Because not all strains of pathogens are susceptible, it is recommended that routine culture and susceptibility studies be performed. When using Vibramycin (doxycycline) in streptococcal infections, therapy should be continued for 10 days to prevent the development of rheumatic fever or glomerulonephritis.

See Brief Summary on next page for information on side effects and contraindications.

Pfizer LABORATORIES DIVISION
New York, N.Y. 10017

and convenience too.



The unique new Vibramycin (doxycycline) V-Pak is especially convenient for use both in your office practice and in the hospital outpatient department. It contains a typical four-day course of therapy for routine infections with easy-to-understand patient instructions. The dosage is low, just 100 mg. b.i.d. the first day followed by 100 mg. once a day for the next three days. In more severe infections, 100 mg. q.12 h. is recommended. If renal impairment exists, lower than usual doses are indicated.

And for added convenience in the hospital pharmacy, Vibramycin is available in unit-dose packs of 100 (10 x 10's) for both the 100 mg. and the 50 mg. capsules.

VIBRAMYCIN® (doxycycline)
BRIEF SUMMARY

Contraindicated: In individuals who have shown hypersensitivity to doxycycline.

Warnings: The usual dosage and frequency of administration of Vibramycin (doxycycline) differs from those of other tetracyclines. Exceeding the recommended dosage may result in an increased incidence of side effects.

If renal impairment exists, even usual doses may lead to excessive accumulation of the drug and possible hepatic toxicity. For such patients, lower than usual doses are indicated and, if treatment is prolonged, Vibramycin serum level determinations may be advisable.

Vibramycin, like other tetracyclines, may form a stable calcium complex in any bone-forming tissue, although *in vitro* Vibramycin binds calcium less strongly than other tetracyclines. The use of Vibramycin during tooth development (last trimester of pregnancy, neonatal period, and early childhood) may cause discoloration of the teeth (yellow-gray-brownish). This effect may occur mostly during long-term use, but also may occur with short-treatment courses.

Increased intracranial pressure with bulging fontanelles has been observed in infants receiving tetracyclines. This effect has disappeared rapidly on cessation of therapy with no sequelae.

In certain hypersensitive individuals treated with Vibramycin, exposure to direct sunlight may precipitate a photodynamic reaction. In individuals with a history of photoallergic reactions to tetracyclines, exposure to direct sunlight should be avoided and treatment should be discontinued at first evidence of skin discomfort.

Precautions: As with any antibiotic, overgrowth of nonsusceptible organisms may occasionally occur. Constant observation of the patient is essential. If such superinfections are encountered, Vibramycin should be discontinued and replaced by appropriate therapy.

When treating gonorrhea in which lesions of primary or secondary syphilis are suspected, proper diagnostic procedures, including dark-field examinations, should be utilized. In all cases in which concomitant syphilis is suspected, monthly serological tests should be made for at least four months.

Adverse Reactions: Nausea, vomiting, diarrhea, vaginitis, as well as reactions of an allergic nature such as dermatitis, urticaria, and anaphylaxis may occur but are rare. Glossitis, stomatitis, proctitis, onycholysis and discoloration of the nails may rarely occur during tetracycline therapy as with other antibiotics. If severe adverse reactions, individual idiosyncrasy, or allergy occur, discontinue medication.

As with other tetracyclines, elevation of SGOT or SGPT values, or elevated BUN have been reported, the significance of which is not known at this time. Anemia, neutropenia, and eosinophilia have been reported, as with other tetracyclines.

Animal Pharmacology: As with other tetracyclines, at doses greater than those recommended for human usage, Vibramycin produces discoloration of animal thyroid glands. Careful monitoring of animals and humans has disclosed no abnormalities of thyroid function studies. Also, as with other tetracyclines, at relatively high oral doses, evidence of hepatotoxicity has been noted in dogs and signs of gastrointestinal intolerance have been seen in both dogs and monkeys.

Dosage: The usual dose of Vibramycin is 200 mg. on the first day of treatment (administered 100 mg. every 12 hours) followed by a maintenance dose of 100 mg./day. The maintenance dose may be administered as a single dose, or as 50 mg. every 12 hours. In the management of more severe infections (particularly chronic infections of the urinary tract), 100 mg. every 12 hours is recommended. The recommended dosage schedule for children weighing 100 pounds or less is 2 mg./lb. of body weight divided into two doses on the first day of treatment, followed by 1 mg./lb. of body weight given as a single daily dose or divided into tw doses, on subsequent days. For more severe infections up to 2 mg./lb. of body weight ma be used. For children over 100 lbs. the usual adult dose should be used.

Acute gonococcal anterior urethritis in males —a single dose of 300 mg. or 100 mg. b.i.d. for 2-4 days.

Acute gonococcal infections in the adult fema should be treated with doses of 100 mg. b.i.d. until cure is effected.

Therapy should be continued beyond the time that symptoms and fever have subsided. When used in streptococcal infections, therap should be continued for 10 days to prevent the development of rheumatic fever or glomerulonephritis.

If gastric irritation occurs, it is recommended that Vibramycin be given with food or milk. Studies indicate that the absorption of Vibramycin is not markedly influenced by simultaneous ingestion of food or milk.

Simultaneous administration of aluminum hy droxide gel given with tetracycline antibiotics including Vibramycin has been shown to decrease absorption.

Supply: Vibramycin Hyclate (doxycycline hyclate) is available as capsules containing doxycycline hyclate equivalent to 50 mg. of doxycycline, bottles of 50, unit-dose pack of 100 (10 x 10's), and X pack of 50 (5 x 10's); capsules containing doxycycline hyclate equivalent to 100 mg. of doxycycline, bottles of 50, unit-dose pack of 100 (10 x 10's and V pack of 25 (5 x 5's).

Vibramycin Monohydrate (doxycycline monohydrate) is available as a dry powder for oral suspension containing when reconstituted doxycycline monohydrate equivalent to 25 mg of doxycycline per 5 cc. (each teaspoonful), with a pleasant-tasting raspberry flavor, 2 oz. bottles.

More detailed professional information available on request.

Pfizer LABORATORIES DIVISION
New York, N.Y. 10017

Vibramycin® (doxycycline)

a semi-synthetic tetracycline

WALTER WALTHALL, M.D.: THE MAN IN CONTROL

When Dr. Walter Walthall assumed the presidency of the Texas Medical Association on May 2, he assumed, naturally, the responsibility of controlling the gamut of the Association's affairs for the next year. Although the job might prove to be an awesome task for many, the San Antonio general practitioner with nearly 30 years' experience in rendering various services to the medical profession should take his new position of leadership confidently in stride; for Dr. Walthall is a man used to being in control not only of himself but also of whatever situation confronts him. He exercises a calm, self-disciplined, and level-headed approach to problems, perhaps because he feels that, if someone talks and argues about everything that comes along, no one listens to him anyway. Therefore, he maintains that in any discussion it is better to sit back quietly and wait until something important is brought up before speaking out on the subject.

The wisdom of this abiding philosophy has been proved time and again as Dr. Walthall's calm restraint and ability to maintain order and control have benefitted the outcome of innumerable meetings over which he has presided. In fact, his past experience should serve as an advantage in his new office in more ways than one. For instance, having formerly served as president of the Bexar County Medical Society and of the Alamo chapter of the Texas Academy of General Practice and as chairman of the TMA Board of Councilors, he will raise and lower the gavel during his term as the 105th President of the Texas Medical Association with a practiced hand. And his past duties as chairman of his county medical society's Public Relations Committee, as co-chairman of the Legislative and Public Policy Committee of the TAGP, and as a member of the board of trustees of the San Antonio Medical Foundation should contribute to the wealth of ideas he brings to the office, as should his current responsibilities as delegate to the American Medical Association from the Texas Medical Association and as chairman of the board of managers of the Bexar County Hospital District.

Possessing almost unlimited energy and a wide range of interests, Dr. Walthall has also served various civic and community organizations in an official capacity. He is a past president of the Rotary Club of San Antonio and formerly served on the city library board. He is now a member of the advisory board of the Worden School of Social Service at Our Lady of the Lake College in San Antonio and a ruling elder in the First Presbyterian Church.

Testimonial to Dr. Walthall's many years of service to medicine and to his community came in 1967 in the form of an official letter of commendation from his colleagues in Bexar County Medical Society. Considering him "a prime example of one who 'plows' something back into the community in which he lives and works," the society members recognized him for finding time to serve his profession and his fellow men "in such a manner as to restore the proper image of medicine." To be thus respected by his closest associates is possibly one of the finest tributes that could be paid to this hard worker who is said never to do anything half way.

Born Aug. 13, 1913, in San Antonio, Dr. Walthall is the son of Walter and Nellie Paschal Walthall. His grandfather, Dr. Frank Paschal, was the President of Texas Medical Association in 1903. A 1935 graduate of The University of Texas at Austin with a BA degree, Dr. Walthall received his MD degree in 1939 from Baylor College of Medicine, then located in Dallas. He served a rotating internship from 1939 to 1940 at Robert B. Green Memorial Hospital in San Antonio. He served a residency in surgery at the same hospital from 1940 to 1941; and from 1940 to 1942 he was an instructor in the hospital's school for laboratory technologists and school of nursing. In 1941-1942 and from 1946 to 1950 he was a member of the volunteer staff at the Green.

In 1942 Dr. Walthall began his private practice in San Antonio for a brief period before entering the US Air Force Medical Corps in June of that year. According to the amiable physician, "My experience in the war consisted almost entirely of travelling from the Rio Grande to Red Rivers, then to the Brazos River—all in Texas," with the exception of two months he spent in the US Army School of Roentgenology at Walter Reed General Hospital in Washington, D.C. During his 42 months of service he was stationed at Randolph Field near San Antonio; Moore Field in Mission, Tex.; Perrin Field at Sherman, Tex.; and at the Waco Army Air Field. He attained the rank of captain before his release from active duty in Decem-

Dr. Charles Max Cole of Dallas, left, hands the presidential gavel to Dr. Walter Walthall of San Antonio in ceremonies during the 1970 Annual Session.

–The lowest priced tetracycline–nystatin combination available–

HIGHLAND HOSPITAL

ASHEVILLE, NORTH CAROLINA

Founded 1904

A DIVISION OF THE DEPARTMENT OF PSYCHIATRY OF DUKE UNIVERSITY

Accredited by the Joint Commission on Accreditation and Certified for Medicare

Complete facilities for evaluation and intensive treatment of psychiatric patients, including individual psychotherapy, group therapy, psychodrama, electro-convulsive therapy, Indoklon convulsive therapy, drugs, social service work with families, family therapy, and an extensive and well organized activities program, including occupational therapy, art therapy, music therapy, athletic activities and games, recreational activities and outings. The treatment program of each patient is carefully supervised in order that the therapeutic needs of each patient may be realized.

High school facilities for a limited number of appropriate patients are now available on grounds. The School Program is fully integrated into the hospital treatment program and is accredited through the Asheville School System.

Complete modern facilities with 85 acres of landscaped and wooded grounds in the City of Asheville.

Brochures and information on financial arrangements available

Contact: (1) Mrs. Elizabeth Harkins, ACSW, Coordinator of Admissions

or

(2) Samuel N. Workman, M.D.
Chief of Clinical Services

(3) Charles W. Neville, Jr., M.D.
Assistant Professor of Psychiatry and Medical Director

Area Code 704 - 254-3201

ber, 1945; and he resumed his private practice in San Antonio in 1946.

Perhaps because of the limited horizons of his tour of duty during World War II, Dr. Walthall still nourishes a yen to travel and hopes some day to rent a bus for that purpose. For the time being, however, the busy practitioner does not even have time to drive down to his family's house at Port Aransas to go fishing, a pastime which he really loves. An avid gardener as well as fisherman, he does manage to spend as much time as possible exercising his green thumb. His home in San Antonio is situated on two acres of land, so Dr. Walthall has plenty of room within easy access to indulge this hobby. Evidently an outdoorsman by nature, he is also a chef of the outdoor variety; for he loves to barbecue. And whenever he can squeeze it into his schedule, he enjoys both film and still photography. Mrs. Walthall, the former Alice Ruth Brady of San Antonio, whom Dr. Walthall married April 5, 1941, reveals that he also writes beautifully on the spur of the moment—which, quite obviously, is the only time he has left to devote to still another interest.

Although the Texas Medical Association is to be "ruled" by Dr. Walthall during 1970-1971, the Walthall household will still be ruled by a poodle named Beau, at least according to Mrs. Walthall. Besides the physician and his wife, that household includes what Mrs. Walthall describes as "one inside cat and one outside cat." The Walthall's son, Walter III, is now married to the former Carolyn Krebs of Weslaco, Tex.; and the couple has made the TMA President and his wife the proud grandparents of one-year-old Walter IV. Walter III is a first lieutenant in the US Army and will report for duty in Vietnam on May 25. The Walthall's daughter, Sally, is a graduate of Trinity University at San Antonio and now teaches fifth grade in San Antonio. She will be married on June 13 to Thomas Cribbs of Sumner, Miss.

If it is true that the busiest people are able to accomplish the most, then Dr. Walthall is assured of having a more than successful term as President of the Texas Medical Association. TMA members may look forward to working with a leader who is responsible, enthusiastic, wise, and able. Perhaps more important, however, Dr. Walthall is a friend to those with whom he works; and he tempers his ability to command authority with kindness, consideration, and patient understanding.

No Physician Draft Call Planned for Fiscal 1971

The US Department of Defense does not foresee the need to request a special call for physicians to meet its medical corps officer requirements for the fiscal year 1971, according to a letter dated Feb. 27 from the assistant secretary of defense (manpower and reserve affairs) to the director of the Selective Service System.

If no special call for physicians is made, fiscal year 1971 will be the first annual period since 1960 that the defense department has not found a special draft call for physicians necessary in order to meet the requirements of its military departments for medical officers. Physicians are subject to such calls through the Selective Service System prior to their 35th birthdays.

Recent reductions in military personnel strengths in Vietnam and the effectiveness of the Berry Plan as a major procurement source for medical officers have resulted in a reduction in the number of draft calls during the past two years. The request for physicians during the 1970 fiscal year was the lowest since 1961, and a new call is not expected since the current situation is even more favorable.

UT Regents Authorize Drug Abuse Committee

The formation of a system-wide Resource Committee on Drug Abuse has been authorized by The University of Texas System Board of Regents.

Deputy Chancellor Charles LeMaistre will choose committee members from the most knowledgeable persons within the UT System on all aspects of the drug problem—educational, legal, treatment, and rehabilitation.

The formation of the committee occurred in direct response to "vital concern for the problems related to drug and narcotic use and abuse shown in recent months by the offices of the governor, lieutenant governor, legislative committees, and state agencies," Dr. LeMaistre said. During the last session of the legislature a bill was passed requiring the Texas Education Agency to develop an operational drug education program for public schools of Texas by September, 1970.

The formation of the UT System Resource Committee on Drug Abuse will make multi-disciplinary expertise available to the component institutions and on request to state or private agencies concerned with the development of meaningful drug information programs.

Institute Plans Program In Suicidology Training

The National Institute of Mental Health of the Health Services and Mental Health Administration will sponsor a new national training program in suicidology, announced Dr. Stanley F. Yolles, director.

The program will be conducted by the training staff of the institute's National Center for Mental Health Services, Training, and Research, in collaboration with the NIMH Center for Studies of Suicide Prevention. Training will take place at St. Elizabeths Hospital in Washington, D.C., and in a variety of local field assignments.

Following a new approach to training in suicidology, three different courses of varying lengths and emphases are included in the program in order to meet the individual needs of a wide variety of potential trainees and to prepare them for many kinds and levels of activities in suicide prevention, crisis intervention, and emergency mental health care. The three courses are the following:

(1) A full year of interdisciplinary graduate training in suicidology. One-year fellowships are available to begin training in September, 1970. Fellowships range from $6,500 to $12,000, depending on prior training experience.

(2) Ten weeks of training in a special area of suicidology: (a) evaluation and treatment of suicidal persons; (b) education, training, and consultation; (c) research; and (d) community services and administration. Stipends for the ten-week sessions range from $1,200 to $2,400. Selected trainees may attend more than one term.

(3) A two-week summer institute in suicidology. The first institute, scheduled for July 27-Aug. 8, 1970, will provide an intensive training experience for 150 persons who are actively working or interested in the field of suicidology, including all levels from professionals to volunteers. Depending on need, limited scholarship assistance is available for participation in the summer institute.

Further information and applications for the new training program may be obtained from Dr. Henry Lederer; "Training in Suicidology"; National Center for Mental Health Services, Training, and Research; National Institute of Mental Health; 2700 Nichols Ave., SE; Washington, D.C. 20032.

TEXAS MEDICAL EDUCATION ENTERS EXPANSION PHASE

The increased priority of medical education in Texas is evidenced by (1) the legislative authorization in June, 1969, of two new medical schools, one under the administration of The University of Texas System in Houston and the second under the direction of Texas Tech University in Lubbock; and (2) the accelerated pace at which the existing medical schools, both public and private, are planning to increase their physical plants and enrollments. Both of these factors were endorsed and encouraged in the comprehensive study of medical education facilities made by the Coordinating Board, Texas College and University System, and released in December, 1968.

Planned eventually for 200 entering students, The University of Texas Medical School at Houston will be located in the Texas Medical Center and will be physically connected to Hermann Hospital, which it will use as a primary teaching resource. Hermann Hospital is planning the expansion of its bed capacity from 700 to 1,000 to accommodate this training relationship. Other Houston-area hospitals not currently involved in teaching programs have indicated a willingness to be included in the clinical program.

Architects for the new facility have been appointed and are working on schematic and preliminary construction plans. An application for federal funds for the institution is scheduled this spring; and the appointment of Dr. Cheves McCord Smythe of Evanston, Ill., as dean became effective April 1, 1970. On the same date Charles Robert Richardson, business manager of The University of Texas Medical Branch at Galveston, became associate dean for business affairs at the new UT Medical School at Houston. His office is temporarily located in the Jesse H. Jones Medical Library at the Texas Medical Center.

Appointed by Dr. Smythe, Richardson was graduated from UT at Austin and received a certificate in college and university business management from the University of Omaha. He began his career in the State Auditor's Office in Austin, where he was assigned to college and university audits for two years. He then spent a year as auditor at West Texas State University in Canyon before moving to Galveston in August, 1964, when he was appointed assistant business manager at the Medical Branch. In 1968 he was promoted to business manager.

First Students in 1970

The acceptance of a small entering class of 20 is planned for September, 1970. Students actually will begin their course work on other UT medical campuses. Entering enrollment is scheduled to increase to 48 in 1971 and to 200 as early as possible. Because of the number of UT System biomedical institutions already located in the Texas Medical Center, such an ambitious beginning is possible. The existing institutions include a dental school, school of public health, graduate school of biomedical sciences, and the M. D. Anderson Hospital and Tumor Institute. The cooperative development of basic science programs, which should insure the school's rapid development, will be further facilitated by the nearby location of the UT Medical Branch at Galveston, only 60 miles away.

Tech Plans 1972 Opening

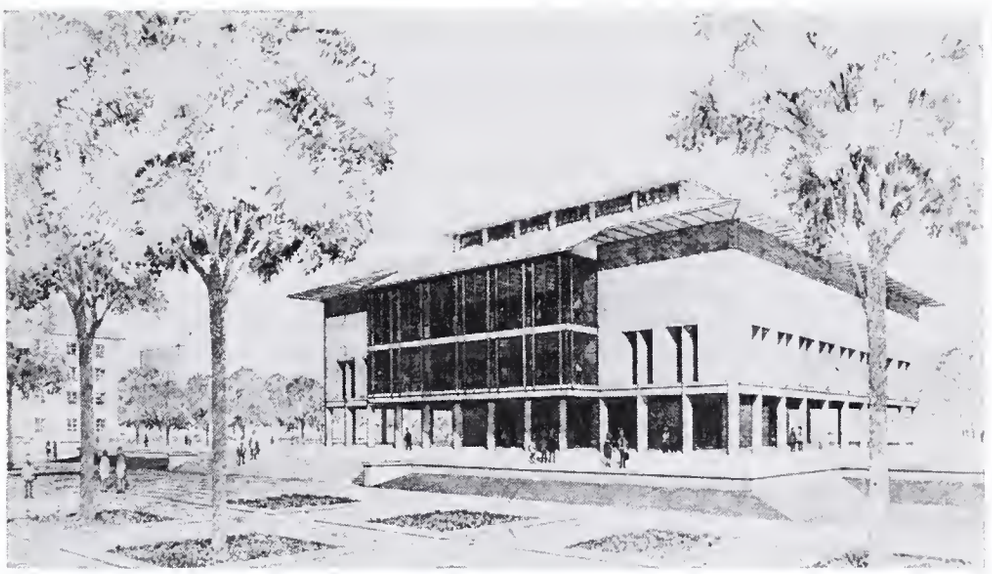
Development of the Texas Tech University School of Medicine at Lubbock is proceeding on a schedule which provides for (1) the submittal of applications to the Department of Health, Education, and Welfare for matching funds in the late summer or early fall of 1970; (2) the acceptance of a small entering class of 10 to 15 students in September, 1972, utilizing existing space on the university campus; and (3) the commencement of construction of the medical school facilities in 1972. Emphasizing training of family physicians and allied health personnel and the development of regional programs of health care in the West Texas area, the school will be located on part of an 80-acre tract specifically dedicated by the university's board of regents to the development of a medical center. The medical school, teaching hospital, and medical center will be the first ever developed in Texas on a university campus.

An integrated master plan for the proposed simultaneous construction of the medical school and the teaching hospital will be developed, as will an affiliation agreement between Texas Tech University School of Medicine at Lubbock and the Lubbock County Hospital District, which will build and maintain the teaching hospital on the medical school campus. Affiliation agreements with other hospitals in Lubbock and the West Texas region will also be made. Dr. William W. Frye, former dean and chancellor of Louisiana State University School of Medicine at New Orleans and now president of United Health Foundations, Inc., has been retained as an official consultant on academic and fiscal programs and planing for the school.

Dr. John A. Buesseler, professor of ophthalmology at the University of Missouri School of Medicine at Columbia,

The newly completed Jennie Sealy Hospital is a welcome addition to facilities on the campus of The University of Texas Medical Branch at Galveston.

Under construction on the UT Medical Branch campus is the new Moody Memorial Library building, depicted in the artist's sketch as it will appear when completed.



Design and location of The University of Texas Medical School at San Antonio allow plenty of room for future expansion of facilities.

was recently named dean and will assume his duties full time in the early summer. Meanwhile, he is assembling a planning team and interviewing prospective faculty and staff members. He will also serve as vice-president for health affairs and as chief executive officer of the Texas Tech University Medical Center.

Having held the professorship at the University of Missouri School of Medicine since 1961, Dr. Buesseler was founding chief of the ophthalmology service from 1959 to 1966. He is also continuing education instructor in ophthalmology for the American Academy of Ophthalmology and Otolaryngology and associate examiner for the American Board of Ophthalmology. He is the University of Missouri executive officer of the Missouri Crippled Children's Service, coordinator for affiliated programs with the university's medical school, and acting executive director of Kansas City General Hospital and Medical Center. He received his MD degree in 1944 from the University of Wisconsin Medical School at Madison and a master of science degree in business administration in 1965 from the University of Missouri Graduate School. He is now a candidate for a PhD degree in business and public administration at Cornell University Graduate School at Ithaca, N.Y.

The Liaison Committee on Medical Education of the American Medical Association and the Association of American Medical Colleges has notified President Grover E. Murray that the Texas Tech University School of Medicine has met the necessary criteria and that the school is considered officially under development. The criteria used to classify a school as "in development" are the

TEXAS MEDICAL EDUCATION ENTERS EXPANSION PHASE

following: (1) formal commitment by a sponsoring body, such as a university or a state legislature, to establish a medical school; (2) firm assurance of financial support for both construction and operation; and (3) appointment of a dean.

UT San Antonio Grows

The University of Texas Medical School at San Antonio will graduate its first class in June of this year. A new class of 104 was admitted in September, 1969, bringing the total student body, including transfer students, to 217.

Following the appointment of Dr. F. Carter Pannill as dean of the school in January, 1965, student enrollment at the medical school began in September, 1966, when 15 entering students were enrolled and were assigned to UT Southwestern Medical School at Dallas and the UT Medical Branch at Galveston. Seven entering students were similarly enrolled in 1967; and 56 entering students began classes at the new facility in San Antonio in September, 1968, at which time the school's then second- and third-year students transferred to San Antonio for continuation of their study. Additional students were accepted as transfers to advanced standing in the second- and third-year classes, bringing total enrollment in September, 1968, to 105.

One hundred entering students will be admitted in each succeeding academic year until 1978, when enrollment will be increased to 125 if enough teaching beds are available to accommodate the additional students. Enrollment should then expand to 150 in 1979 and to 200 by 1980.

UTMB Expansion Ahead

Originally scheduled to admit 200 entering students by 1980, according to recommendations made in 1963 by the Coordinating Board, The University of Texas Medical Branch at Galveston has accelerated its plans for expansion. The UT Medical Branch, with Dr. Truman G. Blocker as president and Dr. Joseph M. White as vice-president for academic affairs and dean of medicine, enrolled 163 students in 1969, will enroll 173 students in 1970, and expects to enroll 178 students in 1971. Continuation of this stepped-up growth rate will allow the school's admittance of 200 students each year from 1972 through 1980.

Southwestern to Double

An accelerated timetable for the expansion of The University of Texas Southwestern Medical School at Dallas, which sets a goal of doubling the school's enrollment capacity within the next five years, has recently been announced. Revised growth plans now call for increasing the size of the annual entering class to 200 students by the fall of 1975, said Dr. Charles C. Sprague, dean of the medical school. Present enrollment rate admits 105 new students per year.

Attainment of the doubled enrollment was made feasible in January when the UT board of regents approved several remaining projects in the Dallas medical school's current Phase One expansion program, including preliminary plans for the construction of four major buildings and an interconnecting plaza. The board authorized architects to proceed with working drawings for the Florence Bioinformation Center, designed to house a new library, computer center, instructional communications, and a bioinformation science program; a new 1,200-seat auditorium with a cafeteria below; a basic sciences teaching building; and a new 12-story academic-administration building. These buildings will be situated off a T-shaped plaza and court area, with lecture and seminar rooms to be built below the plaza.

Paralleling this development is a $25 million expansion and renovation of Parkland Memorial Hospital, the principal teaching hospital of the medical school, which will provide expanded patient facilities for the clinical training of some of the additional medical students.

A combination of local, state, and federal funds will be required if the medical school is to realize its goal of stepped-up growth, according to Dean Sprague. If financing from all sources is achieved on schedule, Phase One building projects should be completed by the fall of 1973, he said; and an application is now pending for federal assistance to complete the Phase One program. The fund request has also been amended to include some additional facilities to meet the increased requirements for earlier handling of a doubled enrollment. These projects include additional teaching space for clinical science departments; new animal quarters; enlarged plant and building service facilities; and renovation of the Cary Building to house expanded clinical activities.

To supplement the requested federal funds, Southwestern Medical Foundation, which created the medical school more than 25 years ago, will conduct a capital fund campaign in 1971 to raise $7.5 million for the medical school. Dr. Sprague said that the UT System is to provide the remaining portion of the capital funds. Additional state appropriations will be required to provide operating funds for the expanded facilities and salaries for the additional

Due to be completed at The University of Texas Southwestern Medical School at Dallas in 1973 are (1) auditorium-cafeteria building; (2) 12-story academic-administration building; (3) Florence Bioinformation Center, to be built in front of existing medical school buildings (center); and (4) basic sciences teaching and research buildings. Adjoining facilities are Parkland Memorial Hospital (top left) and Children's Medical Center (top right).

faculty and staff members needed to serve a doubled enrollment. Administrative and faculty committees are now working on details of these additional fund and personnel requirements, the dean added.

Baylor Plans Increase

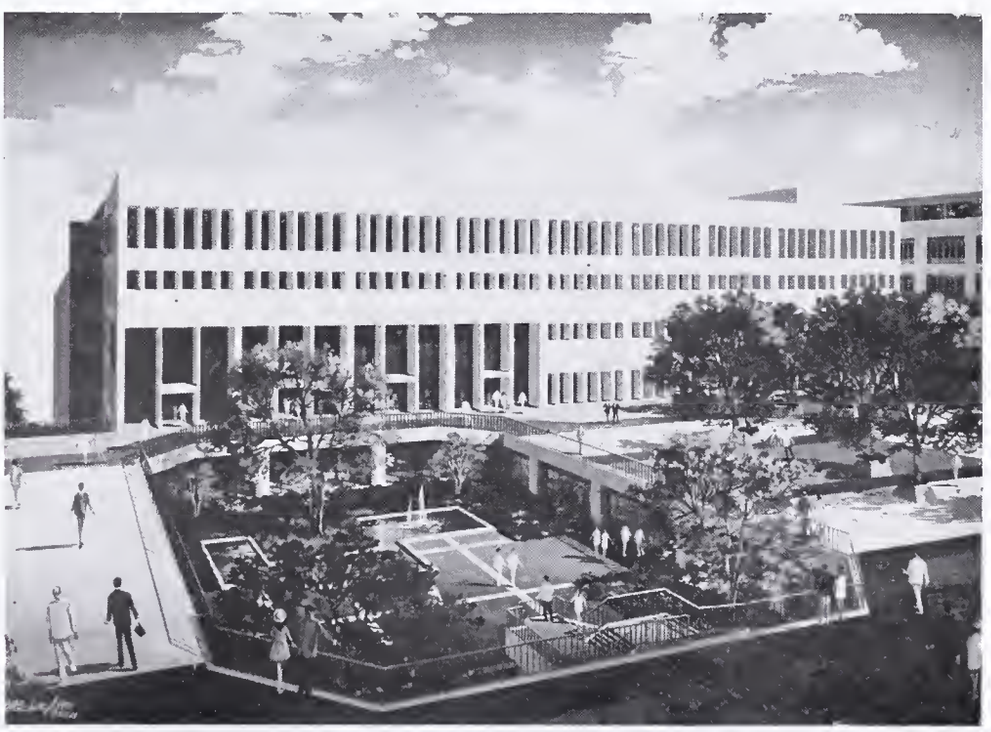
Baylor College of Medicine in Houston also plans to double its annual freshman enrollment within the first half of this decade. Toward that purpose and toward simultaneously increasing physical facilities and expanding the faculty, the school has launched a two-year, $30 million private capital fund campaign, of which $13.5 million has already been received. The fund campaign is specifically pegged for the endowment of 16 chairmanships; 11 professorships, scholarships, and fellowships; general operating funds; and a new building program.

Designed to accommodate a 100% enlargement of Baylor's entering freshman class, the new building space is expected to be completed and occupied by September, 1973, when the school will enroll 168 freshman medical students, an increase of 84 students from Baylor's long-term base line enrollment.

Administrators at Baylor began to phase its expansion program by increasing its entering freshman class from 84 to 92 in September, 1969. They are presently determining the practicality of substantial further enlargements of the entering classes in 1970, 1971, and 1972, utilizing unfinished space in the school's existing facilities to house the classrooms and laboratories necessary to accommodate such increases.

President of Baylor College of Medicine is Dr. Michael E. DeBakey, and its associate dean for medical student affairs is Dr. J. R. Schofield.

In a more detailed view Southwestern's new Florence Bioinformation Center overlooks a central landscaped plaza. Lecture room facilities will be located under the plaza at right.



Not just the tough cases...

Depend on Candeptin® (candicidin) as the agent of first choice in all Candida cases.

Symptoms subside in 48 to 72 hours!
Itching, burning, discharge, and malodor disappear rapidly... patient's embarrassment, too.

Avoids the disappointment of "the cure that didn't take."
CANDEPTIN is "cidal" as well as "static," it is 100 times more potent *in vitro* than nystatin,[2] and it has achieved culture-confirmed cure rates of 90% and more[3] (even in notoriously difficult-to-treat pregnant patients)![1,3,4]

And two weeks does it.
Usually, CANDEPTIN cures in a single 14-day course of therapy.[3]

the fortnight fungicide

Candeptin®

candicidin

Vaginal Tablets/Ointment

Formula: CANDEPTIN Vaginal Ointment contains a dispersion of candicidin powder equivalent to 0.6 mg. per gm. or 0.06% candicidin activity in U.S.P. petrolatum. 3 mg. of candicidin is contained in 5 gm. of ointment or one applicatorful. CANDEPTIN Vaginal Tablets contain candicidin powder equivalent to 3 mg. (0.3%) candicidin activity dispersed in starch, lactose and magnesium stearate.

Indications: Vaginal moniliasis due to *Candida albicans* and other Candida species.

Contraindications: Patient sensitivity to any of the components. During pregnancy manual tablet insertion may be preferred since the use of the ointment applicator or tablet inserter may be contraindicated.

Caution: Clinical reports of sensitization or temporary irritation with CANDEPTIN Vaginal Ointment or Vaginal Tablets have been extremely rare. To avoid reinfection, it is recommended that the patient refrain from sexual intercourse during treatment or the husband wear a condom.

Dosage: One vaginal applicatorful of CANDEPTIN Ointment or one Vaginal Tablet is inserted high in the vagina, twice a day, in the morning and at bedtime, for 14 days. Treatment may be repeated if symptoms persist or reappear.

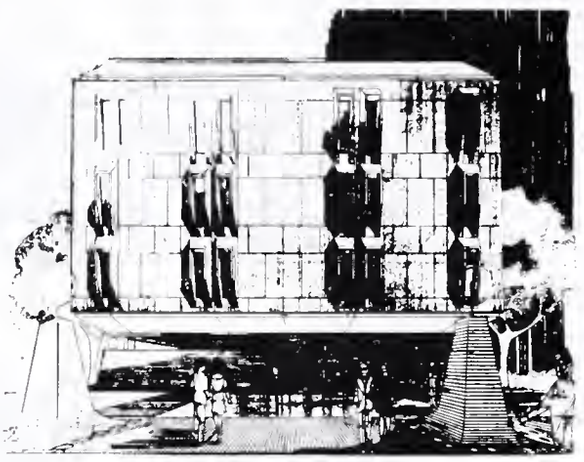
Dosage forms: CANDEPTIN Vaginal Ointment is supplied in 75 gm. tubes with applicator (14-day regimen requires 2 tubes). CANDEPTIN Vaginal Tablets are packaged in boxes of 28, in foil, with inserter—enough for a full course of treatment. Store under refrigeration.

Federal law prohibits dispensing without prescription. CANDEPTIN is a registered trade-mark of Julius Schmid, Inc.

References: 1. Olsen, J. R.: Journal-Lancet *85*:287 (July) 1965. 2. Lechevalier, H.: Antibiotics Annual 1959-1960, New York, Antibiotica, Inc., 1960, pp. 614-618. 3. Giorlando, S. W., Torres, J. F., and Muscillo, G.: Am. J. Obst. & Gynec. *90* 370 (Oct. 1) 1964. 4. Friedel, H. J.: Maryland M. J. *15*:36 (Feb.) 1966.

Julius Schmid Pharmaceuticals
423 West 55th Street
New York, N.Y. 10019

NOW LEASING



VALLEY TOWERS
PROFESSIONAL BUILDING
7603 BELLFORT
HOUSTON, TEXAS

contact:

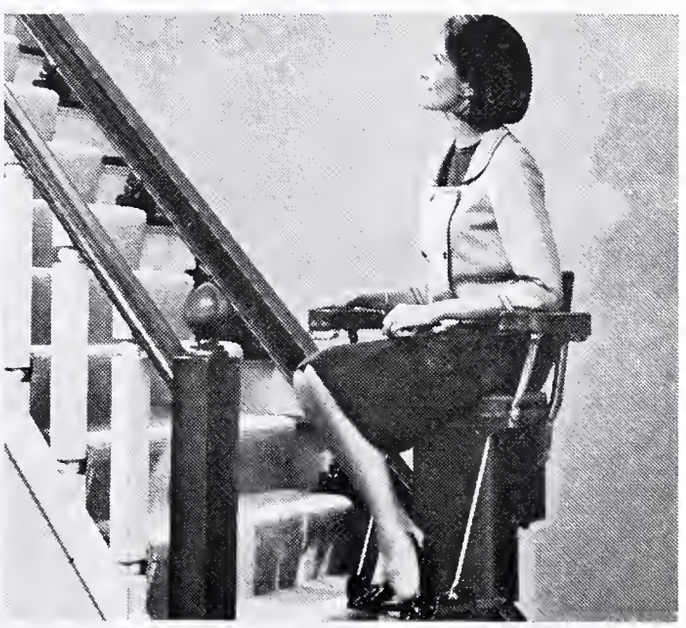
LAGUARTA GAVREL & BOLIN INC
Realtors

PHILLIP SHUMATE

713/622-2200

WELCOLATOR

STAIRWAY ELEVATOR



Sit down and ride up! (or down) at the touch of a button. Ideal way to climb stairs. Like living in a one-story home. Comfortable, attractive styling. The Wecolator is superbly engineered, cog drive—no cables, completely safe and virtually maintenance free. Installed on any straight or curved stairway . . . in just a few hours.

Write or Call:

CUSTOM HOME ELEVATOR CO.

P. O. Box 13627 Dept. M
Ft. Worth, Texas 76118 • A/C 817/281-8188

The treatment of

impotence

in the American male is complex.
The concept of chemotherapy plus the physician's psychological support is confirmed as effective therapy.

NEW CLINICAL STUDY

The Treatment of Impotence with Methyltestosterone Thyroid (100 patients — Double Blind Study)
T. Jakobovits
Fertility and Sterility, January 1970
Official Journal of the American Fertility Society

Android®

(thyroid-androgen) tablets

Double-Blind Study and Type of Patient: 100 patients suffering from undifferentiated impotence. Examination revealed the patients were within the average range of 17-Ketosteroid excretion and protein bound iodine. Except for fatigue in some patients all were in good health. Study was for one month in duration. Each patient received one tablet 3 times daily.

Results: Of the patients receiving the active medication (Android) a favourable response was seen in 78%. This compares with 40% with those on placebo. 80% of the patients treated with the active ingredients showed relief in fatigue compared with 42% of those receiving the placebo. Although psychotherapy is indicated in patients suffering from functional impotence the concomitant role of chemotherapy (Android) cannot be disputed.

Contraindications—Methyltestosterone is not to be used in malignancy of reproductive organs in male, coronary heart disease. Thyroid is not to be used in heart disease, hypertension unless the metabolic rate is low.

References: 1. **Montesano, P., and Evangelista, I.** Methyltestosterone-thyroid treatment of sexual impotence. Clin Med 12:69, 1966. 2. **Dublin, M. F.** Treatment of impotence with methyltestosterone-thyroid compound. West Med 5:67, 1964. 3. **Titeff, A. S.** Methyltestosterone-thyroid in treating impotence. Gen Prac 25:6, 1962. 4. **Hellman, L., Bradlow, H. L., Zumoff, B., Fukushima, D. K., and Gallagher, T. F.** Thyroid-androgen interrelations and the hypocholesteremic effect of androsterone. J Clin Endocr 19:936, 1959. 5. **Farris, E. J., and Colton, S. W.** Effects of L-thyroxine and liothyronine on spermatogenesis. J Urol 79:863, 1958. 6. **Osol, A., and Farrar, G. E.** United States Dispensatory (ed. 25). Lippincott, Philadelphia, 1955, p. 1432. 7. **Wershub, L. P.** Sexual Impotence in the Male. Thomas, Springfield, Ill., 1959, pp. 79-99.

REFER TO PDR

Choice of 4 strengths:

Android

Each yellow tablet contains:
Methyl Testosterone ..2.5 mg.
Thyroid Ext. (1/6 gr.) ..10 mg.
Glutamic Acid .....50 mg.
Thiamine HCL .....10 mg.
Dose: 1 tablet 3 times daily.
Available:
Bottles of 100, 500, 1000.

Android-HP
HIGH POTENCY

Each red tablet contains:
Methyl Testosterone ..5.0 mg.
Thyroid Ext. (½ gr.) ...30 mg.
Glutamic Acid .....50 mg.
Thiamine HCL .....10 mg.
Dose: 1 tablet 3 times daily.
Available:
Bottles of 100, 500, 1000.

Android-X
EXTRA HIGH POTENCY

Each orange tablet contains:
Methyl Testosterone .12.5 mg.
Thyroid Ext. (1 gr.) ....64 mg.
Glutamic Acid .....50 mg.
Thiamine HCL .....10 mg.
Dose: 1 or 2 tablets daily.
Available:
Bottles of 60, 500.

Android-Plus
WITH HIGH POTENCY B-COMPLEX AND VITAMIN C

Each white tablet contains:
Methyl Testosterone ..2.5 mg.
Thyroid Ext. (¼ gr.) ...15 mg.
Ascorbic Acid (Vit. C) .250 mg.
Thiamine HCL .....25 mg.
Glutamic Acid .....100 mg.
Pyridoxine HCL .....5 mg.
Niacinamide .....75 mg.
Calcium Pantothenate .10 mg.
Vitamin B-12 .....2.5 mcg.
Riboflavin .....5 mg.
Dose: 2 tablets daily.
Available: Bottles of 60, 500.

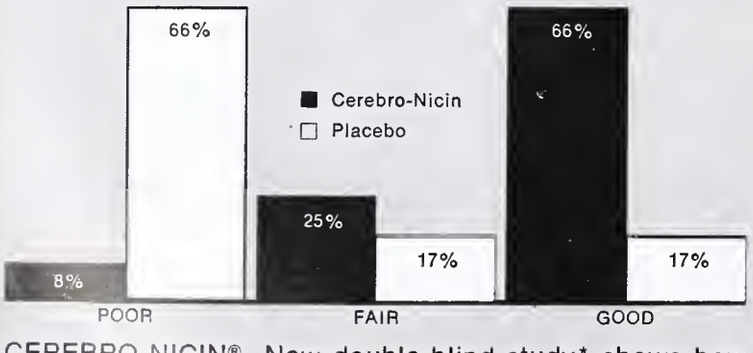
Write for literature and samples: BROWN THE BROWN PHARMACEUTICAL CO., INC. 2500 West 6th Street, Los Angeles, California 90057
A SUBSIDIARY OF ASSOCIATED CARE ENTERPRISES, INC.

For the treatment of the aging patient

Cerebro-Nicin®

capsules/elixir

A Gentle Cerebral Stimulant and Vasodilator



CEREBRO-NICIN® New double-blind study* shows how effectively senility can be forestalled. Four times as many aging patients showed striking improvement.

*A Double-Blind Study of Cerebro-Nicin, Therapy for the Geriatric Patient, R. Goldberg Jrnl,. of the Amer. Ger. Soc. June, 1964

Available in a tasty wine base elixir and capsules

Each Cerebro-Nicin capsule contains:

Pentylenetetrazole	100 mg.
Nicotinic Acid	100 mg.
Ascorbic Acid	100 mg.
Thiamine HCl	25 mg.
l-Glutamic Acid	50 mg.
Niacinamide	5 mg.
Riboflavin	2 mg.
Pyridoxine	3 mg.

DOSAGE: One capsule t.i.d. or as prescribed by physician.
AVAILABLE: Bottles of 100, 500, 1000 capsules.
Also elixir 8 oz. bottles.
CONTRAINDICATIONS: There are no known contraindications to Pentylenetetrazole although caution should be exercised when treating patients with a low convulsive threshold.
Most persons experience a flushing or tingling sensation after taking a higher potency niacin-containing compound. As a secondary reaction some will complain of nausea and other sensations of discomfort. This reaction is transient and is rarely a cause of discontinuance of the drug if the patient is forewarned to expect the reaction.

REFER TO PDR

Write for literature and samples...

BROWN THE BROWN PHARMACEUTICAL CO.
2500 W. 6th St., Los Angeles, Calif. 90057
Write for Product Catalog

Physician Criticizes Attempted Summary of Emphysema, Related Diseases

Pulmonary Emphysema and Related Lung Diseases, Theodore Rodman and Francis H. Sterling, 468 pp., illus., St. Louis, The C. V. Mosby Co., 1969, $10.

CHRONIC BRONCHITIS and pulmonary emphysema are among the most important and challenging public health problems of our time. This very timely effort is an attempt to summarize the literature of recent years and to present a coherent expression of the current state of knowledge regarding these conditions. The authors, however, fell far short of their stated goals.

Many inconsistencies with virtual omissions in certain areas and tedious, sometimes conflicting overemphasis in other areas are apparent. The schema of pathogenesis of emphysema and bronchitis properly places emphasis on inhalation of tobacco smoke and infection. However, the authors recognize that, like most schemes presented at this time, theirs is probably oversimplified and incomplete; for instance, they slighted the significance of alpha$_1$ antitrypsin deficiency.

The "typical bronchitic patient" presented in chapter three is not typical when compared to most published criteria, which emphasize the difficulty in differentiating bronchitis from emphysema through pulmonary function tests. Moreover, the data presented suggests a patient with extensive airways plugging with areas of consolidation and/or atelectasis.

The term "pseudo-asthmatic emphysema" is a striking inconsistency which serves no purpose. The condition described is a recognizable but perplexing collection of signs and symptoms, the etiology of which is not clear and is probably multiple in origin. Patients with this condition who develop emphysema appear to be patients with primary vascular disorders.

The authors persist in perpetuating the confusion in terms with their terminology for spirometry. For example, the term "maximum mid-expiratory flow rate" is used when the more meaningful term "forced expiratory flow 25-75%" has been adopted by the physiology committee of the American College of Chest Physicians and is used uniformly abroad. (Kory, Rankin, Snider, and Tomashefski, *Diseases of the Chest,* vol. 43, p. 214, 1963.) The term "evaluation of disability" used in chapter 11 is inappropriate as used, since disability is a legal and social problem; medical physiological examination determines impairment. Moreover, it is unfortunate that the authors chose to call attention again to the confusing and unsatisfactory system described by Wilson, *et al,* for evaluation of impairment and overlooked the very pertinent work of Armstrong, *et al, American Review of Respiratory Diseases,* vol. 93, p. 90, 1966.

From a documentary point of view the chapters on treatment are complete; but they lack something in coordination and presentation of workable plans of treatment in relation to clinical and functional manifestations. The electrocardiographic and vectorcardiographic section is cumbersome and repetitious. Correlations with other functional and clinical findings are lacking. Another striking inconsistency is the lengthy bibliography that appears with each chapter but is not used to support or amplify the text. The appendix section, however, should prove useful, especially the questionnaire portion and the suggested flow sheet for outpatient follow-up.

The allied health worker, the medical student, and the general practitioner may find this text of value; but the serious student of pulmonary medicine will probably find it significantly lacking when considered as the precise authoritative critique that might be anticipated.

WILLIAM F. MILLER, M.D.,
Dallas.

NEW BOOKS IN TMA LIBRARY

Bogardus, C. R., Jr.: *Clinical Applications of Physics of Radiology and Nuclear Medicine,* St. Louis, Warren H. Green, Inc., 1969.

Cushing, H.: *Selected Papers on Neurosurgery,* New Haven, Conn., Yale University Press, 1969.

Denecke, H. J. and Meyer, R.: *Plastic Surgery of Head and Neck,* vol. 1, *Corrective and Reconstructive Rhinoplasty,* New York, Springer-Verlag New York, Inc., 1967.

Doppman, J. L., DiChiro, G., and Ommaya, A. K.: *Selective Arteriography of the Spinal Cord,* St. Louis, Warren H. Green, Inc., 1969.

Fletcher, G. H. and Jing, B.: *The Head and Neck, Atlas of Tumor Radiology,* Chicago, Year Book Medical Publishers, Inc., 1968.

Itoh, S.: *Integrative Mechanism of Neuroendocrine System,* Japan, Hokkaido University School of Medicine, 1968.

Krieghbaum, H. and Rawson, H.: *An Investment in Knowledge,* New York, New York University Press, 1969.

McLennan, C. E.: *Synopsis of Obstetrics,* ed. 8, St. Louis, The C. V. Mosby Co., 1970.

Rodin, E. A.: *The Prognosis of Patients with Epilepsy,* Springfield, Ill., Charles C Thomas, Publisher, 1968.

Ryan, R. E., *et al: Synopsis of Ear, Nose, and Throat Diseases,* ed. 3, St. Louis, The C. V. Mosby Co., 1970.

Sewell, W. H.: *Coronary Disease Management,* St. Louis, Warren H. Green, Inc., 1969.

★

Specialized Service

IN

PROFESSIONAL LIABILITY INSURANCE

is a high mark of distinction

THE

MEDICAL PROTECTIVE COMPANY

FORT WAYNE, INDIANA

Professional Protection Exclusively since 1899

AUSTIN OFFICE: Robert F. Reiman, Representative
3201 Clearview, Austin 78703 Telephone: 512-472-9603
DALLAS OFFICE: Gayle Nelson and Arthur F. Ennis, Jr., Representatives
816 Medical Arts Building, Dallas 75201 Telephone: 214-742-4980
HOUSTON OFFICE: Richard B. Ross and William A. Orsburn, Representatives
525 Hermann Professional Bldg., Houston 77025 Telephone: 713-523-1127

Turner's Clinical & X-Ray Laboratories

Medical Center

El Paso, Texas

Telephone 532-4689

☆

SURGICAL PATHOLOGY
CLINICAL PATHOLOGY
RADIOLOGY

☆

GEORGE TURNER, M.D.
JEANNE TURNER BOWMAN, M.D.
DAVID LIBMAN, M.D.

The Martin X-Ray and Radium Clinic

3501 Gaston Ave. Dallas, Texas

ADJOINING
GASTON EPISCOPAL HOSPITAL

For X-ray diagnosis and the X-ray and radium treatment of cancer and other conditions suitable for radiation therapy.

Chas. L. Martin, M.D. James A. Martin, M.D.

PAMPHLETS

With summer coming and millions of Americans taking to the outdoors, the American Medical Association has available a pamphlet entitled *Poison Plant Rashes* to warn the public of poison ivy contact and dermatitis. Prepared by Dr. Naomi M. Kanof for the AMA Committee on Cutaneous Health and Cosmetics, the brochure identifies the characteristics of the poison ivy family, the types of skin eruptions contact may cause, and the anticipated discomfort. Dr. Kanof recommends both treatment and preventive measures and comments on mechanical and herbicidal techniques for plant eradication.

Single review copies are free; and prices range from 20 cents each to 12 cents each for orders of 1,000 or more. Medical societies receive a 50% discount. Copies are available from the AMA Order Department, 535 N. Dearborn St., Chicago 60610.

How to Keep Your Teeth After 30 by Theodore Berland is a new Public Affairs pamphlet which explains what periodontal disease is and how to treat and prevent it. Of 20,000,000 Americans who have no natural teeth, 98% have lost their teeth as a result of periodontal disease. Berland cites the first symptoms of this and various other teeth and gum conditions, and he suggests preventive measures as well as procedures and treatments a dentist may follow when problems are found. The pamphlet is available for 25 cents from the Public Affairs Committee, 381 Park Ave. S, New York 10016.

The American National Red Cross Blood Program has published a pamphlet entitled *The 20 Most Common Excuses for not giving blood*. Each excuse listed is followed by an appropriate statement of fact or explanation which points out the invalidity of the excuse and reassures the prospective blood donor. The pamphlet is available from Blood Program, Midwestern Area, American National Red Cross, 4050 Lindell Blvd., St. Louis 63108.

Staff members of the molecular disease branch of the National Heart and Lung Institute and of the nutrition department of the Clinical Center of the National Institutes of Health have prepared a series of publications entitled *Dietary Management of Hyperlipoproteinemia*. Designed to assist physicians and nutritionists guide the changes in diet recommended for patients with high levels of cholesterol or other fats in the blood, the series contains a therapeutic diet for each type of hyperlipoproteinemia, a condition associated with increased risk of heart attacks and arteriosclerosis. The booklets are available without charge to physicians and dietitians from Publications Section, Office of Heart and Lung Information, National Heart and Lung Institute, Bldg. 31, Room 4A10, Bethesda, Md. 20014.

PERSONALS

Dr. Charles D. Bussey of Dallas has been unanimously elected chairman of the American Medical Association's Council of Scientific Assembly, which supervises the scientific programs at the AMA's annual and clinical conventions.

Houston allergy specialist **Dr. John P. McGovern** was recently installed as the new president of the Association of Convalescent Homes and Hospitals for Asthmatic Children.

New chairman of the neurology department at Baylor College of Medicine in Houston is **Dr. John Stirling Meyer.** He has been serving as chairman of the department of medicine at Wayne State University School of Medicine at Detroit, Mich.

Several Texas physicians were recently selected as new fellows of the American College of Radiology. They include **Drs. Cyrus P. Klein** of Texarkana; **Melvyn H. Schreiber** of Galveston; **Leonard J. Bisaccia** of Fort Sam Houston; **Phillip W. Voltz, Jr.,** of San Antonio; **W. Hanson Granger** of Waco; **Wayne V. Ramsey, Jr.,** of Abilene; **Gerald D. Dodd, Jr.,** of Houston; **Jesse B. Johnson, Jr.,** of La Marque; and **David H. Allen** of Wichita Falls.

Associate professor of pediatrics at The University of Texas Medical School at San Antonio **Dr. William T. Kniker** has been elected to membership in the American Academy of Allergy.

Dr. Fernando Guerra has accepted an appointment as an instructor in the department of pediatrics at The University of Texas Medical School at San Antonio, effective July 1, 1970. He is a 1964 graduate of the UT Medical Branch at Galveston.

Recent Deaths

Dr. J. H. Stephenson

Dr. James H. Stephenson, 85, of Dallas died March 9, 1970, in Dallas. He had been a practicing physician for more than half a century before retiring in 1962.

Born in Weston, Tex., Dec. 18, 1884, Dr. Stephenson was the son of Rev. William Henry and Harriet Monroe Stephenson. He was graduated from Southwestern University at Georgetown and received his medical degree in 1907 from Vanderbilt University School of Medicine at Nashville, Tenn. He began his medical practice in Cravens, La., and moved to Dallas in 1915. During World War I he served as a medical officer with the US Army. After completion of his military duty he returned to Dallas and in 1927 was appointed superintendent of the Dallas County Hospital System. He served in that position until 1937, when he became superintendent of the Houston City-County Hospital System and of Jefferson Davis Hospital in Houston. In 1942 he was recalled to active duty in World War II, and he served as a US Army colonel assigned

DR. STEPHENSON

to the US Public Health Service. Following the war and until his retirement he served as a medical officer with the Veterans Administration in Dallas.

A charter member and former president of the Texas Hospital Association, Dr. Stephenson was a member of American Medical Association, American Hospital Association, and Texas Medical Association. He was elected to honorary membership in TMA in 1956, and he was also an honorary member of Dallas County Medical Society. He served on the board of stewards of Highland Park United Methodist Church.

Surviving Dr. Stephenson are a son, James L. Stephenson of Dallas; two grandchildren; and three great-grandchildren. He was preceded in death by his wife, the former Laura T. Lucas, in 1967.

Dr. C. Friedman

Dr. Carl Friedman, 56, Waco psychiatrist, died March 23, 1970, at a Dallas hospital. Death resulted from complications of a gastrectomy.

The son of Joseph and Mary Levitov Friedman, Dr. Friedman was born March 24, 1914, in Jersey City, N. J. He was graduated in 1935 from New York University in New York City with a BA degree, and he received his MD degree in 1938 from New York University School of Medicine. He interned at St. John's Queens Hospital, Long Island City, New York, from 1938 to 1940. He served a residency at the same hospital until he began practice at the Veterans Administration Hospital in Waco in 1941. From 1944 to 1946 he served as a major with the US Army at the VA hospital in Waco. In 1946 he entered the private practice of neurology and psychiatry.

A former chief of staff at Providence Hospital in Waco, Dr. Friedman was a fellow of the American Psychiatric Association and a member of American Medical Association, Texas Medical Association, and McLennan County Medical Society. Miriam Hall, the first psychiatric unit at Providence Hospital and the first facility of its type in Central Texas, was founded under his leadership in 1952. He also belonged to Rotary International and was a member of the board of Temple Rodef Sholom in Waco.

Survivors include two sons, Joseph D. Friedman of San Francisco, Calif., and Martin G. Friedman, a student at The University of Texas at Austin; one

DR. FRIEDMAN

daughter, Mary Friedman of Waco; and a sister, Mrs. Reuben Horowitz of West New York, N.J. Dr. Friedman was preceded in death by his wife, the former Lillian Gross, a Waco pediatrician, in 1968.

Dr. W. V. Ramsey

A former vice-president of Texas Medical Association, Dr. Wayne Vetree Ramsey, Sr., of Abilene died March 16, 1970, at an Abilene hospital of renal failure. He was 75.

Born Jan. 20, 1895, in Baird, Tex., Dr. Ramsey was the son of Dr. H. H. Ramsey (DDS) and Kate Richardson Ramsey. He received a BA degree from Trinity University, then located in Waxahachie, Tex., and taught school for three years. He then took premedical courses at Hardin-Simmons University in Abilene and was graduated in 1925 from The University of Texas Medical Branch at Galveston with an MD degree. He interned at Baylor Hospital in Dallas and later did postgraduate work at Tulane University School of Medicine at New Orleans. He practiced medicine, specializing in radiology, in Abilene until his retirement in 1965.

Dr. Ramsey was a former chief of the surgical staff at Hendrick Memorial Hospital in Abilene and was past president of the Texas Radiological Society and of Taylor-Jones Counties Medical Society. Elected to inactive membership in Texas Medical Association in 1963, he was a member of American Medical Association, American College of Radiology, and Radiological Society of North America and was a diplomate of the American

DR. RAMSEY

Board of Radiology. Also a member of the Lions Club and a 32nd degree Mason, he was the first radiologist and dermatologist in West Texas.

Surviving Dr. Ramsey are his wife, the former Grace Marie Dawley; two sons, Dr. Wayne V. Ramsey, Jr., and Dr. Jack D. Ramsey, all of Abilene; three brothers, H. H. Ramsey, Jr., of Corpus Christi, Dr. M. T. Ramsey and Dr. David S. Ramsey, both of Abilene; three sisters, Mrs. William M. Lewis and Mrs. C. G. Atkinson, both of Abilene, and Mrs. E. N. Woodrum of Lubbock; four grandsons; and one granddaughter.

Dr. E. T. Williams

La Grange, Tex., general practitioner since 1946, Dr. Edward T. Williams, died March 4, 1970, in an Austin hospital. He was 53.

Dr. Williams was born July 22, 1916, in Chicago, the son of Clifford T. and Viene Caswell Williams. He was graduated from the University of Michigan at Ann Arbor in 1939 with an AB degree; and he received his MD degree in 1942 from the University of Michigan Medical School at Ann Arbor. He interned at University Hospital in Ann Arbor from 1942 to 1943; and he served as a flight surgeon in the US Army during World War II, attaining the rank of captain.

Past president and secretary of the Colorado-Fayette Counties Medical Society and past president of the staff at Fayette Memorial Hospital, Dr. Williams was a member of Texas Medical Association, American Medical Association, American Academy of General Practice, and Texas Society of Athletic Team Physicians. He was a former state director of the Texas Academy of General Practice; and he belonged to the Lions Club, American Legion, La Grange Chamber of Commerce, La Grange Quarterback Club, and La Grange Parent-Teacher Association. He had served for the past two years as the La Grange school district's physician and formerly had served as the La Grange schools' football team physician. He was senior warden of St. James Episcopal Church. He served as local physician and surgeon for the Katy Railroad and as an uncompensated member of the Selective Service System. He was chairman of the medical advisory board of the local March of Dimes Foundation.

Surviving Dr. Williams are his wife, the former Marjorie Ann Logan, of La

DR. WILLIAMS

DR. POTTER

DR. FRICK

Grange; three sons, Dr. Edward T. Williams, III, of Ann Arbor, Mich., John Phillip Williams, and Bruce Gilman Williams, both of La Grange; a daughter, Lucia Leigh Williams of La Grange; and a brother, Phillip C. Williams of Prattville, Ala.

Dr. C. Potter

Retired Temple anesthesiologist Dr. Claudia Potter died Feb. 2, 1970, in a Temple hospital. She was 89 and had been ill for several years.

The daughter of W. T. C. and Laura Smith Potter, Dr. Potter was born Feb. 3, 1881, in Denton. The sixth woman to be graduated from The University of Texas Medical Branch at Galveston, she received her MD degree in 1904 and interned at John Sealy Hospital in Galveston from 1904 to 1905. She entered private practice in San Antonio in 1905-1906 before serving a residency at Scott and White Memorial Hospital in Temple. She later did postgraduate work at the Mayo Clinic in Rochester, Minn., and at Johns Hopkins University School of Medicine in Baltimore, Md. When she joined the staff at Scott and White in June, 1906, she was the fourth member of the staff and was head of the anesthesia department. She was the first physician to administer gas anesthesia in Texas. Having served on the staff of Scott and White Memorial Hospital for 41 years, she retired in 1947.

A charter member and former president of the Texas Society of Anesthesiologists, Dr. Potter was elected an honorary member of the American Society of Anesthesiologists in 1961 and was elected to honorary membership in Texas Medical Association in 1952. She also belonged to American Medical Association, Southern Medical Association, and was a former secretary of Bell County Medical Society. Certified by the American Board of Anesthesiology in 1948, she was also an honorary member of Delta Kappa Gamma and a member of American Association of University Women and of the First Christian Church in Temple. She was the first woman ever to receive the golden "T" award from the UT Medical Branch for her 50 years of service to medicine.

Dr. Potter is survived by a sister, Miss Helen Potter of Temple; a nephew, Rev. Clayton Potter of Fort Worth; a niece, Mrs. James Rice of Statesville, N.C.; four grand-nieces; and a sister-in-law, Mrs. W. C. Potter of Denton.

Dr. S. J. Gaddy

Long time El Paso eye, ear, nose, and throat specialist, Dr. Shellie James Gaddy died Feb. 28, 1970, at his home in El Paso following a lengthy illness. He was 82 and had retired from his practice in 1966.

Born Dec. 3, 1888, in Columbia, Miss., Dr. Gaddy was the son of James Hurd and Mattie Bufkin Gaddy. He attended Vanderbilt University and was graduated from the University of Alabama School of Medicine at Mobile in 1917 with an MD degree. He served as a lieutenant in the US Army Medical Corps during World War I, and he later took postgraduate courses in New York and in New Orleans. Before moving to El Paso in 1934 he practiced medicine in Hattiesburg, Miss., and in Albuquerque, N.M.

Past chairman of the board of stewards of the Fort Boulevard Methodist Church in El Paso, Dr. Gaddy held a 50-year membership pin in the Ancient Free and Accepted Masons of El Paso. He was a member of American Medical Association, Texas Medical Association, and El Paso County Medical Society.

Surviving Dr. Gaddy are two sons, Dr. Charles M. Gaddy (DDS) and Dr. Burrell C. Gaddy (DDS), both of El Paso; three daughters, Mrs. Frances Benge and Mrs. Rachel Myers, both of El Paso, and Mrs. Elise Lawrence of Barstow, Calif.; a brother, Ira Gaddy of Long Beach, Miss.; and two sisters, Mrs. Linda Bilbo and Mrs. Inez Calhoun, both of Jackson, Miss. He was preceded in death by his wife, the former Ivy Elise Cato of Brookhaven, Miss., in 1967.

Dr. R. T. Frick

Garland orthopedic surgeon Dr. Ross Thurber Frick, 37, died Feb. 19, 1970, in Aspen Colo. He suffered a heart attack.

Born Feb. 14, 1933, in San Antonio, Dr. Frick was the son of Alvin E. and Palma Duderstadt Frick. He attended The University of Texas at Austin from 1949 to 1954; and he received his MD degree in 1958 from the UT Medical Branch at Galveston. Following an internship from 1958 to 1959 at the William Beaumont General Hospital in El Paso, he served a four-year residency in orthopedic surgery at the UT Medical Branch hospitals. He then served in the US Army from 1963 to 1969. He attended Medical Field Service School at Fort Sam Houston in San Antonio in 1963 and was stationed at Fort Sill, Okla., prior to serving a three-year tour of duty in Munich, Germany, where he was chief of orthopedic surgery at an Army hospital. In 1966 he did postgraduate study in orthopedic surgery in London, England; and from 1967 to 1969 he served as chief of the orthopedic surgery division at Womack Army Hospital at Fort Bragg, N. C. He attained the rank of lieutenant colonel. In May, 1969, he began his practice in Garland.

Dr. Frick held memberships in Dallas County Medical Society, Texas Medical Association, American Medical Association, Singleton Surgical Society, and the Episcopal Church of the Resurrection. He was certified as a fellow of the American Academy of Orthopaedic Surgeons in 1967. He was also a member of Phi Gamma Delta social fraternity, Alpha Kappa Kappa medical fraternity, and Mu Delta honorary medical fraternity. He was recognized as one of the outstanding young men of America in 1965 by the Junior Chamber of Commerce of the United States.

Survivors include his wife, the former Virginia Shropshire; a son, Ross T. Frick, Jr.; a daughter, Kimberly Ann Frick, all of Garland; his parents of Floresville, Tex.; a brother, Alvin E. Frick, Jr., of Floresville; and a sister, Mrs. Dianne Prosser of Tacoma, Wash.

Dr. S. Z. Frazier

Lamesa general practitioner and surgeon for 32 years, Dr. Samuel Z. Frazier, 71, died Feb. 8, 1970, in a Lamesa hospital. He had suffered a stroke in January.

The son of Samuel Z. and Fannie Ellen Bartram Frazier, Dr. Frazier was born April 17, 1898, in Louisa, Ky. He attended Kentucky Normal College and was graduated in 1928 from the University of Louisville School of Medicine with an MD degree. He interned and served a residency in surgery at Louisville City Hospital. He had practiced medicine in Lamesa from 1933 until he retired in 1965.

Elected to inactive membership in the Texas Medical Association in 1967, Dr. Frazier was a member of Dawson-Lynn-Terry-Gaines-Yoakum Counties Medical Society and American Medical Association. He belonged to the Lamesa Masonic Lodge, and he was a 32nd degree Mason in the El Paso Consistory of the Scottish Rite. A member of the Baptist church, he was also a sports enthusiast and a former owner of the Lamesa Loboes professional baseball club.

Surviving Dr. Frazier are his wife, the former LaNelle Bartlett of Lamesa; a daughter, Mrs. Jimmie Robinson of Odessa; a sister, Mrs. Carl Crumb of DeLand, Fla., and two grandchildren.

Dr. M. M. Connor

General practitioner at Texas A&M University Hospital, Dr. Marvin Myers Connor, 53, died Jan. 19, 1970, in Houston, Tex., of arteriosclerotic heart disease.

Born Sept. 5, 1916, in Cumby, Tex., Dr. Connor was the son of Dr. W. E. and Blanche Myers Connor. He attended what is now East Texas State University at Commerce and The University of Texas at Austin and was graduated in 1942 from the UT Medical Branch at Galveston with an MD degree. He interned at Roper Hospital in Charleston, S. C., in 1942-1943; and he served as a captain in the US Air Force from 1943 to 1946. He practiced in Commerce from 1946 to 1965 and in Houston from 1965 to 1969, when he moved to College Station.

Dr. Connor was a member of Brazos-Robertson Counties Medical Society, Texas Medical Association, and American Medical Association. He also belonged to the Methodist church.

Surviving Dr. Connor are his son, Michael Kelly Connor of Mesquite, Tex.; his mother of Cumby; two brothers, James E. Connor and Dr. W. Harris Connor; and a sister, Mrs. Don Schneider, all of Houston.

Dr. J. B. Birt

General practitioner Dr. John Bunyan Birt, 84, died Jan. 23, 1970, at his home in Harper, Tex. He had been ill for several weeks with pneumonia, and cause of death was cor pulmonale.

Born June 23, 1885, in Van Zandt County, Tex., Dr. Birt was the son of James Johnson and Adah Graham Birt. He attended what is now East Texas State University at Commerce and was graduated from Baylor College of Medicine, then located in Dallas, in 1912 with an MD degree. He interned at Baylor Hospital, now Baylor University Medical Center, before moving to Harper in 1913. From 1914 through 1923 he practiced medicine at Pilot Grove, Tex., and then at Whitewright, Tex., but in 1924 returned to Harper, where he had since practiced.

A former president of Kerr-Kendall-Gillespie-Bandera Counties Medical Society, Dr. Birt was a member of Texas Medical Association and American Medical Association. He was elected to honorary membership in TMA in 1965. He was a deacon in the Baptist church and was a Mason. He also belonged to Modern Woodmen of America and Woodmen of the World.

Surviving Dr. Birt are his wife, the former Hilda McDougall, of Harper; three sons, Bryan B. Birt of Sarasota, Fla., Harold B. Birt of San Antonio, and J. B. Birt, Jr., of Scottsdale, Ariz.; one daughter, Mrs. Vester B. Parker of Harper; two brothers, Robert Birt of Dallas and Bryan F. Birt of Ben Wheeler, Tex.; 17 grandchildren; and five great-grandchildren.

Dr. A. W. Jester

Dr. Albert William Jester, 49, Houston radiologist, died Jan. 16, 1970, in Houston. Cause of death was acute massive myocardial infarction.

Born Jan. 8, 1921, in Taylor, Tex., Dr. Jester was the son of Rev. Thomas C. and Mae Richardson Jester. He was graduated from Baylor University in Waco in 1942 with a bachelor of science degree, and he received his MD degree in 1944 from Baylor College of Medicine in Houston. He interned at Hermann Hospital in Houston from 1944 to 1945, before serving active duty as a lieutenant with the US Navy from 1945 to 1946. He entered general practice in Crosby, Tex., in 1946. He served residencies in radiology at North Carolina Baptist Hospitals in Winston-Salem, N. C., from 1950 to 1952 and at Methodist Hospital in Houston from 1952 to 1953. From 1954 to 1955 he was an associate professor at Baylor College of Medicine; and he became director of radiology of the Memorial Baptist Hospital System in 1956. He served in that capacity until 1968, when he entered private practice.

A member of Harris County Medical Society's board of censors and grievance committee, Dr. Jester also belonged to Texas Medical Association and American Medical Association. He was certified by the American Board of Radiology and was a member of the American College of Radiology. He was also the newly elected vice-president of the Houston Radiological Society for 1970-1971.

Surviving Dr. Jester are his wife, the former Mildred Kerr; two sons, Thomas L. Jester and Robert W. Jester; and a daughter, Jane Jester, all of Houston.

DR. CONNOR

DR. BIRT

DR. JESTER

BEVERLY HILLS HOSPITAL
BEVERLY HILLS CLINIC

PSYCHIATRY
INPATIENT – OUTPATIENT

Multiple-approach treatment of thinking disorders. Established diagnostic procedures available. Secluded in-town location convenient to the medical community.

Psychiatry

Joseph L. Knapp, M.D. — Fred H. Jordan, M.D.
Jackson H. Speegle, M.D. — Joseph H. Lindsay, M.D.
Jack R. Tomlinson, M.D.

Psychology

Traudl E. Jordan-Diener, Ph.D. — R. A. Mitchell, M.S. — David K. Fooshee, M.S.

1353 North Westmoreland Avenue — Dallas, Texas 75211 — 214 331-8331

Serving Texas Physicians for Over Forty Years

Precision-engineered, functionally-built equipment

SMR keeps you and your patients' comfort and satisfaction in mind . . . a room that reflects professional good taste.

SMR has manufactured medical and Dental equipment for over forty years on a direct to user basis.

NEW CATALOG NOW AVAILABLE

SURGICAL MECHANICAL RESEARCH, INC.

Post Office Box 1185 • (714) 646-4405

960 W. 16th St., Newport Beach, Calif. 92663

Established Over 40 Years

STAINLESS STEEL POLISH

SMR Stainless Steel Polish cleans, and preserves with superior results —ends fingerprints, watermarks and surface stains. 22 oz. economy $2.75 F.O.B. Plant

Factory Direct Sales

Vasomist

(ANTIHISTAMINIC)

VASOCONSTRICTOR, NASAL DECONGESTANT AND LOCAL ANTIHISTAMINIC

Active Ingredients:
Phenylephrine Hcl 0.25%
Phenylpropanolamine Hcl ..0.50%
Chlorobutanol 0.15%
Tripelennamine Hel 0.50%
In Isotonic Solution

Vasomist

(PLAIN)

VASOCONSTRICTOR AND NASAL DECONGESTANT

Active Ingredients:
Phenylephrine Hcl 0.25%
Phenylpropanolamine Hcl ...0.50%
Chlorobutanol 0.15%
In Isotonic Solution

USE: Temporary relief of nasal congestion due to colds and hay fever.

DIRECTIONS: Adults and Children: Instill two or three drops into each nostril, using no more than needed to provide relief. Repeat every three to four hours as needed but not oftener.

AVAILABILITY

In plastic squeeze bottles containing ¾ fluid oz. and in dropper bottles containing 1 fluid oz.

HUMCO LABORATORY
TEXARKANA, ARK.-TEX.

HUMCO LABORATORY
TEXARKANA, ARK.-TEX.
Our Integrity is Your Guarantee

Painful night leg cramps...

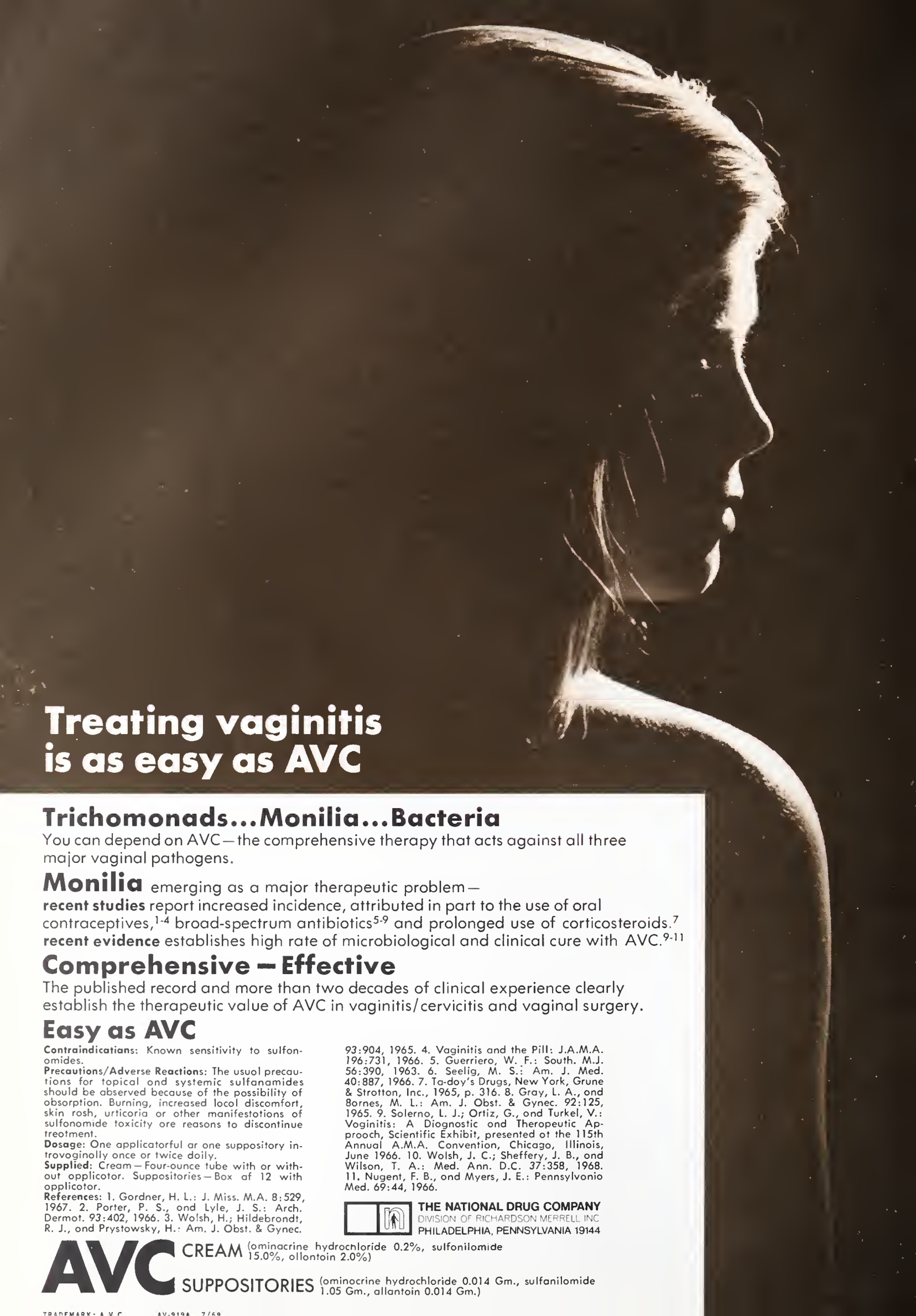
unwelcome bedfellow for any patient– including those with arthritis, diabetes or PVD

One thing patients can sleep without, particularly patients with chronic disease conditions such as arthritis, diabetes or PVD, is painful night leg cramps. Although seldom the presenting complaint, night leg cramps can tie your patients up in painful knots. Now, just one tablet of QUINAMM at bedtime can usually bring an end to shattered sleep and needless suffering. Your patients will sleep restfully—gratefully—with QUINAMM, specific therapy to prevent painful night leg cramps.

Prescribing Infarmation—Compositian: Each white, beveled, compressed tablet contains: Quinine sulfote, 260 mg., Aminophylline, 195 mg. **Indications:** For the preventian and treatment af nocturnal and recumbency leg muscle cramps, including those ossociated with arthritis, diabetes, varicose veins, thrombophlebitis, arteriosclerosis and stotic foot deformities. **Contraindications:** QUINAMM is controindicoted In pregnancy because of its quinine content. **Precautions/Adverse Reactions:** Aminophylline moy produce intestinal cromps In some instonces, and quinine may produce symptoms of cinchonism, such as tinnitus, dizziness, ond gastrointestinal disturbance. Discantinue use if ringing in the ears, deafness, skin rash, or visuol disturbonces occur. **Dosage:** One tablet upon retiring. Where necessary, dosage moy be Increased to one tablet fallawing the evening meal ond one toblet upon retiring. **Supplied:** Bottles of 100 ond 500 tablets.

THE NATIONAL DRUG COMPANY
DIVISION OF RICHARDSON-MERRELL INC.
PHILADELPHIA, PENNSYLVANIA 19144

Quinamm™ Specific therapy for night leg cramps
(quinine sulfate 260 mg., aminophylline 195 mg.)



Treating vaginitis is as easy as AVC

Trichomonads...Monilia...Bacteria

You can depend on AVC—the comprehensive therapy that acts against all three major vaginal pathogens.

Monilia emerging as a major therapeutic problem—
recent studies report increased incidence, attributed in part to the use of oral contraceptives,[1-4] broad-spectrum antibiotics[5-9] and prolonged use of corticosteroids.[7]
recent evidence establishes high rate of microbiological and clinical cure with AVC.[9-11]

Comprehensive — Effective

The published record and more than two decades of clinical experience clearly establish the therapeutic value of AVC in vaginitis/cervicitis and vaginal surgery.

Easy as AVC

Contraindicatians: Known sensitivity to sulfonomides.
Precautions/Adverse Reactions: The usuol precautions for topical ond systemic sulfanamides should be observed because of the possibility of absorption. Burning, increased locol discomfort, skin rosh, urticoria or other manifestotions of sulfonomide toxicity ore reasons to discontinue treotment.
Dosage: One applicatorful ar one suppository introvoginolly once or twice doily.
Supplied: Cream—Four-ounce tube with or without opplicotor. Suppositories—Box af 12 with opplicotor.

References: 1. Gordner, H. L.: J. Miss. M.A. 8:529, 1967. 2. Porter, P. S., ond Lyle, J. S.: Arch. Dermot. 93:402, 1966. 3. Wolsh, H.; Hildebrondt, R. J., ond Prystowsky, H.: Am. J. Obst. & Gynec. 93:904, 1965. 4. Vaginitis and the Pill: J.A.M.A. 196:731, 1966. 5. Guerriero, W. F.: South. M.J. 56:390, 1963. 6. Seelig, M. S.: Am. J. Med. 40:887, 1966. 7. Ta-doy's Drugs, New York, Grune & Strotton, Inc., 1965, p. 316. 8. Gray, L. A., ond Bornes, M. L.: Am. J. Obst. & Gynec. 92:125, 1965. 9. Solerno, L. J.; Ortiz, G., ond Turkel, V.: Voginitis: A Diognostic ond Theropeutic Approoch, Scientific Exhibit, presented ot the 115th Annual A.M.A. Convention, Chicago, Illinois, June 1966. 10. Wolsh, J. C.; Sheffery, J. B., ond Wilson, T. A.: Med. Ann. D.C. 37:358, 1968. 11. Nugent, F. B., ond Myers, J. E.: Pennsylvonio Med. 69:44, 1966.

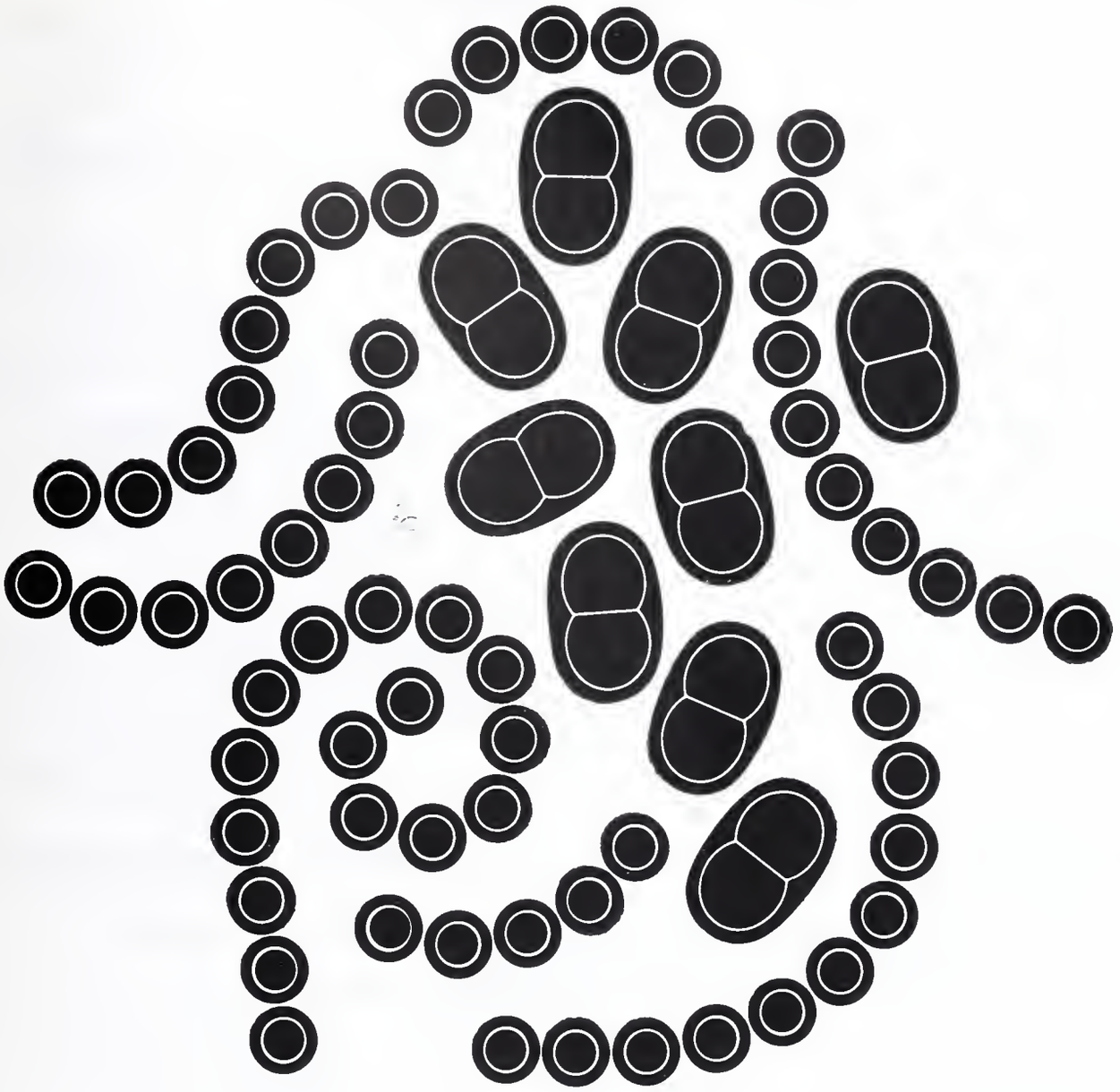
THE NATIONAL DRUG COMPANY
DIVISION OF RICHARDSON MERRELL INC
PHILADELPHIA, PENNSYLVANIA 19144

AVC CREAM (ominacrine hydrochloride 0.2%, sulfonilomide 15.0%, ollontoin 2.0%)

SUPPOSITORIES (ominocrine hydrochloride 0.014 Gm., sulfanilomide 1.05 Gm., allantoin 0.014 Gm.)

TRADEMARK: A.V.C. AV-919A 7/69

during and after infection



Berocca®

TABLETS
high potency B-complex and C
for nutritional support

AVAILABLE ONLY ON Rx

contains water-soluble vitamins only

b.i.d. dosage

good patient acceptance

no odor, and virtually no aftertaste

Each Berocca Tablet contains:

Thiamine mononitrate	15 mg
Riboflavin	15 mg
Pyridoxine HCl	5 mg
Niacinamide	100 mg
Calcium pantothenate	20 mg
Cyanocobalamin	5 mcg
Folic acid	0.5 mg
Ascorbic acid	500 mg

Usual dosage is one tablet b.i.d.

Indications: Nutritional supplementation in conditions in which water-soluble vitamins are required prophylactically or therapeutically.

Warning: Not intended for treatment of pernicious anemia or other primary or secondary anemias. Neurologic involvement may develop or progress, despite temporary remission of anemia, in patients with pernicious anemia who receive more than 0.1 mg of folic acid per day and who are inadequately treated with vitamin B_{12}.

Dosage: 1 or 2 tablets daily, as indicated by clinical need.

Available: In bottles of 100.

ROCHE

Roche
LABORATORIES

Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

Starlite Village Clinic

Center Point, Texas

Ph.: ME 4-2426

- - - A specialized clinic dedicated to the physical, mental, and spiritual treatment of men and women suffering from alcoholic and similar disturbances.

F. E. Seale, M.D.
Medical Director

Bland Seale
Administrator

RADIOLOGY ASSOCIATES OF FORT WORTH

John S. Alexander, M.D., M.A.C.R.
Robert J. Atcheson, M.D., M.A.C.R.
Douglas E. Bibby, M.D., F.A.C.R.
James W. Buice, M.D., F.A.C.R.
Richard C. Gasser, M.D., M.A.C.R.
James A. Holland, M.D., M.A.C.R.
Paul W. Mathews, Jr., M.D., M.A.C.R.
Preston W. Nash, M.D., M.A.C.R.
Rolland F. Oakes, M.D., M.A.C.R.
Norman L. Presley, M.D., M.A.C.R.
Sanford Reitman, M.D., M.A.C.R.
Gomer W. Roberts, M.D., M.A.C.R.
Herman C. Sehested, M.D., F.A.C.R.
Glenn A. Stokdyk, M.D., M.A.C.R.
C. H. Tseng, M.D., M.A.C.R.
Claude Williams, M.D., M.A.C.R.

DIPLOMATES OF THE AMERICAN BOARD OF RADIOLOGY

Offices:

100 Medical Tower Bldg. — 336-8681
1217 West Cannon — 336-8627
900 W. Randol Mill Rd., Arlington, Texas 76010 — 277-7681

TRAVIS CLINIC ASSOCIATION AND THE NAN TRAVIS MEMORIAL HOSPITAL

JACKSONVILLE, TEXAS

STAFF

General Surgery:
L. L. Travis, M.D.
J. S. O'Hare, M.D.
R. K. Willms, M.D.

Orthopedic Surgery:
E. L. Mahon, Jr., M.D.

Urology:
H. F. Rives, M.D.

Pathology:
Harbert Davenport, Jr., M.D.

Internal Medicine:
J. T. Boyd, M.D.
F. H. Verheyden, M.D.
J. T. Scogin, M.D.
J. H. Pesnell, M.D.
Mary A. Bone, M.D.

Obstetrics and Gynecology:
J. C. Rucker, M.D.
J. D. Crawford, M.D.

Ophthalmology:
Fred Haberle, M.D.

Pediatrics:
M. L. Gray, M.D.

Radiology and Radioactive Isotopes:
L. W. Ralston, M.D.

William J. Fowler
Administrator of Nan Travis Memorial Hospital

J. G. Casey
Business Manager of Travis Clinic

MEDICAL ARTS CLINIC

Box 841
Corsicana, Texas

PEDIATRICS
JOHN W. GRIFFIN, M.D., F.A.A.P.*
JAMES E. SPEIER, M.D.
INTERNAL MEDICINE
ROBERT D. BONE, M.D., F.A.C.P.*
JAMES F. WITTEN, M.D., F.A.C.P.*
CHARLES I. BILTZ, M.D.*
OBSTETRICS & GYNECOLOGY
KELLY PAUL BURKHART, M.D., F.A.C.O.G.*
DERMATOLOGY
JOSEPH M. GLICKSMAN, M.D.
BUSINESS MANAGER
OWEN G. ELLIOTT, M.G.M.A.
SURGERY
LOUIS E. GIBSON, M.D., F.A.C.S.*
E. SCOTT MIDDLETON, M.D.
OPHTHALMOLOGY
ROBERT D. MERTZ, M.D., F.A.A.O.O.*
EAR, NOSE, THROAT
PHILLIP M. AWTREY, M.D.,* F.A.A.O.O.
DENTISTRY
ROBERT A. LANG, D.D.S.

*Diplomate of the American Board

PHYSICIANS' DIRECTORY

Allergy

DRS. FEIN AND KAMIN
Allergy and Immunology

Bernard T. Fein, M.D., F.A.C.A.
Fellow
American Academy of Allergy
216 Medical Prof. Bldg.
CA 6-7671

Peter B. Kamin, M.D., F.A.A.P.
Diplomate
Sub-Board Pediatric Allergy
San Antonio, Texas
CA 7-6331

HOUSTON ALLERGY CLINIC
CLINICAL ALLERGY AND IMMUNOLOGY
RICHARD L. ETTER, M.D., F.A.C.A., F.A.A.A.
RICHARD H. JACKSON, M.D., F.A.C.A.
WARREN J. RAYMER, M.D., F.A.C.A.
RAMON GARRIDO, M.D.
(Certified American Board of Pediatrics)
Suite 156, Hermann Professional Building
6410 Fannin St., Houston, Texas 77025
JA 6-3281

V. E. FRIEDEWALD, M.D., F.A.C.P.
Diplomate American Boards of Internal Medicine and Allergy
ALLERGY

2203 West Tennessee Midland, Texas 79701
MU 2-5385

McGOVERN ALLERGY CLINIC
Diagnosis and Treatment of Allergic Diseases
John P. McGovern, M.D. Theodore J. Haywood, M.D.
Orville C. Thomas, M.D. Joseph T. Queng, M.D.
Charles D. Haunschild, M.D. James A. Murray, M.D.
*Hermann Gregory, M.D.
Certified American Boards of Pediatrics and Allergy
6655 Travis Street Houston, Texas 77025 JA 8-5591
*Military Leave of Absence

HARRIS HOSEN, M.D., F.A.A.Pd.
Clinical Allergy and Immunology

2649 Procter Street Port Arthur, Texas

ALLERGY CLINIC
Saul Grossman, M.D., F.A.C.A.
Allergy-Dermatology
W. A. Crozier, M.D., F.A.C.A.
Allergy-Immunology
TU 2-3487
2530 Morgan Corpus Christi, Texas

STUART A. MASON, M.D.
Allergic Diseases

921 Eighth Avenue Fort Worth, Texas 76104
Phone: 336-1574 If no answer: 924-4231

Cardiovascular Disease

GUS SCHREIBER, M.D., F.A.C.P.
Fellow American College of Cardiology

Elective cardioversions for the tachycardias and for auricular fibrillation performed at your hospital with my personal synchronized defibrillator.

For the heart blocks temporary placement at your hospital of my bipolar electrode cardiac catheter and external pacemaker.

Reception and consultative interpretation of telephoned electrocardiographs from any system 24 hours per day.

Rental-maintenance of matching FM Transmitter-Tape Recording equipment which permits the taping of tracings from any bed, compression of the coded data, and later transmission of the tracing when desired.

Office ECG Telephone and Relay Station: 214-748-4118
Home ECG Telephone and Relay Station: 214-352-5504

1430 Medical Arts Building Dallas, Texas 75201

DIRECTORY RATES & DATA: Space is available to TMA members at $8.00 per column inch and must run six months. New listings are limited to those specialties recognized by the American Medical Association. A discount of 5% is allowed for six month's advance payment. Mail copy to Advertising Assistant, TEXAS MEDICINE, 1801 North Lamar Blvd., Austin, Texas 78701. Deadline is 20th of the month preceding publication month.

Clinics

THE CLINIC-HOSPITAL OF SAN ANGELO
224-234 West Beauregard Avenue
SAN ANGELO, TEXAS

R. M. Finks, M.D., Pediatrics
M. D. Knight, M.D., Surgery
W. H. Brauns, M.D., Internal Medicine
Roy E. Moon, M.D., Obstetrics and Gynecology
Chas. F. Engelking, M.D., Ear, Nose and Throat
R. A. Morse, M.D., Internal Medicine
Ralph R. Chase, M.D., Pediatrics
Tom R. Hunter, M.D., Surgery
Dale W. Hayter, M.D., Ophthalmology
O. Sterling Gillis III, M.D., Obstetrics and Gynecology
Consultant in Pathology—Lloyd R. Hershberger, M.D.
Consultants in Radiology—John E. Ballard, M.D., John G. Bolen, M.D., William T. Gordon, M.D.
Robert P. Gordon, C.P.A., Administrator

THE FORT WORTH CLINIC
1221 West Lancaster Avenue
Fort Worth, Texas

John M. Church, M.D.
T. J. Coleman, M.D.
O. M. Phillips, M.D.
Robert L. Sewell, M.D.
John H. Sewell, M.D.
C. K. Holsapple, M.D.
Wm. L. Asper, Bus. Mgr.

FIFTH AVENUE CLINIC
650 Fifth Avenue
Fort Worth, Texas

MEDICINE
Sidney E. Stout, M.D.
Frank L. Bynum, M.D.
Ed Etier, Jr., M.D.

GENERAL PRACTICE
Donald S. Gibbs, M.D.

RADIOLOGY
Otto H. Grunow, M.D.

THOMAS-SPANN CLINIC
& THOMAS-SPANN HOSPITAL, INC.
1546 S. Brownlee Corpus Christi, Texas 78404
Telephone 884-3861

SURGERY
R. Gayle Spann, M.D., F.A.C.S.
J. Houston Thomas, M.D.
OPHTHALMOLOGY
L. David Wright, M.D., F.A.C.S.
GENERAL PRACTICE
Travis B. Phelps, M.D.
T. D. Harvey, M.D.
H. R. Rose, M.D.
C. L. Vernor, M.D.
ORTHOPEDICS
Carlos M. Yanez, M.D.

INTERNAL MEDICINE
William E. Morris, M.D.
Gerald A. Reeves, M.D.
Pruett Moore, Jr., M.D.
RADIOLOGY
Crysup Sory, M.D.
ADMINISTRATOR
B. J. Clark
DIRECTOR OF NURSES
Clinic - Pat Parker
Hospital - Mrs. Joyce Pettit

RUGELEY AND BLASINGAME CLINIC
Wharton, Texas

2100 North Fulton Street — 713 LE 2-1700

INTERNAL MEDICINE
R. D. Little, M.D.
D. W. Samuelson, M.D.

GENERAL PRACTICE
C. E. Woodson, M.D.

PEDIATRICS
F. W. Kolle, M.D.

NEUROPSYCHIATRY
R. R. Gleason, Jr., M.D.

DERMATOLOGY & SKIN CANCER
J. S. Stell, M.D.

GENERAL & THORACIC SURGERY
R. E. Goelzer, M.D.

GENERAL SURGERY
R. B. Caraway, Jr., M.D.

UROLOGY
H. Z. Fretz, M.D.
C. M. Collins, M.D.

OBSTETRICS & GYNECOLOGY
D. M. Voulgaris, M.D.
H. E. Secor, M.D.

OPHTHALMOLOGY
V.A. Black, M.D.

OTOLARYNGOLOGY
J. L. Holcomb, M.D.

DENTISTRY
C. J. Shumbera, D.D.S.
J. R. Kieler, Jr., D.D.S.

PATHOLOGY—CONSULTANT
H. M. Perches, M.D.

ANESTHESIOLOGY—CONSULTANT
C. G. Spears, M.D.

RADIOLOGY—CONSULTANT
L. D. O'Gorman, M.D.

ADMINISTRATION
C. H. "Ham" Rugeley
Malcolm D. Rugeley

THE CHESTER CLINIC & THE JOHN BUIST CHESTER HOSPITAL
3330 S. Lancaster Rd., Dallas, Texas
376-5411

John B. Chester, M.D., F.A.C.S., Orthopedic Surgery
Gene W. Rogers, M.D., General Surgery
Douglas M. Hardy, M.D., Obstetrics & Gynecology
Ervin R. Miller, M.D., Cardiovascular Diseases
Ralph C. Disch, M.D., F.A.C.S., D.A.B.S., General Surgery
Catherine P. Chester, M.D., Infants and Children
Doyle L. Sharp, M.D., General Surgery
R. M. Flasdick, M.D., Diagnosis and Internal Medicine
Ben E. Moore, B.S., M.D., Pediatrics
A. P. Larson, B.S., M.S., M.D., F.A.C.S., A.A.O.S.
Garrett, W. Maxwell, M.D., General Practice
Amado E. Dominquez, M.D., Diagnosis & Internal Medicine
H. A. Mueller, M.D., Consultant in Radiology
Gerard Noteboom, M.D., Consultant in Pathology
Geneva Bratton, R.N., Superintendent of Nurses
E. B. Morgan, Administrator

LANCASTER OFFICE – LANCASTER, TEXAS
Phone 227-2151

David E. Krebs, M.D., Pediatrics & Medicine
Charles W. Waldrop, M.D., General Practice
Miles W. Davis, M.D., General Practice

COUNTRY CLUB CORNERS OFFICE
7140 Baytree — 224-1181

R. B. Curry, M.D., General Practice
Herbert M. Hinckley, M.D., General Practice

BEELER-MANSKE CLINIC
9th Avenue N. at 5th Street N.
Texas City, Texas 77590
AC 713, WI 8-8521

Obstetrics & Gynecology
G. W. Beeler, M.D.

Internal Medicine
W. T. Matlage, M.D.
C. M. Maruri, M.D.

General Surgery
B. W. Hink, M.D., F.A.C.S.

General Practice
J. H. Cochrane, M.D.
J. W. O'Bryant, M.D.
O. O. Smith, M.D.

Clinic Manager
Stan M. Sheppard

Complete X-ray, Physical Therapy and Laboratory Facilities

MALONE and HOGAN CLINIC
901 Main Street — Phone 267-6361
Big Spring, Texas 79720

Ophthalmology and Otolaryngology
P. W. Malone, M.D., F.A.C.S.
J. W. Tipton, M.D.

General Surgery
J. E. Hogan, M.D., F.A.C.S.
C. B. Marcum, Jr., M.D., F.A.C.S.

Orthopedic Surgery
P. H. Rhymes, M.D.

Internal Medicine
J. H. Burnett, Jr., M.D.
W. A. Riley, M.D.
R. S. Griffin, M.D.
R. T. Torp, M.D.

Obstetrics and Gynecology
M. A. Porter, M.D.

Pediatrics
J. M. Woodall, M.D.
M. W. Talbot, Jr., M.D., F.A.A.P

Radiology
W. R. Cashion, M.D.

Urology
G. F. Dillon, M.D.

Consultants in Pathology
Jarrett E. Williams, M.D.
B. B. Trotter, M.D.

Business Manager
R. L. Heith

DIAGNOSTIC CLINIC OF HOUSTON
6448 Fannin, Houston, Texas 77025 (713) 526-2051

Internal Medicine and Diagnosis

Cardiovascular Disease
Thomas J. Fatherree
Hugh F. Arnold, M.D.
Hugh H. Hanson, M.D.
Michael B. Raine, M.D.
Michael A. Modelski, M.D.
Sigmund W. Friedland, M.D.

Endocrinology and Metabolic Diseases
H. Leland Kaplan, M.D.
Thomas G. Vandivier, M.D.
Charles H. Gregory, M.D.
R. Frederick Gregory, M.D.

Endocrinology, Metabolic Diseases and Director of Clinical Research
Raymond L. Gregory, M.D.

Geriatrics
Frederick G. Dorsey, M.D.

Gastroenterology
Dolph L. Curb, M.D.
W. Tom Arnold, M.D.
Belton G. Griffin, M.D.
Frederick R. Lummis, Jr., M.D.
Dean C. Solcher, M.D.

Hematology
Edmund N. Gouldin, M.D.
George W. Conrad, Jr., M.D.

Hypertension and Renal Diseases
K. Ronald Bingman, M.D.
R. Robert Durrett, M.D.

Infectious Diseases
Lewie L. Travis, Jr., M.D.
Jack L. Reddin, M.D.

Internal Medicine
Jeffrey Zatorski, M.D.

Neurology
Donald J. Russell, M.D.

Oncology
Lester L. Hoaglin, Jr., M.D.
Peter Sullivan, M.D.

Pathology
Jack P. Abbott, M.D.
Paul B. Radelat, M.D.

Pulmonary Disease
William M. Donohue, M.D.
Joel E. Reed, M.D.
Gene R. Lindley, M.D.

Radiology and Nuclear Medicine
William L. Hinds, M.D.
Charles P. Eldridge, Jr., M.D.
David D. Lawrence, M.D.
Charles A. Spain, M.D.

Rheumatology
John E. Norris, M.D.

Administration
C. G. Mercy, Administrator
Robert B. Hall, Assistant Administrator

Laboratory:
Clinical Pathology
Cytology

Nuclear Medicine
Isotope uptake, Gammagram and Therapy

Roentgenology

PROCEDURES:

Bronchoscopy:
Pulmonary Functions

Cardiac Catheterization

Electrocardiography-Phonocardiography

Esophagoscopy

Gastroscopy

Proctosigmoidoscopy

CONSULTATION BY APPOINTMENT

THE LORIMER CLINIC
901 West Leuda Street
Fort Worth, Texas 76104
335-4333

SURGERY
W. S. Lorimer, Jr., M.D., F.A.C.S.
R. J. Turner, III, M.D., F.A.C.S.

INTERNAL MEDICINE
W. W. Moorman, M.D., F.A.C.P.
D. W. Johnston, M.D. F.A.C.P.
Stephen Eppstein, M.D.
A. R. Daniell, M.D.

Mrs. Evelyn Farr, Business Manager

CLINIC OF THE SOUTHWEST
6437 High Star at Hillcroft
Houston, Texas 77036 — PR 4-7671

INTERNAL MEDICINE
William C. Franklin, M.D.
Arthur B. Conde, M.D.

OBSTETRICS & GYNECOLOGY
Joy L. Deere, M.D.
Loren B. Goss, M.D.

PEDIATRICS
John R. Dunn, Jr., M.D.
Blanca S. Azios, M.D.

PHYSICAL THERAPY
Richard D. Tinsley, R.P.T.

GENERAL SURGERY
Harvey B. Koch, M.D.

UROLOGY
Glen E. Lewis, M.D.

DENTISTRY
Burley G. Ingram, D.D.S.

RADIOLOGY
Neil B. Longley, M.D.
Richard E. Schuette, M.D.

BUSINESS MANAGER
C. C. Walker

AS NEAR AS YOUR MAILBOX OR TELEPHONE!

TMA MEMORIAL LIBRARY
1801 North Lamar Blvd.
Austin, Texas 78701
512 477-6704

Colon and Rectal Surgery

MALCOLM McNATT, M.D., F.A.C.S.
Diplomate of the American Board of Colon and Rectal Surgery
Proctology
Colon and Rectal Surgery
710 Medical Arts Bldg. RIverside 2-2858
Dallas, Texas

ALVIN BALDWIN, JR., M.D., F.A.C.S.
Practice Limited to
Diseases and Surgery of the Colon and Rectum
714 Doctors Building 3707 Gaston Avenue
Dallas, Texas
Off. Tel. 824-2573 Res. Tel. 361-4500

HUGH C. WELSH, M.D.
Proctology and Abdominal Surgery
2715 Fannin Street Houston, Texas

J. WADE HARRIS, M.D., F.A.C.S.
JOHN E. COGAN, M.D., F.A.C.S.
Surgery of the Rectum and Colon
406 Hermann Professional Bldg.
Houston, Texas

C. D. L. CROMAR, M.D.
Surgery of the Rectum and Colon
617 South Tatar Street
Pasadena, Texas 77502

Dermatology

ROGER W. MANAR, M.D.
DERMATOLOGY
SUPERFICIAL X-RAY THERAPY
1400 Eighth Street Wichita Falls, Texas

BEDFORD SHELMIRE, M.D.
BEDFORD SHELMIRE, JR., M.D.
DAVID S. SHELMIRE, M.D.
Dermatology
1410 Medical Arts Bldg. Dallas, Texas

DRS. PIPKIN, RESSMANN & RICHARDSON
J. LEWIS PIPKIN, M.D.
ARTHUR C. RESSMANN, M.D.
A. W. RICHARDSON, M.D.
DERMATOLOGY
X-Ray and Radium in The Treatment of Skin Malignancies
714 Medical Arts Bldg. San Antonio, Texas

EVERETT R. SEALE, M.D.
Dermatology
Treatment of Skin Malignancies
1217 Hermann Professional Bldg. Houston, Texas

J. GILMORE BRAU, M.D.
DERMATOLOGY—SYPHILOLOGY
X-RAY and RADIUM THERAPY
Hours 9 to 1 — 3 to 5
3817 Brown Street Dallas, Texas

J. FRANKLIN CAMPBELL, M.D.
EDMUND N. WALSH, M.D.
Dermatology and Syphilology, and Treatment of Skin Cancer
Radium and X-Ray Therapy
1410 Pruitt Street Fort Worth, Texas

Leslie M. Smith, M.D. H. D. Garrett, M.D.
John C. Wilkinson, M.D.
DRS. SMITH, GARRETT & WILKINSON
Dermatology and Syphilology
X-Ray and Radium in the Treatment of Skin Malignancies
Medical Center, 1501 Arizona El Paso, Texas

WALTER B. MANTOOTH, JR., M.D.
JOE M. LEHMAN, M.D.
ROBERT LEHMAN, M.D.
Dermatology, Syphilology, and Cancer of the Skin
3801 19th St., Suite 500 Lubbock, Texas

MARVIN E. CHERNOSKY, M.D.
DERMATOLOGY AND SYPHILOLOGY
703 Hermann Professional Building
Phone JA 6-3733 Houston, Texas

THOMAS L. SHIELDS, M.D.
Dermatology and Syphilology
X-Ray Therapy in the
Treatment of Skin Malignancies
Hours 9 to 1 — 3 to 5
800 Fifth Ave. Fort Worth, Texas

DAVID R. WEAKLEY, M.D., F.A.C.P.
Dermatology
Treatment of Skin Malignancies
8548 Northwest Plaza Drive Dallas, Texas
315 North Shiloh Road Garland, Texas

M. A. (Mac) HAIRSTON, JR., M.D.
DERMATOLOGY
HAIR TRANSPLANTATION & DERMOPLANING
Memorial City Professional Bldg., 902 Frostwood, Suite 184
(Between Memorial & Katy Fwy.)
Phone: 464-6369 Houston, Texas 77024

JOHN B. McMASTER, JR., M.D.
Dermatology
222-2147
Dermabrasion & Chemosurgery
416 M & S Tower San Antonio, Texas 78205

Eye, Ear, Nose, Throat

M. Ray Harrington, M.D. Lloyd F. Ritchey, M.D.
Jack Blum, M.D.
Ophthalmology and Otolaryngology
8215 Westchester
Suite 135
Dallas, Texas

Drs. Canon, Watkins, Anderson, Nalle and Ellsasser
Eye, Ear, Nose and Throat, Broncho-Esophagology and Allergy
R. T. Canon, M.D., F.A.C.S. — M. D. Watkins, M.D., F.A.C.S., A.I.C.S.
Wm. F. Anderson, M.D., DAB Oph., F.A.C.S. — Ernest Nalle, Jr., M.D. DAB Oto., F.A.C.S., F.I.C.S.
M. G. Ellsasser, M.D., DAB Oph.
West Texas Clinic 1312 Main Lubbock, Texas

W. HUBERT SEALE, M.D.
Eye, Ear, Nose & Throat
HUBERT JAMES SEALE, M.D.
Disease & Surgery of the Eye
OR 3-3751
1321 Hickory St. Abilene, Texas

Gastroenterology

JAMES J. GORMAN, M.D., F.A.C.P.
Gastroenterology
Diagnosis Gastroscopy
1111 El Paso National Bank Bldg.
El Paso, Texas 79901

MILFORD O. ROUSE, M.D.
announces limitation of practice to consultation in hospitals. His office is now at Dallas Chamber of Commerce in Community Health Focus program. Records of his patients are with Cecil O. Patterson, M.D., and Daniel Polter, M.D., 1414 Medical Arts Building, Dallas, 742-6144.

CECIL O. PATTERSON, M.D.
GASTROENTEROLOGY, GASTROSCOPY
ESOPHAGOSCOPY
1414 Medical Arts Building
Dallas, Texas
742-6141

DRS. BAILEY, DOUGLAS AND FISHER
3434 Swiss Avenue, Suite 303, Dallas, Texas
Diseases of the Digestive System
Herbert A. Bailey, M.D. F. Clark Douglas, M.D.
John W. Fisher, M.D.

W. CROCKETT CHEARS, JR., M.D.
GASTROENTEROLOGY
GASTROSCOPY & ESOPHAGOSCOPY
1027 Medical Arts Building
Telephone 748-4975 Dallas, Texas

General Surgery

J. PEYTON BARNES, M.D., F.A.C.S.
Surgery
1000 St. Joseph Professional Bldg.
Houston, Texas 77002

L. GONZALEZ CIGARROA, M.D., F.A.C.S.
Diplomate American Board of Surgery
Practice limited to
SURGERY
1502 Logan Ave. Laredo, Texas

BURT B. SMITH, M.D.
SURGERY
Emphasizing Breast, Thyroid and Gastro-Intestinal Surgery
728 Hermann Professional Building
Phone 523-8323 Houston, Texas 77025

ADOLPH F. KAUFFMANN, M.D., F.A.C.S.
Diplomate American Board of Surgery
GENERAL SURGERY
707 Fifth Ave. Fort Worth, Texas
Phone 332-7597

BRYAN V. WILLIAMS, M.D., F.A.C.S.
Diplomate American Board of Surgery
GENERAL SURGERY
1506 St. Joseph Professional Bldg.
Houston, Texas 77002
227-5505

PAUL CARRILLO-RIVERA, M.D., F.A.C.S.
General, Pulmonary, Cardiovascular Surgery
105 University Towers
915-533-2508
1900 N. Oregon St. El Paso, Texas 79902

Internal Medicine

JOHN A. WIGGINS, JR., M.D.
Diseases of the Chest
Bronchoscopy
1105 Pennsylvania Ave. Fort Worth, Texas

HENRY N. GEMOETS, M.D., F.A.C.P., F.C.C.P.
Internal Medicine and Diseases of the Chest and Heart
THOMAS H. GEMOETS, M.D.
Internal Medicine and Diagnosis
1003 Memorial Professional Building
1010 Louisiana Houston, Texas 77002 222-7224

Neurology/Psychiatry

HAUSER CLINIC

Psychiatry, Neurology, and Electroencephalography

Section of Psychiatry
*Abe Hauser, M.D.
*Robert I. Hauser, M.D.
Barry M. Brown, M.D.
*Harris M. Hauser, M.D.

Section of Neurology
*Harris M. Hauser, M.D.
*Gerald Ratinov, M.D.
Robert M. Gordon, M.D.
*Abe Hauser, M.D.

Section of Social Work
Ethel Feinsilver, M.S.

Section of Psychology
Robert Langston, Ph.D.
Consultant
Joanne Borba, M.A.

Administrator
Gordon D. Keller

808 Memorial Professional Building
Houston, Texas 77002
224-5041

*Diplomate, American Board of Psychiatry and Neurology

Perry C. Talkington, M.D.
Charles L. Bloss, M.D.
Howard M. Burkett, M.D.
Jerry M. Lewis, M.D.
James K. Peden, M.D.
Ward G. Dixon, M.D.
Claude L. Jackson, M.D.
E. Clay Griffith, M.D.
Dode M. Hanke, M.D.
Doyle I. Carson, M.D.
Thomas H. Allison, M.D.
Stanley L. Seaton, M.D.
Maurice S. Green, M.D.
Joe W. King, M.D.
Keith H. Johansen, M.D.
Charles G. Markward, M.D.

practice limited to
PSYCHIATRY

4645 Samuell Blvd., Dallas, Texas
Timberlawn Sanitarium
4600 Samuell Blvd., Dallas, Texas
381-7181

STEPHEN WEISZ, M.D.
Practice Limited to
NEUROLOGY and PSYCHIATRY
1637 Medical Arts Bldg. Dallas, Texas
747-5183

ALEX K. MUNSON, M.D.
Child Psychiatry
KERBEY LANE EVALUATION
AND TREATMENT CENTER
3400 Kerbey Lane Austin, Texas 78703
Office Hours by Appointment
AC 512-454-8718

THE FORT WORTH
NEUROPSYCHIATRIC CENTER
*Bernard J. Dolenz, M.D. *Herbert G. Rush, M.D.
1066 W. Magnolia Avenue 336-5469
Fort Worth, Texas 76104
*Diplomates American Board of Psychiatry and Neurology

HOUSTON ASSOCIATES
IN
PSYCHIATRY AND NEUROLOGY
Houston, Texas

C. A. Iannucci, M.D.
Joe C. A. Eckhardt, Jr., M.D.
Alfred H. Vogt, M.D.
George M. Stevens, M.D.
Jules Bohnn, M.D.
Leroy Androes, M.D.
A. R. Martinez, Ph.D.
Ruth Searls, M.S.W.
Diana Sheer, M.S.W.
Dan DeShazo, M.S.W.
Beth Bowman, M.A.

Comprehensive Neuropsychiatric
Evaluation and Treatment
Electroencephalography

1021 Hermann Prof. Bldg. 529-5721
6812 Staffordshire 748-3780

CHAPMAN ISHAM, M.D.
Diplomate American Board of Psychiatry
Child Psychiatry and Marriage Counseling
Hypnotherapy for Smoking and Obesity
3701 21st Street Lubbock, Texas 79410
795-4023

MEDICAL NEUROLOGY AND
ELECTROENCEPHALOGRAPHY
205 Swiss Avenue Medical Building
3434 Swiss

Dallas, Texas 75204 827-3610

Sheff D. Olinger, M.D. Joseph S. Jenike, M.D.
Charles W. Barrier, M.D.
Hours by Appointment Only

Pasadena Neuropsychiatric Clinic Association
Robert E. Hazlewood, M.D. Richard M. Orr, M.D.
Practice Limited
to
Neurology and Psychiatry
Office Hours by Appointment
First Pasadena State Bank Building
1001 E. Southmore, Suite 1103
Pasadena, Texas 77502 Telephone 473-7646

LABORATORY OF ELECTROENCEPHALOGRAPHY
Jean M. B. Moure, M.D.
Diplomate American Board of Electroencephalography
522-1037
275 Hermann Prof. Bldg. Houston, Tex. 77025

Neurological Surgery

JAMES GREENWOOD, JR., M.D.
Neurosurgery
718 Hermann Professional Bldg., Houston, Texas 77025
Office: 528-5373 Residence: 528-4038

Morris Sanders, M.D. Jack I. Woolf, M.D.
DRS. WOOLF AND SANDERS
Diplomate American Board of Neurological Surgery
Locke Medical Building, 6011 Harry Hines Blvd.
Dallas, Texas 631-1500

JACK STERN, M.D.
GARY C. HUTCHISON, M.D.
Neurological Surgery
8226 Douglas, Suite 609
Dallas, Texas 75225
363-8524

Casey E. Patterson, M.D. Tom M. Nash, M.D.
Charles W. Simpson, M.D. James E. Bland, M.D.
DRS. NASH, PATTERSON & SIMPSON, ASSN.
Neurological Surgery
637-0420
Suite 557 - Locke Medical Building, 6011 Harry Hines Blvd.
Dallas, Texas 75235

ALBERT D'ERRICO, M.D.
Neurological Surgery
3707 Gaston Avenue Dallas, Texas 75246
Telephone 824-2543

RONALD SMITH, M.D.
Neurological Surgery
901 South Lake Fort Worth, Texas
Telephone 336-0551

GLENN R. CHERRY, M.D., F.A.C.S.
R. GORDON LONG, M.D.
Diplomate American Board of Neurological Surgery
712 North Washington
826-7060 Dallas, Texas

ROBT. C. L. ROBERTSON, M.D., F.A.C.S.
JOSEPH W. ROBERTSON, M.D.
Neurological Surgery
2210 Maroneal Houston, Texas 77025
523-3684

WILLIAM J. NELSON, M.D.
Certified by the American Board of Neurological Surgery
Suite 300
University Towers
915-542-0643
1900 N. Oregon St. El Paso, Texas 79902

CHARLES A. BORNE, JR., M.D.
Neurological Surgery
Suite 834, Sealy-Smith Professional Building
Galveston, Texas 77550
200 University Boulevard 713-763-1688

Nuclear Medicine

HERBERT C. ALLEN, JR., M.D.
Practice Limited to
NUCLEAR MEDICINE
526-1501
100 Hermann Professional Bldg.
Houston, Texas 77025

Ophthalmology

HOUSTON EYE ASSOCIATES
1121 Hermann Professional Building
Houston, Texas 77025
Phone 526-7261
(AC 713)
Richard S. Ruiz, M.D., F.A.C.S.
Charles E. Russo, M.D. Robert H. Stewart, M.D.
Malcolm L. Mazow, M.D. Robert B. Wilkins, M.D.

DRS. MURPHY, ALPAR, TAYLOR & HOWELL
OPHTHALMOLOGY
Weldon O. Murphy, M.D.
John J. Alpar, M.D.
Coleman Taylor, M.D.
J. Franklin Howell, Jr., M.D.
Diplomates of the American Board of Ophthalmology
2300 West 7th Avenue Amarillo, Texas

ALBERT VAISER, M.D.
WILLIAM B. SNYDER, M.D.
Diseases and Surgery of the Retina
318 Medical Arts Building
Dallas, Texas 748-0958

LIEVEN J. VAN RIET, M.D.
OPHTHALMOLOGY
Medical Surgical
224-0654
Saint Joseph Professional Building
Houston, Texas 77002

BERT C. BRYAN, M.D.
Surgery and Diseases of the Eye
1314 Medical Arts Building
747-7474 Dallas, Texas 747-2481

W. REX HAWKINS, M.D.
Detachment of the Retina
Diabetic Retinopathy
250 Hermann Professional Building
Houston, Texas 529-6727

OPHTHALMOLOGY ASSOCIATES
Harold E. Caplan, M.D. Jed Lee Howard, M.D.
R. Larry Brenner, M.D.
Special interest in corneal, ophthalmic plastic & retinal surgery
3320 Plainview
Pasadena, Texas 77504
713-944-5700
2622 NASA Road 1
Seabrook, Texas 77586
713-877-2571

DAVID R. STAGER, M.D.
PEDIATRIC OPHTHALMOLOGY
8226 Douglas Ave.
Dallas, Texas 75225

ARTHUR M. CLEMENTS, M.D.
Surgery and Diseases of the Eye
(214) 341-3407
Northlake Professional Building
8535 Ferndale Road Dallas, Texas 75238

Orthopedic Surgery

H. H. Beckering, M.D. George Truett James, M.D.
L. Ray Lawson, M.D. Robert D. Vandermeer, M.D.
W. B. CARRELL MEMORIAL CLINIC
2828 Lemmon Ave. Dallas, Texas

FORT WORTH BONE & JOINT CLINIC
918 8th Avenue — Fort Worth, Texas
Louis J. Levy, M.D. Cuvier P. Lipscomb, M.D.
Henry C. McDonald, Jr., M.D. Fred W. Sanders, M.D.

Ralph E. Donnell, M.D. F. Carlton Hodges, M.D.
ORTHOPEDIC ASSOCIATES
Diplomates American Board of Orthopedic Surgery
1133 N. 19th St. Abilene, Texas 79601

HOUSTON ORTHOPEDIC CLINIC
Joseph Barnhart, M.D. Donald T. Lazarz, M.D.
1817 Dryden Road Phone: 529-4389
Houston, Texas

LUBBOCK ORTHOPEDIC SURGERY CLINIC
ROYCE C. LEWIS, JR., M.D.
KENNETH C. SCHOLZ, D.D.S., M.D.
RAY E. SANTOS, M.D.
3702 21st St., Suite 9 806-763-8281
Lubbock, Texas 79410

THE EL PASO
ORTHOPEDIC SURGERY GROUP
Louis W. Breck, M.D. Oren H. Ellis, M.D.
W. Compere Basom, M.D. Wellington J. Pindar, M.D.
Morton H. Leonard, M.D.* Donald A. Shearer, Admstr.
**Special attention to surgery of the hand*
1220 N. Stanton St. Tel. 533-7465 El Paso, Texas 79902

B. C. HALLEY, JR., M.D.
DAVID R. WEBB, JR., M.D.
Orthopaedic Surgery
3909 Worth at Washington 821-1417
Dallas, Texas 75246

RUSS B. GRAHAM, M.D., F.A.C.S.
3607 Gaston Avenue
Dallas, Texas 75246
ORTHOPEDIC SURGERY
Telephone
824-7883

THE ORTHOPEDIC GROUP OF RICHARDSON
Charles E. Graham, M.D.
M. Gayle Glidewell, M.D.
212 South Cottonwood Suite D
Richardson, Texas 75080
ORTHOPEDIC SURGERY
231-6396

L. LEE LANKFORD, M.D.
Diplomate American Board of Orthopedic Surgery
HAND SURGERY AND
UPPER EXTREMITY RECONSTRUCTIVE SURGERY
3707 Gaston Ave. Area Code 214
Dallas, Texas 75246 823-5351

THE ARLINGTON ORTHOPEDIC GROUP
H. W. Bendel, Jr., M.D. E. E. Rising, Jr., M.D.
C. Poindexter, M.D.
Diplomates American Board of Orthopaedic Surgery
801 West Randol Mill Road 817 - 261-8284
Arlington, Texas 76010

THE BOSWELL-EVANS ORTHOPAEDIC CLINIC
George M. Boswell, Jr., M.D., F.A.C.S. James P. Evans, M.D.
Lewis R. Thompson, M.D.
Gerald W. Schofield, M.D.
4849 W. Lawther Dr. 348-8300 Dallas, Texas 75218

Otolaryngology

TOM BARR, M.D.
Ear, Nose, and Throat,
Diseases of Larynx, and
Laryngeal Surgery
Medical Arts Building Dallas, Texas

HERBERT H. HARRIS, M.D., F.A.C.S., F.I.C.S.
Oto-Laryngology Broncho-Esophagology
and Laryngeal Surgery
907 Hermann Professional Bldg. Houston, Texas

MARVIN G. SHEPARD, M.D., F.A.C.S.
Practice limited to Otology and Otological Surgery
Medical Tower Building
712 N. Washington
Suite 514
Dallas, Texas Hours By Appt.

W. P. ANTHONY, M.D.
Otology
662 So. Henderson Fort Worth, Texas 76104

DONALD N. MATHESON, M.D., F.A.C.S.
Diplomate American Board of Otolaryngology
800 Fifth Avenue, Phone 336-7133
Fort Worth, Texas

Pathology

MARVIN D. BELL, A.B., M.D.
Clinical Pathology
1109 Medical Arts Bldg. Dallas, Texas

A. B. CAIRNS, M.D.
GERARD NOTEBOOM, M.D.
MARC GARZA, M.D.
RONALD E. BUCHANAN, M.D.
WADE M. BRANNAN, M.D.
Diplomates American Board of Pathology
1105 N. Bishop Methodist Hospital
Dallas, Texas Dallas, Texas

FORT WORTH MEDICAL LABORATORIES
John J. Andujar, M.D.
Dorothy Patras, M.D.
1404 Pennsylvania Ave. (817) 336-7137
P. O. Box 1118 Fort Worth, Texas 76101

BROWN & ASSOCIATES MEDICAL LABORATORY
Tissue Pathology, Exfoliative Cytology, Hematology, Serology, Clinical Chemistry, Bacteriology, Parasitology, Serum Protein Electrophoresis and Hemoglobin Electrophoresis
Wilson G. Brown, M.D. George V. Miller, M.D.
Walter G. Olin, M.D. John R. Thomas, M.D.
S. J. Skinner, M.D. Joe B. Haden, M.D.
Diplomates American Board of Pathology
165 Hermann Professional Bldg., 526-4031
Houston, Texas
"Mailing Containers on Request"
"Office Pickup Service in Houston"

DR. PREUSS PATHOLOGY LABORATORY
Exfoliative Cytology
and Surgical Pathology
FRED S. PREUSS, M.D., F.C.A.P.
3607 Gaston Avenue, Room 305
Dallas, Texas 75226
Telephone: 823-6912
Specimen containers on request

NUCLEAR MEDICINE LABORATORIES
OF TEXAS
6411 South Main Street
Texas Medical Center
Houston, Texas 77025
Completely equipped radioisotope laboratory for diagnostic radioactive tests in:
Hematology, Thyroidology, Endocrinology, Gastroenterology, Cardiology, Neurology, Neurosurgery, Urology, Ophthalmology and Obstetrics-Gynecology
Herbert C. Allen, Jr., M.D., Director
526-1501

John H. Childers, M.D. E. H. Valentine, M.D.
R. R. Rember, M.D. W. L. Crofford, M.D.
E. P. Jenevein, M.D.
MEDICAL LABORATORY SERVICE OF DALLAS
Clinical Pathology Surgical Pathology
Diagnostic Radioisotopes Exfoliative Cytology
6011 Harry Hines Boulevard Dallas, Texas 75235
637-0210
(Mailing containers available upon request)

PRUITT MEDICAL LABORATORIES
Jack Pruitt, M.D.
Diplomate, American Board of Pathology
Tissue Pathology, Exfoliative Cytology, Clinical Pathology, Medicolegal Consultation.
P. O. Box 160 Lufkin, Texas 75901
Phone 634-4453

WACO CLINICAL PATHOLOGY LABORATORY
K. P. Wittstruck, M.D., F.C.A.P.
Walter Krohn, M.D., F.C.A.P.
Clinical Pathology Exfoliative Cytology
Surgical Pathology Medicolegal Consultation
Mailing containers on request
2112 Washington Avenue 756-7226
P.O. Box 3160 Waco, Texas 76707

GEORGE J. RACE, M.D. AND ASSOCIATES
PATHOLOGISTS
Surgical Pathology and Cytology Consultation
421 Medical Tower Building
712 North Washington, Dallas, Texas 75246
Telephone AC 214, 824-1258

Physical Medicine and Rehabilitation

TEXAS REHABILITATION HOSPITAL
OF GONZALES
WARM SPRINGS FOUNDATION, INC.
P.O. BOX 58, GONZALES, TEXAS 78629
Facilities for physical restoration.
Physical Therapy, Occupational Therapy, Speech Therapy, Recreational Therapy, School from first grade through twelfth grade.
ROBERT M. IZARD, JR., M.D. Medical Director
LYNN SMITH, SR. Administrator

Plastic Surgery

THOMAS D. CRONIN, M.D., F.A.C.S.
RAYMOND O. BRAUER, M.D.
THOMAS M. BIGGS, M.D.
Diplomates American Board of Plastic Surgery
PLASTIC SURGERY
5419 Caroline Street 523-8131 Houston, Texas 77004

WILLARD C. SELLMAN, JR., M.D.
Plastic, Maxillo-Facial and Hand Surgery
530 Locke Medical Building
6011 Harry Hines Blvd.
Dallas, Texas 75235 637-4770

BROMLEY SMITH FREEMAN, M.D., F.A.C.S.
Diplomate American Boards of Surgery and Plastic Surgery
PLASTIC AND RECONSTRUCTIVE SURGERY
Tumors of the Head and Neck
1810 The Medical Towers — Tel. 529-3579
Houston, Texas 77025 — Res. 782-1628

JOHN B. PATTERSON, M.D., F.A.C.S.
Diplomate American Board
PLASTIC SURGERY
612 Doctors Building — Fort Worth, Texas
336-0356

SIMON FREDRICKS, M.D., F.A.C.S.
Diplomate American Board of Plastic Surgery

Houston Office	*Pasadena Office*
1103 Medical Towers	904½ E. Southmore
Houston, Texas 77025	Pasadena, Texas 77502
523-5575	473-5488

DAVID A. GRANT, M.D., F.A.C.S.
Diplomate American Boards of Surgery and Plastic Surgery
PLASTIC & RECONSTRUCTIVE SURGERY
COSMETIC SURGERY
800 Fifth Avenue
Fort Worth, Texas 76104
335-4751

CARL R. COERS, III, M.D.
Diplomate American Board of Plastic Surgery
PLASTIC, RECONSTRUCTIVE & HAND SURGERY
800 Fifth Avenue
Fort Worth, Texas 76104
335-4751

MARCUS L. FINLEY, M.D., F.A.C.S.
Diplomate American Board of Plastic Surgery
PLASTIC, RECONSTRUCTIVE AND HAND SURGERY
1115A Pennsylvania Avenue
Fort Worth, Texas 76104
Telephone 335-6439

VALENTIN GRACIA, M.D.
F.A.C.S., F.I.C.S., D.A.B.
AESTHETIC SURGERY—BURNS
1001 W. Rosedale — Phone
Fort Worth, Texas 76104 — 336-0446

FRANCIS A. MORRIS, JR., M.D.
WILLIAM E. BARNES, M.D.
Diplomates American Board of Plastic Surgery
Plastic, Reconstructive and Hand Surgery
3100 Red River — 476-9149 — Austin, Texas

Plastic Surgery
JOHN R. HILL, M.D., F.A.C.S.
Diplomate, American Board of Plastic Surgery
Practice limited to Plastic, Reconstructive and Hand Surgery
Medical Center Office: 272 Hermann Prof. Bldg. Houston, Texas 77025 528-2481
Spring Branch Office: 9320 Westview Houston, Texas 77055 528-2481

E. FRANK DUNTON, M.D., F.A.C.S.
Plastic & Reconstructive Surgery and Surgery of the Hand
Telephone 824-7290 — Suite 104, 3434 Swiss Avenue, Dallas, Texas

W. W. SCHUESSLER, M.D., F.A.C.S.
Diplomate of American Board of Plastic Surgery
Plastic, Reconstructive & Maxillo-Facial Surgery
Telephone 533-6362 — Suite 4-C Medical Center, 1501 Arizona Avenue, El Paso, Texas 79902

Radiology

AMARILLO RADIOLOGICAL GROUP
Practice Limited to Radiology
ROYAL WERTZ, M.D., F.A.C.R.
WILBUR Q. BUDD, M.D., D.A.B.R.
800 Rusk Street
Amarillo, Texas 79106 — 373-8324

J. R. MAXFIELD, JR., M.D., M.A.C.R.
JACK G. S. MAXFIELD, M.D., M.A.C.R.
Radiological Center
Including Radioisotopes
2711 Oak Lawn, Dallas — 526-6661

MAURICE C. ARCHER, M.D., M.A.C.R.
MARY L. KILLINGSWORTH, M.D., M.A.C.R.
Diplomates of the American Board of Radiology
800 Fifth Avenue, Fort Worth, Texas — Doctors Building 332-3401

DRS. CARLSON AND BAREKMAN
Glenn D. Carlson, M.D., F.A.C.R.
William H. Barekman, M.D., D.A.B.R.
Agnes M. Guthrie, M.D., D.A.B.R.
X-RAY DIAGNOSIS
X-RAY AND RADIUM THERAPY
RADIOISOTOPES
1221 Medical Arts Bldg.....741-3621
6011 Harry Hines Blvd.....631-7070
3607 Gaston Ave.....823-9961
DALLAS, TEXAS

Harvey M. Lowry, M.D., F.A.C.R.
James R. Gish, M.D., D.A.B.R.
Edward A. Sheldon, M.D., D.A.B.R.
James P. Wills, M.D.
RADIOLOGY

109 Doctors Bldg.	838-4543
502 Goodhue Bldg.	838-2224
Baptist Hospital	833-6421

Beaumont, Texas

JAMES L. CLIFFORD, M.D., D.A.B.R.
Cobalt 60 Rotational Therapy
X-Ray and Radium Therapy
X-Ray Diagnosis
Radioisotopes
845 Clarksville St. — 784-4624 — Paris, Texas

DOCTORS McCONNELL, RIDINGS AND FULLER
208 Locke Medical Building — Telephone 637-0774
6011 Harry Hines Boulevard
Dallas, Texas 75235
R. W. McConnell, M.D.
Practice Limited to Nuclear Medicine
G. Ray Ridings, M.D.
D. E. Fuller, M.D.
Practice Limited to Radiation Therapy

Thoracic Surgery

Donald L. Paulson, M.D. Harold C. Urschel, Jr., M.D.
DRS. PAULSON AND URSCHEL
Thoracic and Cardiovascular Surgery
3810 Swiss Ave. 824-2503
Dallas, Texas

THORACIC AND CARDIOVASCULAR SURGERY
James O. McBride, M.D., F.A.C.S.
662 South Henderson, Suite A
P. O. Box 1407
Fort Worth, Texas 76102
332-7454 738-4594

Charles T. Meadows, M.D.
Diplomate, American Board of Thoracic Surgery
Thoracic and Cardiovascular Surgery
Broncho-esophagology
The Professional Building
673-8184
1101 North 19th Abilene, Texas

LeROY J. KLEINSASSER, M.D., F.A.C.S.
Diplomate American Board of Surgery &
The Board of Thoracic Surgery
CARDIOVASCULAR and
PERIPHERAL VASCULAR SURGERY
The Doctors Bldg., 3707 Gaston Ave.
Dallas 10, Texas

Robert R. Shaw, M.D. John L. Kee, Jr., M.D.
DRS. SHAW AND KEE
THORACIC SURGERY
The Doctors Building 3707 Gaston Avenue
Dallas, Texas 75246
826-5184

WILLIAM W. TAYLOR, M.D.
Diplomate Board of Thoracic Surgery
Thoracic, Cardiac, and Vascular Surgery
804 Locke Med. Bldg. 6011 Harry Hines Blvd.
Dallas, Texas 75235 637-4833

ALLAN L. GRAHAM, M.D.
Diplomate American Board of Surgery and
Board of Thoracic Surgery
Cardiovascular and Peripheral Vascular Surgery
502 Doctors Building 800 Fifth Avenue
Fort Worth, Texas 332-7879

Use your
Texas Medical Association
Memorial Library
45,000 Bound Volumes 400 Films
1,100 New Journals Each Month
Extensive Reprint Collection
Audio Digest Foundation Tapes
Call or write today!
1801 North Lamar Blvd.
Austin, Texas 78701
AC 512 477-6704

Urology

CECIL M. CRIGLER, M.D., F.A.C.S.
Practice limited to
UROLOGY
1519 Hermann Professional Bldg., Houston, Texas

JO C. ALEXANDER, M.D.
KARL B. KING, M.D. FOSTER FUQUA, M.D.
ELGIN W. WARE, JR., M.D.
GEORGE E. HURT, JR., M.D.
EUGENE R. TODD, M.D.
DONALD E. JOHNSON, M.D.
Urology
3707 Gaston Avenue Dallas, Texas

THE UROLOGY CLINIC
1415 Pennsylvania Ave., Fort Worth, Texas 76104
Dolphus E. Compere, M.D., M.S., F.A.C.S.
Diplomate of American Board of Urology
Grant F. Begley, A.B., M.D.
Diplomate of American Board of Urology
Hugh Lamensdorf, M.D.

H. M. GIBSON, JR., M.D., F.A.C.S.
(Certified by American Board of Urology)
Practice limited to
UROLOGY
512 University Towers Bldg. 1900 North Oregon St.
El Paso, Texas Ph. 532-8130 & 533-4765

MARVIN GREER RAPE, M.D.
Diplomate of American Board of Urology
NEWTON F. McDONALD, M.D.
Diplomate of American Board of Urology
Practice Limited to
UROLOGY
1703 St. Joseph Professional Bldg., 2000 Crawford
Houston, Texas 77002

JOHN B. TRIBLE, M.D.
Practice Limited to
UROLOGY
1209-10 Medical Arts Bldg.
222-7521 Houston, Texas 77002

ERWIN C. WINKEL, M.D.
practice limited to
UROLOGY
Northwest Professional Center 681-0343
2925 West T.C. Jester Blvd. Houston, Texas

THE UROLOGY CLINIC
1010 Louisiana, Houston, Texas 77002
227-1414
JAMES S. BOREN, M.D.
ROBERT I. COX, M.D.
Diplomates American Board of Urology

JOHN F. COLLINS, JR., M.D.
Urology
Doctor's Park 1400 Crescent
Denton, Texas 76201 (817) 387-3828

ADVERTISING INDEX

Arch Laboratories
Dicarbosil 84

Beverly Hills Hospital and Clinic 121

Blue Cross-Blue Shield of Texas 7

The Brown Pharmaceutical Company
Android 114
Cerebro-Nicin 114

Bristol Laboratories
Salutensin 84-85

Burroughs Wellcome & Company, Inc.
Neosporin 26

Campbell Soup Company 79

Casualty Indemnity Exchange
Malpractice Insurance 40

Conal Pharmaceuticals, Inc.
Urised 24

Custom Home Elevator Co.
Welcolator 113

Dallas Medical & Surgical Clinic and Hospital 2nd Cover

The Dow Chemical Company
Novahistine LP 25

Flint Laboratories
Synthroid 70-71

Francis Hospitels Incorporated
Convalescent Care 86

Geigy Pharmaceuticals
Preludin 28-29

Harcliffe Laboratories, Inc.
StomAseptine 18

Highland Hospital 106

Hoechst Pharmaceutical Co.
Doxidan 37

Homestead Child Placement 138

Humco Laboratory
Vasomist 122

Hynson, Westcott and Dunning, Inc.
Lutrexin 41

Ives Laboratories, Inc.
Cyclospasmol 62-63
Isordil 8

Mead Johnson Laboratories
Vasodilan 10-11

Kelsey-Seybold Clinic 100

The Killgore Children's Psychiatric Center and Hospital, Inc. 122

King's Daughters Clinic Back Cover

Lederle Laboratories
Achrocidin 98
Achromycin V 3rd Cover
Achrostatin V 106
Declostatin 47

Eli Lilly and Company
Cordran Tape 30

The Martin X-Ray and Radium Clinic 116

Medical Arts Clinic, Corsicana 126

The Medical Protective Company
Professional Liability Insurance 116

Merck Sharp & Dohme
Indocin 44-46

The Wm. S. Merrell Company
Kolantyl 140

The National Drug Company
AVC 124
Quinamm 123
Tepanil Ten-tab 20

Oncology—Fort Worth 138

Pfizer, Inc.
Pfizer Laboratories Division
Bonine 42-43
Vibramycin 102-104

William P. Poythress & Company, Inc.
Mudrane 27
Uro-Phosphate 82

T. Rowe Price Growth Stock Fund, Inc. 84

The Prudential Insurance Company of America
TMA Group Insurance Plan 96

Radiology Associates of Fort Worth 126

Roche Laboratories
Berocca 12, 125
Librium 38

Julius Schmid Pharmaceuticals
Candeptin 112-113

Scott and White Clinic Back Cover

G. D. Searle & Company
Ovulen-21, Ovulen-28 80-81

Starlite Village Clinic 126

Stuart Pharmaceuticals
Division of Atlas Chemical Industries, Inc.
Mylanta 23

Surgical Mechanical Research, Inc.
Medical and Dental Equipment 122

Syntex Laboratories, Inc. 9

Terrell's Laboratories and Medical Group 1

Texas Medical Association
Texas Medicine 83

Timberlawn Psychiatric Hospital 100

Torbett, Hutchings, Smith Memorial Hospital 2nd Cover

Travis Clinic and Nan Travis Memorial Hospital 126

Turner's Clinical & X-Ray Laboratories 116

Valley Towers Professional Building, Houston 113

Wichita Falls Clinic-Hospital 70

Wyeth Laboratories
Equanil 21-22
Bonine 42-43

Physicians' Directory 127-136

Classified Advertisements 137-138

ADVERTISING RATES & DATA: Available on request from the Advertising Director, Texas Medicine. Advertising plates should be sent directly to the printer. Space reservations, copy and proofs should be sent to the Advertising Director. Represented nationally by the State Medical Journal Advertising Bureau, Inc., 1010 Lake Street, Oak Park, Ill. 60301.

ADVERTISING & BUSINESS OFFICES: Texas Medical Association, 1801 North Lamar Blvd., Austin 78701; Telephone: 512-477-6704.

PRINTING OFFICES: Texas Medicine, c/o Stafford-Lowdon Company, 1114 West Daggett, Fort Worth 76104.

Can one prescription do the work of two?

Yes, Kolantyl.®

Kolantyl Gel/Wafers contain antacids, and Bentyl® (dicyclomine hydrochloride) too.

Merrell

The Wm. S. Merrell Company
Division of Richardson-Merrell Inc.
Cincinnati, Ohio 45215

9-1243

(0715)

JUNE 1970

TEXAS MEDICINE

U. C. SAN FRANCISCO
MEDICAL CENTER LIBRARY
JUL 6 1970

SNAKEBITE • AUTOMOBILES AS KILLERS
MALE INFERTILITY • MD CAMERA BUFFS

Torbett, Hutchings, Smith Memorial Hospital
And The Torbett Clinic

306 Coleman Street
Post Office Box 60

Marlin, Texas

Telephone: WE 6-3561

GENERAL SURGERY
Howard O. Smith, M.D., F.A.C.S.
D. R. Swetland, M.D., F.A.C.S.
Howard L. Smith, M.D., F.A.C.S.

INTERNAL MEDICINE
W. F. McKinley, Jr., M.D.
James S. Bussell, M.D.
C. G. Brown, M.D.

EYE, EAR, NOSE AND THROAT
S. W. Hughes, M.D.

ALLERGY
Walter S. Smith, M.D.*

OBSTETRICS AND PEDIATRICS
M. A. Davison, M.D., F.A.C.O.G.
W. L. Reese, M.D., F.A.C.O.G.

RADIOLOGY
J. M. Brown, M.D., F.A.C.R.

PATHOLOGY
W. W. Klatt, M.D.
Ronald E. Henderson, Jr., M.D.
Kent Smith, M.D.

UROLOGY
Howard O. Smith, M.D., F.A.C.S.

DENTISTRY
B. E. Latimer, D.D.S.

NEUROPSYCHIATRY
S. B. Morrison, M.D.

DERMATOLOGY
Maurice C. Barnes, M.D., D.A.B.D.

Administrator:
J. D. Norris, Jr.

Superintendent of Nurses:
Ruby Lowrance, R.N.

Howard O. Smith, M.D., FACS, Chairman of the Board of Trustees, of Torbett, Hutchings, Smith Memorial Hospital and the Torbett Clinic which opened January, 1963. The original hospital was founded by Dr. J. W. Torbett, Sr., in 1898.

The Torbett Clinic and Memorial Hospital continues to utilize the Marlin Hot Mineral Water and other forms of physical therapy as an adjunct in the treatment of arthritis and allied rheumatic conditions.

*Expired 4-24-69.

THE DALLAS MEDICAL & SURGICAL CLINIC AND HOSPITAL

4105 Live Oak Street

DALLAS, TEXAS

Telephone TA 3-4151

*Geo. M. Underwood, M.D., F.A.C.P., Diagnosis & Gastroenterology, D.A.B. Internal Medicine & Gastroenterology
P. E. Luecke, Sr., M.D., F.A.A.P., Pediatrics
Diplomate American Board Pediatrics
*G. A. Davidson, B.S., M.D., Dermatology
*Wm. H. Potts, B.A., F.A.C.P., Internal Medicine
*Ozro T. Woods, M.D., Surgery, Emphasizing Tumors
Richard M. Smith, M.D., F.A.C.P., Diagnosis & Internal Medicine
J. Wilbur Bourland, Jr., M.D., Obstetrics & Gynecology
Harry M. Spence, M.D., D.A.B.U., F.A.C.S., Urology
Wells M. Wade, D.D.S., Dental Surgery
Halcuit Moore, M.D., F.A.A.P., Pediatrics
Diplomate American Board Pediatrics
John B. Bourland, M.D., Gynecology & Obstetrics
Diplomate American Board OB-GYN
Raymond W. Burford, M.D., D.A.B.R., Radiology
Henry G. Montgomery, M.D., F.A.C.S., D.A.B.S., Surgery
Edwin M. Cleveland, M.D., Internal Medicine
John B. Allen, M.D., Internal Medicine
Diplomate American Board Internal Medicine
R. M. Burnside, M.D., D.A.B.O., Ophthalmology
Adam D. Green, M.D., Surgery
Morris E. Magers, M.D., Internal Medicine
Diplomate American Board Internal Medicine
B. Celia Slaughter, M.D., F.A.A.P., Pediatrics
Diplomate American Board Pediatrics
D. W. Shuster, M.D., D.A.B.O., Otolaryngology and Otologic Surgery
P. E. Luecke, Jr., M.D., Pediatrics, F.A.A.P.,
Diplomate American Board Pediatrics
Channing Woods, M.D., Internal Medicine
William W. Hoffman, M.D., D.A.B.U., F.A.C.S., Urology
James M. Copps, M.D., D.A.B.O., Ophthalmology
Joe B. Caldwell, M.D., D.A.B.R., Radiology
Terry D. Allen, M.D., D.A.B.U., Urology
J. Boyd Hollabaugh, D.D.S., General Dentistry
George P. Fosmire, M.D., F.A.C.S., D.A.B.S., General Surgery
Richard C. Stone, M.D., Internal Medicine and Gastroenterology
Daniel L. Maddox, D.D.S., General Dentistry
William N. New, M.D., Dermatology
Donald A. Sutherland, M.D., Internal Medicine (Hematology)
John R. Woodward, M.D., Obstetrics & Gynecology,
Diplomate American Board OB-GYN
Masashi Kawasaki, M.D., D.A.B.O., Otolaryngology, Tumor and Reconstructive Surgery of the Head and Neck
Miss Billye J. Norris, R.N., Director of Nurses
C. H. Rosamond, Administrator
Arthur L. Cook, Business Manager

*Inactive status

TERRELL'S LABORATORIES

T. C. TERRELL, M.D., F.C.A.P., F.A.C.P., DIRECTOR
JOHN S. TERRELL, M.D., F.A.A.P., ASSISTANT DIRECTOR

FORT WORTH, TEXAS

211 Medical Arts Building

DEPARTMENT OF PATHOLOGY
T. C. Terrell, M.D., F.C.A.P., F.A.C.P.
May Owen, M.D., F.C.A.P., F.A.C.P.
Robert Hausman, M.D., F.C.A.P.
Joan Windmiller, M.D., F.A.A.P.

DEPARTMENT OF RADIOLOGY
H. W. Banker, M.D., D.A.B.R., M.A.C.R.
Ernest E. Holt, M.D., D.A.B.R., M.A.C.R.
James C. Moore, M.D., D.A.B.R., M.A.C.R.

DEPARTMENT OF CHEMISTRY
LaMonte A. Tucker, Ph.D.

DEPARTMENT OF BACTERIOLOGY & MYCOLOGY
Robert F. Devlin, Ph.D.

CONSULTING & ANALYTICAL SERVICES

PATHOLOGY, FORENSIC PATHOLOGY & VETERINARY PATHOLOGY: Histology, Cytology.
CLINICAL PATHOLOGY: Serology, Bacteriology & Mycology, Parasitology, Hematology.
INDUSTRIAL & CLINICAL CHEMISTRY: Radioassay, SMA-12 survey and other Automated Procedures. Hormone Chemistry, Chromatography, Electrophoresis, Immunochemistry.
TOXICOLOGY: Drugs, Water, Foods & Biological materials.
MANUFACTURING DEPARTMENT: Allergenic Extracts and Treatment Sets, Mounting Media, Specifically Prepared Reagents and Stains for Laboratory Use.

TERRELL MEDICAL GROUP

FORT WORTH, TEXAS

210 Medical Arts Building

INTERNAL MEDICINE Diagnosis, Allergy, Cardiology	T. C. Terrell, M.D., F.C.A.P., F.A.C.P. Elizabeth A. Taylor, M.D.
NEUROPSYCHIATRY Electroencephalography	Henry G. Gardiner, Jr., M.D.
PEDIATRICS Pediatric Hematology Adolescent Medicine & Pediatric Consultation	Joan Windmiller, M.D., F.A.A.P. John S. Terrell, M.D., F.A.A.P.
CLINICAL PSYCHOLOGY	Michael W. Wheeler, Ph.D.

Administrator: Arthur Fuston

TEXAS MEDICINE

VOLUME 66 NUMBER 6 JUNE 1970

SCIENTIFIC ARTICLES

42 Pitfalls in Rattlesnake Bite

William E. Lockhart practices general medicine and surgery in Alpine. He is a graduate of The University of Texas Medical Branch, Galveston, and interned at Cleveland City Hospital and the University of Minnesota Hospitals. Dr. Lockhart is a member of the Texas and American Academies of General Practice.

44 Osteogenesis Imperfecta: Biochemical Cancer Resistance? Family Pedigree and Review of Literature

Harvey A. Rosenstock is a resident in psychiatry at Baylor College of Medicine, Houston. A graduate of the University of Oregon Medical School, he interned at Good Samaritan Hospital in Phoenix, and recently completed a tour of duty with the US Navy.

48 The Male Factor in Infertility

Harvey L. Gordon is assistant professor, Department of Surgery, Division of Urology, Baylor College of Medicine, Houston. L. Russell Malinak is an assistant professor and Robert R. Franklin is a clinical professor, Department of Obstetrics and Gynecology, at Baylor.

56 Perineal Neurofibroma; An Unusual Cause of Urinary Tract Obstruction

Ace Gibson Powers practices urology in Albuquerque, NM, is a clinical associate in the Division of Urology, University of New Mexico, and a consultant to the Albuquerque VA Hospital. A graduate of The University of Texas (Southwestern) Medical School, Dallas, he interned at El Paso General Hospital and was a resident in urology for four years at Highland-Alameda County Hospital, Oakland, Calif.

62 Nonsuture Repair of Pelvic Fistulae: An Experimental Study

Kamal S. Sheena, FACS, is a diplomate of the American Board of Surgery and practices in Houston. He also is associated with the Section of Experimental Surgery, M D Anderson Hospital and Tumor Institute. His coauthors are John E. Healey, Jr; H. Stephen Gallager; and Charles M. McBride, all of whom are associated with M D Anderson.

68 Primary Malignant Tumors of the Ileum and Jejunum

James R. Armstrong, senior resident in surgery at Hermann Hospital, Houston, plans to enter the practice of general surgery in Tyler this summer. Frank R. Denman is assistant chief of surgery at Hermann Hospital.

LOCKHART

ROSENSTOCK

GORDON

POWERS

SHEENA

ARMSTRONG

ROGERS

PUTNAM

KOWALEWSKI

72 The Lower Esophageal Ring; A Source of Dysphagia

Lee F. Rogers is assistant professor of radiology at The University of Texas Medical School at San Antonio. A diplomate of the American Board of Radiology and fellow of the American College of Radiology, he is a member of several other professional organizations. Dr. Rogers enjoys water sports and woodworking.

80 Clinicopathologic Conference

Participants in this CPC from The University of Texas (Southwestern) Medical School and Parkland Memorial Hospital, Dallas, are Robert S. Putnam, assistant professor of pathology; Roger Williams, FRCP, visiting professor; Burton Combs, professor of internal medicine; Donald W. Seldin, professor and chairman, Department of Internal Medicine; James P. Luby and C. Gunnar Blomqvist, assistant professors of internal medicine; Rand Frederiksen, resident in internal medicine; Philip E. Duvall, assistant professor of radiology; Gregory Whelan, instructor in internal medicine; and Edwin H. Eigenbrodt, associate professor of pathology and guest editor.

SPECIAL ARTICLE

92 The Automobile—The Greatest Killer

Edward J. Kowalewski of Rothsville, Pa, is president of the American Academy of General Practice. This article is a condensation of an address he gave to the International Medical Assembly of Southwest Texas in January, 1970. Dr. Kowalewski, a general practitioner in a rural area, is an active participant in civic affairs as well as those of medical organizations. He led a successful campaign to have a medical safety strip erected on the Pennsylvania Turnpike, and received the Medical Tribune Auto Safety Award in 1968.

EDITORIALS

27 The Physician as Biologist and Ecologist
John S. Chapman

28 Functional Asplenia—A Concept
Donald J. Fernbach
John A. Burdine, Jr

29 Communications to TEXAS MEDICINE

31 Reflections on a Historic Meeting
Walter Walthall

DEPARTMENTS

4 Association and Late News

11 Highlights of Coming Meetings

17 Continuing Education Courses

98 New Decade in Texas Medicine Launched at 103rd Annual Session

101 News

112 MD Camera Buffs Use Disney Approach

115 Personals

117 Pamphlets

119 Medicine in Literature

120 Recent Deaths

ON THE COVER

Summer is the time to relax, take a vacation, and enjoy life. It shouldn't be spoiled by snakebites or automobile accidents (see pages 42 and 92 for more on those subjects). As a matter of fact, if there were fewer accident victims to care for, physicians would have considerably more time for their favorite summer pursuits and for their hobbies the year round (for more on hobbies, see page 112).

NEXT MONTH

July's issue will include articles on pulmonary tuberculosis with pneumonectomy complicated by active pulmonary histoplasmosis, clinical and research aspects of reconstruction of the cervical trachea, roentgen diagnosis of disseminated alveolar disease, group therapies in the problem habit of alcoholism, and an assimilative view of neurosis.

PUBLICATION INFORMATION

Texas Medicine is published monthly by the Texas Medical Association.

Editorial and Business Offices: 1801 N. Lamar Blvd., Austin, Texas 78701; Telephone: Area Code 512 477-6704.

Second Class Postage paid at Austin, Texas, with additional entry at Fort Worth, Texas, under Act of March 3, 1879.

Subscription communications should be sent to the Business Offices, $3 per year for members; $6 for nonmembers; $8 for foreign; $3 for medical students; single copy, $1.

Contributions, previously unpublished, are welcomed for review; suggestions for preparation are available from the Editorial Offices. News and other items should be sent to the Editorial Offices by the 10th of the month preceding the month of publication. All contributions are sent at the owner's risk.

Printing Offices: c/o Stafford-Lowdon Company, 1114 West Daggett, Fort Worth 76104.

ASSOCIATION & LATE NEWS

TMA House of Delegates Acts on Himler Report During Annual Session; Texas Delegates To Present Recommended Changes to AMA in Chicago

The Texas Medical Association's House of Delegates on May 3 adopted many suggestions, discarded some, and rewrote many other recommendations of the report of the American Medical Association's Committee on Planning and Development (known as the Himler Report). House action, on the Himler Report followed extensive review and consideration of its content by special TMA reference committees.

The Texas delegates to the American Medical Association will present the following recommended changes,* by sections, to the AMA at its annual meeting June 21-25 in Chicago.

Basic Considerations

TMA delegates recommended that the AMA adopt as a statement of the primary purpose and responsibility of the Association and the medical profession the following:

"To continue to affirm, by all appropriate means, to make health services of high quality available to all individuals, in a dignified and acceptable manner, regardless of their social class or ethnic origin."

Delegates agreed with the AMA recommendation to adopt as a corollary or as a separate policy statement:

"The American Medical Association has the duty to guide and assist the medical profession in the attainment of this objective."

Further, they suggested that the following policy be adopted:

"That the American Medical Association continue to study the need for new and improved methods of delivering health services, that it encourage and participate in efforts to develop them, and that, in the interest of attracting the most highly qualified candidates to the field of medicine, it simultaneously make every effort to maintain and create incentives in medical practice. Among these incentives are maximum professional independence, a multiplicity of practice options, and freedom of choice for both physicians and patients."

As a definition of health, delegates proposed that "health is a state of physical and mental well-being and not merely the absence of disease or infirmity."

They further advised the following change in the AMA report:

"That AMA adopt an active role and take the initiative in developing plans and programs for health care and that it encourage and assist state and county medical societies to do the same at their respective levels."

Evaluation of Current Trends

As a critique of the preliminary discussion in the AMA's report in this section, delegates concurred with Dr. Charles Max Cole, Immediate Past President of TMA, who had observed, "The simple fact is that the federal government has promised more care than it can deliver, and more than the taxpayer may be willing to finance. We feel that it is inappropriate and morally wrong for government to promise medical care, to ask providers of services to subsidize it by reducing fees and reimbursement payments, and then to criticize them for the soaring costs of the programs."

Shortages in All Categories of Health Service

In preliminary discussion in this area, delegates observed several changes in wording and noted specifically:

"In the area of graduate education, consideration should be given to the shortening of residency requirements for specialty board certification. However, there is reason to believe that the abbreviation might adversely affect the quality of training."

Delegates also observed that "rural areas are not necessarily poverty pockets and that there are frequently many advantages to rural areas over urban areas."

They amended an AMA proposal by stating, "That an appropriate committee or division of the Association secure data from all the state medical societies on the adequacy of health services and the manner in which they are being provided in the various areas of their state, and the practice mechanisms, if any, that are being considered or developed to correct existing deficiencies. It is suggested that early motivation of students toward the private practice of medicine would help solve the deficiencies where they exist."

They agreed with a recommendation in the AMA report, "That the Association, in conjunction with state and county medical societies, establish a service of consultation and assistance for such physicians to facilitate the planning and financing of their projects."

Delegates amended another recommendation to read, "That, in those instances in which physicians cannot be found to develop health care facilities with the capability of providing needed

*Persons interested in the original recommendations of the Committee on Planning and Development may review them in the Report of the Committee on Planning and Development, available from Texas Medical Association, 1801 N. Lamar, Austin, 78701.

services, the AMA urge, encourage, and assist the state and local medical societies to do so."

Delegates disapproved one AMA recommendation which involved the establishment of lay-owned corporations because the corporate practice of medicine is illegal in Texas.

They, however, recommended that the "AMA and the constituent and component medical societies seek the active cooperation of medical centers and voluntary hospitals in health service projects for the medically underprivileged consistent with the AMA's code of medical ethics."

Shortages of Specific Categories of Health Personnel by Profession and Specialty

The negative introduction of this section was disapproved and amended to read:

"To consider further the matter of medical manpower, the short supply of family physicians represents a great need that is generally recognized and which medicine must continue to dedicate itself to help resolve."

They also felt that this section of the report should be expanded to make clear that the basic shortage is in the number of physicians providing direct patient care because of the many who are attracted into research, education, administrative medicine, and government, including military services.

They recommended that "the AMA, state and local county medical societies, in conjunction with other professional, educational, and lay associations, continue to explore and develop plans to overcome health manpower shortages."

Further, they recommended:

"That the Association, in its future declarations and activities directed toward the alleviation of shortages in health services and personnel, underscore the fact that these shortages are due in part to the channeling of such personnel into research, education, administrative medicine, and government medical programs such as public health service, VA facilities, and the military services as well as problems of distribution and total number of practicing physicians and paramedical personnel."

The delegates agreed with an AMA recommendation that "the Association publicize the reasons for maldistribution, as outlined in this section, and stress that the voluntary correction of these deficiencies requires public cooperation and community action in addition to the measures taken by the health professions."

Other recommended changes for this section were:

"That an appropriate Committee of the AMA immediately begin to formulate a policy on doctors' assistants, particularly with regard to their responsibilities, limitations on their services, and supervision of their services by qualified physicians."

"That the AMA reaffirm the principle that the basic responsibility for the medical care of patients lies with their physicians of record and that that responsibility cannot be legally or morally delegated."

"That the Association's Law Division upon request assist state medical societies in identifying and avoiding any legal hazards that may accompany the employment of doctors' assistants."

Delivery Systems for Health Care

The delegates favored changing the first recommendation in this section to:

"In seeking as its goal the highest quality of patient care, the most effective use and broadest availability of the science and art of medicine, the Association advocates factual investigation and objective experimentation in new methods of delivery of health care, while still maintaining faith and trust in the private practice of medicine and pride in its accomplishments."

They also recommended:

"That an appropriate committee of the AMA investigate and propose the basic criteria which any proposed system of delivery of health services or mechanism for payment must satisfy to be acceptable and insist that these criteria be in accordance with the free enterprise system of the practice of medicine."

And further:

"That the Association, in appropriate public statements, emphasize the concept that differences in education, state laws, culture, and income levels create problems that may necessitate different systems of delivering medical care for different population groups and different geographic areas."

"That the state and local medical societies be encouraged and assisted in devising and proposing practice expedients suited to their localities and their problems." (original AMA recommendation)

"That the Association, in conjunction with the state and county medical societies, establish a consultation and assistance service for physicians or groups of physicians who wish to develop programs for the rendering of health services."

"That the AMA endeavor to be informed of the pilot projects that are proposed by other sources and that it request the Department of HEW to discuss those projects with the Association before they are put into effect." (original AMA recommendation)

"That the Association insure that the value judgments made by the Department of HEW on plans, programs, pilot projects and payment mechanisms are firmly based on the criteria and standards the AMA has developed for that purpose and that these criteria be in accordance with the free enterprise system of the practice of medicine."

Medical Society Negotiation of Conditions, Regulations and Fees in Government Programs

Delegates approved the following statements:

"Encourage state medical associations to consider undertaking various studies, including surveys, of fees and office overhead and related expenses of medical practice. Such surveys shall not be binding on any individual physician. In accordance with the principles of medical ethics of the American Medical Association, physicians should arbitrate fees with their patients and not with third parties."

"Develop a uniform methodology for conducting such studies to the end that the data from the various states and localities be comparable." (original AMA recommendation)

"Serve as a clearing house for the material thus obtained and, after analysis, redistribute the data to the state medical associations, but negotiations must be conducted by state and local societies and individual physicians in order to allow for variations in local circumstances."

"Encourage the state medical associations to designate representatives to deal energetically with third party agencies and programs."

Cost Control of Health Care: Utilization and Monitoring of Professional Fees

Delegates approved the following positive statement, in substitution for the original AMA recommendations:

"That the AMA reiterate its support of sound, existing mechanisms, such as public grievance and adjudication committees, and new, innovative plans, such as review committees, which state and county medical societies have found to be most appropriate and effective for the consideration of fees and the costs of medical care."

Audit and Postgraduate Study

Delegates agreed with the original AMA recommendation to:

"Endorse the principle of voluntary, life-long postgraduate study for all physicians and continue and accelerate the development of programs and incentives for such study."

They further recommended the following amended statements:

"Encourage physicians, medical staffs of hospitals, and appropriate committees of state and county medical societies to develop, within their organizational framework, effective methods of reviewing professional services, to the maximum possible extent, for use by appropriate committees to those societies and their members."

"Request the Law Division to clarify the extent to which a physician's responsibility for the privacy of his patients' records will permit him to cooperate in an audit of his office practice."

Special Requirements to Participate in Government Programs—Licensure

Delegates recommended:

"That the AMA encourage and assist all state medical associations to devise programs for voluntary postgraduate study designed to maintain medical education at the optimum level with the primary objective of assisting the physician in rendering professional services to his patients. These programs of postgraduate study should be mindful of the many demands on the time of the busy physician, and his responsibilities to his patients and his practice, and should be least disruptive to provision of medical services."

They agreed with the AMA:

"That the Association obtain information from each state medical society as to whether special requirements have been imposed on physicians who render services to patients under the provisions of tax-supported programs and obtain the specifics of what those requirements are."

"That in those states where the health or welfare departments have imposed special requirements on physicians to participate in their programs, the medical society reject those requirements and that, if the need for such regulation can be demonstrated, the state medical society, education department, and health department cooperatively develop standards to be incorporated into the education law and enforced on all physicians of that state, thereby eliminating double standards for medical practice and restoring the licensing authority to the proper agency."

Hospital Bed Shortages; Utilization; Physician-Hospital Relationships

They agreed with the AMA:

"That the Association secure data from state and county medical societies on problems in physician-hospital relationships in their areas and the measures, if any, that are being taken to solve them."

"That, on the basis of these data, the Association identify the basic principles that apply to staff-hospital relationships and encourage state and county medical societies to do the same."

"That the Association and each state and county medical society request its counterpart in the hospital association structure to assist in developing guidelines and urge their member associations and hospitals to implement them."

Effects of Medicare and Medicaid on Voluntary Health Insurance

They agreed with the AMA:

"That the Association, through its current liaison with the NABSP, seek to obtain continuous and current information on the Medicare Program; that it secure data on the development of additional benefits, new fields of coverage, and minimum standards of benefits in voluntary plans; and that, through the NABSP, it stimulate the Blue Shield Plans to greater efforts in upgrading their programs."

"That a similar liaison committee be developed in conjunction with the Blue Cross National Association for similar purposes."

They recommended the following amended version of the AMA statement:

"That the AMA advise state and county medical societies to take similar action at their respective levels and to renew their representation on the boards of directors of their local Blue Plans to be sure that their representatives are individuals who are currently active in society affairs and familiar with society policy. These representatives should make regular reports to their local and state societies and should not be members of any liaison committee with Blue Shield or Blue Cross while serving on their Board of Directors."

"That the association and state associations seek a formal and direct channel of communication with the Department of Health, Education, and Welfare, with the object of developing its own capacity for modifying existing and new programs when such modification is indicated, rather than relying solely on the NABSP for this purpose."

Priorities of Health Services

Delegates recommended that this title be changed to read, "Priorities of Optimum Health Care."

They further recommended the following version of priorities of health care:

"1. Necessary care for all acute illnesses, somatic or mental, of high quality, availability, and rendered in a suitably equipped facility.

2. The same care for chronic illness.

3. A program for maternal, child, and adolescent health care.

4. Disease and accident prevention programs.

5. Periodic, regular health inventory of adults to prevent disease or detect it in its early stages.

6. A formal program of health education counselling to function in conjunction with 3 and 4."

The following were thought to be of concern but not the direct responsibility of the physician:

"7. Occupational counselling based on appraisals of the individual's background, attitudes, aptitudes, and aspirations.

8. Social service counselling for domestic, behavioral, and environmental problems.

9. A healthful environment in terms of housing, control of air and water pollution, sanitation, noise abatement, and medical transportation."

Health Bill of Rights

The delegates recommended that this section be entitled, "Goals of Health Care."

The following recommendations were approved by the delegates:

"An appropriate committee or division of the Association continue to gather information from the state medical societies on the availability of physicians, ancillary personnel, hospital beds in all categories, laboratories, public health nurses, social service workers, and all other types of health professionals."

"The Association continue to identify the services that comprise good health care."

"On the basis of the data received from the state medical societies, the Association establish guidelines which state and county medical societies may use in evaluating needs and priorities of medical services in their respective areas."

72 Million Strong

72 Million Strong! Seventy-two million Americans are protected by the "Blues" — BLUE CROSS® and BLUE SHIELD®′. (A million gain in the past year.) More than are enrolled in any other voluntary health care service in the world. More than *any* voluntary organization in the U.S.A.

What does it take to earn a vote of confidence like that? The answer is important to all Americans — but most of all to those in the "provider" professions . And doesn't it make the hospital's credit man happy to know that just about —

"Everybody's swingin' to the Blues!"

BLUE CROSS®and BLUE SHIELD®′

Hospital and Health Care Coverage
(GROUP HOSPITAL SERVICE, INC.)

Medical and Surgical Benefits
(GROUP LIFE & HEALTH INSURANCE COMPANY)

OF TEXAS

MAIN AT NORTH CENTRAL EXPRESSWAY ■ DALLAS, TEXAS 75222

®American Hospital Association
®′National Association of Blue Shield Plans

Partnership for Health

Delegates supported the following statement regarding the preface of this section:

"PL 89-749 is a permissive law, and we should not give it binding control by default. We should support voluntary community planning programs, but must insist that planning councils be composed, in the majority, of persons competent in the disciplines involved and that plans are not evolved which will interfere with the natural principle of supply and demand."

The following recommendations were approved:

"That the Association request the state medical societies to submit information on the status of comprehensive areawide planning in their states and the problems that are being encountered."

"That this information be analyzed, summarized, and redistributed to the state societies, together with a resume, prepared by the Law Division, of the provisions in the law that are pertinent."

"That the implementation of comprehensive areawide health planning be reviewed periodically and that the state and county medical societies be advised of the problems and pitfalls in this difficult but important area of endeavor."

Considerations For and Against Structural Reorganization of the AMA

The delegates approved the AMA recommendation:

"That the present structure of the association be retained and that it be strengthened by improvements and modifications in its function."

The Association's Attitude Toward the Constituent Associations

Delegates concurred with the following AMA recommendations:

"That an immediate survey be conducted of the state medical societies and, through them, of the component county medical societies to determine what arrangements they have made, if any, for the regular collection of data on the socio-economics of health care."

"That, on the basis of the information received, the AMA develop tables of organization for research divisions at the state levels and methods of participation for county societies that are in keeping with their resources. The planning should be developed along lines that are compatible with the concept of a tight federation of societies and are least disruptive to research divisions that are already in existence."

"That the plans and tables of organization in their initial form be circularized among the state and county medical societies with the reasons for their development and strong recommendations for affirmative action."

"That the association hold a series of working meetings with state and county medical society executives, individually or in groups, to further refine the organization patterns and procedures that will best serve them in this collective endeavor."

The delegates reserve action on one AMA recommendation calling for a planning council with appropriate subcommittees to be formed for the purpose of processing data and formulating policy recommendations. Although the delegates did not oppose the recommendation, they felt that endorsement should be reserved until the planning council's responsibilities were fully defined.

Changes in Association Attitude

The delegates supported the following amended statement:

"At the risk of being repetitous, the Committee would again emphasize that the Association should reconsider its exclusive support for existing delivery systems."

They recommended that the terms "private practice," "fee-for-service payment," and "free choice" should be more widely used and thoroughly explained rather than avoided, as the Himler Report recommends.

Academy of the Professions

Delegates studied the AMA recommendations that "the AMA sponsor, promote the formation of, and participate in, a 'National Academy of the Health Professions for Research and Policy' "; however, they recommended that this suggestion be returned to the newly formed AMA Committee on Planning and Development for more detailed study and evaluation.

Modification of Program Administration

In this section, the delegates felt that the AMA committee "engages in a semantic debate over prevailing and customary fees and implies that physicians will negotiate fees with third parties in the future." They felt that physicians should not surrender to these ideas.

Legislation: Essential Conditions for Successful Public Relations and Legislative Programs

The delegates, in reviewing this section, felt that the AMA committee had entirely overlooked "basic honesty and medical judgment." They felt that the tests of future issues should be based on competent medical knowledge, not on physicians' forecast of legislators' approval.

They also supported the minority report of the AMA committee, written by Dr. John H. Budd of Ohio, which denounced the committee's statement that the "association's opposition to Medicare was more emotional than objective."

Annual Session Lecture Tapes To Be Available

Key lectures of the 1970 Annual Session of the Texas Medical Association were taped by the Audio-Digest Foundation of Los Angeles, Calif.

Sessions selected to be recorded in entirety were the general meetings and meetings of the scientific sections on ophthalmology, pediatrics, and surgery.

The tapes will be available on loan from the TMA Memorial Library as soon as processing will allow. Further information concerning the tapes is available from the Texas Medical Association, 1801 N. Lamar Blvd., Austin 78701.

Texas' Volume of Claims For Medicare Increases

The volume of claims received under Medicare in March by Blue Cross-Blue Shield of Texas was the second highest in the nation. Traditionally, Texas has ranked fourth.

The increase in volume of claims received by all Blue Shield plans acting as carriers for Medicare Part B in Texas began in February, when 224,597 claims put Texas third highest in the United States. The volume rose to 260,295 claims in March.

In spite of the increased inflow of claims, Texas Blue Cross-Blue Shield had only 1.7 weeks of work on hand at the end of March, whereas the national average was 2.5 weeks. Only six of the 33 plans in the US and only two of the seven plans that rank highest in volume of claims had fewer claims on hand. Only three other plans in the top seven had a lower ratio of 30-day-old claims on hand to the total number of claims on hand.

The Blue Cross-Blue Shield plan in San Francisco ranked first in volume, and the Dallas-headquartered plan was followed in order by New York; Camp Hill, Pa.; Jacksonville, Fla.; Boston; and Detroit.

THE LEADING MANUFACTURER
OF INSULIN SYRINGES

B-D

BECTON, DICKINSON AND COMPANY
RUTHERFORD, NEW JERSEY 07070

FREE CLINICAL SUPPLY

PLASTIPAK
INSULIN SYRINGE/NEEDLE UNITS

Send samples to:

Name _____
(Physician's Signature

Address _____

City _____ State _____ Zip _____

Clip out postcard on dotted line . . . no stamp required

Now you can lower the risk of insulin error when your patient is home . . . and alone

B-D

SINGLE-USE
PLASTIPAK
INSULIN SYRINGE/NEEDLE UNIT

8401
RED CAP u40

8406
GREEN CAP u80

as specific as insulin itself

Postage will be paid by Addressee

No postage stamp necessary if mailed in the United States

BUSINESS REPLY MAIL
First Class Permit No. 134, Fairview, N.J.

Becton-Dickinson and Company
Consumer Products Division
P.O. Box 183
Fairview, New Jersey 07022

THE LEADING MANUFACTURER OF INSULIN SYRINGES

B-D

BECTON, DICKINSON AND COMPANY
RUTHERFORD, NEW JERSEY 07070

Clip coupon on dotted line . . . fill out other side
send for physician's free samples

color-coded caps and numbers—red for U40, green for U80

presterilized—consistently dependable, and sterility is assured until cap is opened

easy-to-hold, easy-to-handle—even for child diabetics with small hands or adults with stiff fingers

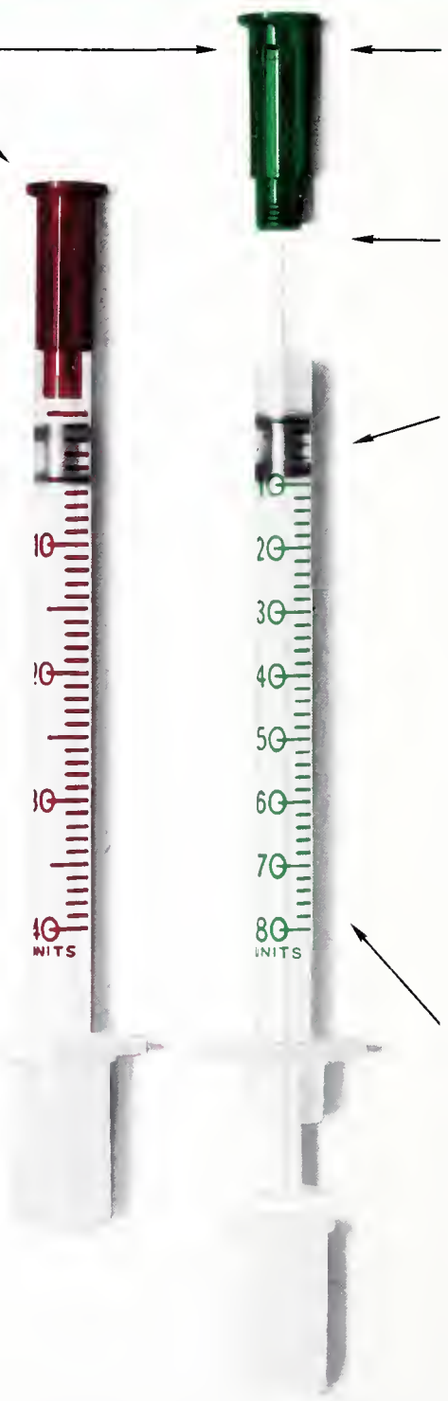
the sharpest needle your patient can buy—far sharper than any reusable needle

pocket-or-purse portable—sturdy from tip to top

integral cannula reduces air bubbles

single-scale PLASTIPAK insulin syringe needle units eliminate the hazard of reading the wrong scale

the first insulin syringe so low in cost your patient can use a new one every time



low cost—barely pennies higher than old-fashioned disposable needles without syringe . . . about as low as a cup of coffee

its single-scale—U40 or U80—minimizes the risk of measurement errors. Your patient *can't* read the wrong scale.

big numbers, wide spaces for easy reading

BECTON B-D DICKINSON
Consumer Products Division
Becton, Dickinson and Company
Rutherford, New Jersey 07070

U40 U80

Supplied: in packages of 10—
PLASTIPAK syringe U-40 (red) or
PLASTIPAK syringe U-80 (green)
Prescription required in most states.

AMERICAN MEDICAL ASSOCIATION

The 119th annual convention of the American Medical Association will be held in Chicago June 21-25 at the International Amphitheatre on Chicago's Near South Side. Scientific and industrial exhibits will be presented, and many of the world's most prominent medical researchers and practitioners will be featured. The scientific program will include four general scientific meetings, special exhibits, and seven special sessions. Some of the topics to be covered are coma and the diagnosis of death, conception control and abortion, suicide, drug interactions, neurological surgery, and nuclear medicine. Included in the program are receptions, luncheons, and dinners for alumni organizations and specialty groups; sessions of the AMA House of Delegates; inauguration of the 124th AMA President; and the President's reception. There will be no registration fee.

Contact: Norman H. Budde, Program Service Department, American Medical Association, 535 N. Dearborn St., Chicago 60610.

POSTGRADUATE MEDICAL ASSEMBLY OF SOUTH TEXAS

Astroworld Hotel will be headquarters for the 36th annual meeting of the Postgraduate Medical Assembly of South Texas July 27-29. Sessions on internal medicine, surgery, obstetrics and gynecology, ophthalmology, and otolaryngology are planned. Panel sessions will include discussions on pulmonary embolism, ovulation induction, trauma, acute crisis intervention in psychiatry, diagnosis and management of arrhythmias following acute myocardial infarction, shock, pulmonary edema, and cardiovascular emergencies. Speakers include Drs. Isadore Dyer, New Orleans; Clark M. Hinkley, Birmingham, Ala.; David L. Knox, Baltimore; Frank N. Ritter, Ann Arbor, Mich.; and George Dekle Taylor, Jacksonville, Fla. Private and special group social functions are planned for Monday night, and a reception-cocktail party will be held Tuesday evening. Registration fee is $35.

Contact: Mrs. W. H. Dahme, 410 Jesse H. Jones Library Bldg., Texas Medical Center, Houston 77024, executive secretary.

TEXAS PHARMACEUTICAL ASSOCIATION

Texas Pharmaceutical Association's 91st annual meeting will be staged at the Statler Hilton Hotel in Dallas July 26-29. Program speakers and their presentations will include Donald E. Miller, Washington, D.C., chief counsel, Bureau of Narcotics and Dangerous Drugs, "Controlled Dangerous Substance Act"; Carl Roberts, Washington, D.C., director, legal division, American Pharmaceutical Association, "Unions in Pharmacy Today"; and Howard E. Mossberg (PhD), dean, school of pharmacy, University of Kansas, Lawrence, "Mandatory Continuing Education." Addressing the House of Delegates will be Dr. Walter Walthall, President, Texas Medical Association, and William R. Whitten, President, American Pharmaceutical Association. A new innovation in the educational program will be sidewalk seminars, with topics ranging from technical and scientific aspects to the economics of pharmacy practice. Registration fee is $25.

Contact: Luther R. Parker, 404 Austin Savings Bldg., Austin, executive officer.

HIGHLIGHTS OF COMING MEETINGS

CURRENT MEETINGS IN TEXAS

THE UNIVERSITY OF TEXAS NURSING SCHOOL (System-wide) will present a conference on "The Changing Role in Mental Health Nursing—A New Dimension: Family Systems and Therapy," July 9-10 in the auditorium of The University of Texas Medical School at San Antonio. Shirley A. Smoyak, RN, PhD, associate professor and acting chairman, Graduate Program in Advanced Psychiatric Nursing, Rutgers University, Newark, N.J., will be consultant. Registration fee is $15. Contact: Miss Dorothy Blume, Director, Continuing Education, The University of Texas Nursing School, Austin 78712.

CURRENT REGIONAL MEETINGS

ROCKY MOUNTAIN CANCER CONFERENCE, sponsored by the Colorado Division of the American Cancer Society and Colorado Medical Society, will be held at the Brown Palace Hotel in Denver July 17-18. Distinguished luncheon speakers at the 24th annual conference will be Dr. Walter C. Bornemeier, president-elect, American Medical Association, and Dr. Jonathan E. Rhoads, president, American Cancer Society. Speakers and their presentations will be Maj. Gen. Joe M. Blumberg, "Malignant Melanomas"; Dr. Donald S. Childs, Jr., "Results of Radiation Therapy Augmented by 5-Fluorouracil or Oxygen in the Treatment of Gastrointestinal Malignancies"; Dr. Alfred W. Kopf, "Host Defense Mechanisms in Malignant Melanoma"; Dr. H. Marvin Pollard, "What Is Being Done About Colon Cancer?"; and Dr. Harry W. Southwick, "Management of Soft Tissue Sarcomas." Contact: F. C. Schmidt, 1764 Gilpin St., Denver 80218, executive officer.

SOUTHERN OBSTETRIC AND GYNECOLOGIC SEMINAR will take place July 27-31 in Asheville, N.C. A wide variety of gynecological and obstetrical subjects will be covered, including cervical incompetence, cervical dysplasia and carcinoma, pituitary-ovarian relationships, cryosurgery, and vaginal surgery. Speakers will be Drs. Robert Greenblatt, Robert Barter, Robert Franklin, Raymond Kaufman, Duane Townsend, and Charles Hendricks. Contact: Dr. George T. Schneider, 1514 Jefferson Highway, New Orleans 70121, secretary.

CURRENT NATIONAL MEETINGS

AMERICAN MEDICAL SOCIETY ON ALCOHOLISM will meet in Chicago June 23-24 in conjunction with the annual convention of the American Medical Association. On June 23 the meeting will be held at the headquarters of the American Hospital Association and will include a presentation of the association's program on alcoholism. Drs. Charles Lieber, Ernest Wynder, and George Burch will be speakers at that session. A presentation of the Lutheran General Hospital's rehabilitation program for alcoholic patients will be offered the following day at that hospital by Dr. Nelson Bradley, director. Contact: Dr. Frank A. Seixas, Medical Director, National Council on Alcoholism, Inc., 2 Park Ave., New York 10016.

MORE HIGHLIGHTS OF COMING MEETINGS

■ Denotes Texas meetings.

ALSO IN JUNE

AMERICAN PHYSICAL THERAPY ASSOCIATION, Washington, D.C., June 28-July 3, 1970. Royce P. Noland, 1740 Broadway, New York 10019, Exec. Officer.

INDUSTRIAL MEDICAL ASSOCIATION, Chicago, June 23-25, 1970. Howard N. Schulz, 55 E. Washington, Chicago 60602, Exec. Dir.

ALSO IN JULY

SOCIETY OF NUCLEAR MEDICINE, Washington, D.C., July 6-12, 1970. Margaret Gloss, 211 E. 43rd St., New York 10017, Exec. Officer.

AUGUST

AMERICAN ACADEMY OF PHYSICAL MEDICINE AND REHABILITATION, New York, Aug. 16-18, 1970. Creston C. Herold, 30 N. Mich. Ave., Chicago 60602, Exec. Dir.

AMERICAN COLLEGE OF CHEST PHYSICIANS, 11th International Congress, Lausanne, Switzerland, Aug. 3-7, 1970. Alfred Soffer, 112 E. Chestnut St., Chicago, Exec. Dir.

AMERICAN CONGRESS OF REHABILITATION MEDICINE, New York, Aug. 16-21, 1970. Creston C. Herold, 30 N. Michigan Ave., Chicago 60602, Exec. Dir.

THE UNIVERSITY OF WISCONSIN, Ninth National Conference on Therapies for Advanced Cancers, Madison, Wis., Aug. 20-22, 1970. Dr. Robert J. Samp, Assistant Professor of Surgery and Clinical Oncology, University Hospitals, Madison, Wis. 53706, Program Coordinator.

WORLD MEDICAL ASSOCIATION, Oslo, Norway, Aug. 16-22, 1970. Dr. A. Z. Romualdez, 10 Columbus Circle, New York 10019, Sec.

SEPTEMBER

AMERICAN ACADEMY OF GENERAL PRACTICE, San Francisco, Sept. 25-Oct. 1, 1970. Mac F. Cahal, Volker Blvd. at Brookside, Kansas City, Mo., Exec. Dir.

AMERICAN ACADEMY OF ORTHOPAEDIC SURGEONS, postgraduate course on hip surgery, Philadelphia, Sept. 13-16, 1970. Dr. Raymond G. Tronzo, 133 S. 36th St., Philadelphia 19104.

AMERICAN ASSOCIATION OF MEDICAL CLINICS, San Francisco, Sept. 20-23, 1970. Dr. Edward M. Wurzel, 719 Prince St., Alexandria, Va. 22313, Exec. Dir.

AMERICAN ELECTROENCEPHALOGRAPHIC SOCIETY, Washington, D.C., Sept. 17-19, 1970. Dr. Philip T. White, Marquette University School of Medicine, 8700 W. Wisconsin Ave., Milwaukee, Wis. 53226, Sec.

AMERICAN FRACTURE ASSOCIATION, New York, Sept. 26-30, 1970. Dr. H. W. Wellmerling, 610 Griesheim Bldg., Bloomington, Ill. 61701, Sec.-Gen.

■ AMERICAN HEART ASSOCIATION, TEXAS AFFILIATE, INC., Dallas, Sept. 15-20, 1970. Dudley H. Hafner, Box 9928, 8600 Hwy. 183 N., Austin 78757, Exec. Officer.

■ AMERICAN HOSPITAL ASSOCIATION, Houston, Sept. 14-17, 1970. James E. Hague, 840 N. Lake Shore Dr., Chicago, Sec.

AMERICAN HUMANE ASSOCIATION, St. Louis, Sept. 27-30, 1970. Rutherford T. Phillips, P. O. Box 1266, Denver 80201, Exec. Dir.

AMERICAN MEDICAL WRITERS ASSOCIATION, New York, Sept. 24-27, 1970. W. Wayne Curtis, 420 Lexington Ave., New York 10017, Exec. Officer.

AMERICAN ROENTGEN RAY SOCIETY, Miami Beach, Sept. 30, 1970. Dr. William B. Seaman, 20 N. Wacker Dr., Chicago 60606, Exec. Officer.

AMERICAN SOCIETY OF CLINICAL PATHOLOGISTS and COLLEGE OF AMERICAN PATHOLOGISTS, annual, Atlanta, Ga., Sept. 14-21, 1970. Albert G. Boeck, Jr., 710 S. Wolcott, Chicago, Exec. Officer.

ASSOCIATION OF LIFE INSURANCE MEDICAL DIRECTORS OF AMERICA, Boston, Sept. 28-30, 1970. Dr. Arthur E. Brown, c/o ALIMDA, P.O. Box 594, Newark, N.J.

■ TEXAS MEDICAL ASSOCIATION, Austin, Sept. 18-20, 1970. C. Lincoln Williston, 1801 N. Lamar Blvd., Austin 78701, Exec. Sec.

■ TEXAS PEDIATRIC SOCIETY, Fort Worth, Sept. 24-26, 1970. Dr. Pat A. Cato, 1015 E. 32nd St., Austin 78705, Sec.

OCTOBER

AMERICAN ACADEMY OF CLINICAL TOXICOLOGY, San Francisco, Oct. 24-26, 1970. Dr. Eric G. Comstock, P. O. Box 2565, Houston 77001, Exec. Dir.

AMERICAN ACADEMY OF OPHTHALMOLOGY AND OTOLARYNGOLOGY, Las Vegas, Oct. 5-9, 1970. Dr. C. M. Kos, 15 Second St., SW, Rochester, Minn. 55901, Exec. Sec.-Treas.

AMERICAN ACADEMY OF PEDIATRICS, annual, San Francisco, Oct. 17-22, 1970. Dr. Robert G. Frazier, 1801 Hinman Ave., Evanston, Ill. 60204, Exec. Dir.

AMERICAN ASSOCIATION OF BLOOD BANKS, San Francisco, Oct. 25-29, 1970. Lois J. James, 30 N. Mich. Ave., Chicago, Central Office Mgr.

AMERICAN ASSOCIATION OF MEDICAL ASSISTANTS, Des Moines, Iowa, October, 1970. Pauline M. Hunter, 5652 N. 10th St., Phoenix, Ariz., Sec.

AMERICAN COLLEGE OF CHEST PHYSICIANS, annual, Los Angeles, Oct. 25-30, 1970. Alfred Soffer, 112 E. Chestnut St., Chicago Exec. Dir.

AMERICAN COLLEGE OF EMERGENCY PHYSICIANS, annual, Las Vegas, Oct. 18-23, 1970. Executive Secretary, 120 W. Saginaw, E. Lansing, Mich. 48823.

AMERICAN COLLEGE OF GASTROENTEROLOGY, New York, Oct. 25-31, 1970. Daniel Weiss, 299 Broadway, New York 10007, Exec. Officer.

AMERICAN COLLEGE OF SURGEONS, Chicago, Oct. 12-16, 1970. Dr. C. Rollins Hanlon, 55 E. Erie St., Chicago 60611, Dir.

AMERICAN DIETETIC ASSOCIATION, Cleveland, Oct. 5-9, 1970. Ruth M. Yakel, 620 N. Mich. Ave., Chicago 60611, Exec. Dir.

■ AMERICAN PUBLIC HEALTH ASSOCIATION, Houston, Oct. 26-30, 1970. Berwyn F. Mattison, 1790 Broadway, New York 10019, Exec. Dir.

AMERICAN SOCIETY OF ANESTHESIOLOGISTS, New York, Oct. 17-21, 1970. John W. Andes, 515 Busse Hwy., Park Ridge, Ill., Exec. Sec.

ASSOCIATION OF AMERICAN PHYSICIANS AND SURGEONS, INC., Richmond, Va., Oct. 1-3, 1970. Frank K. Woolley, 230 N. Mich. Ave., Chicago 60601, Exec. Dir.

■ EASTER SEAL SOCIETY FOR CRIPPLED CHILDREN & ADULTS OF TEXAS, INC., San Antonio, Oct. 8-10, 1970. William E. Russell 4429 N. Central Expwy., Dallas, Exec. Dir.

OKLAHOMA CITY CLINICAL SOCIETY, Oklahoma City, Oct. 26-28, 1970. Mrs. Alma O'Donnell, 601 N.W. Expwy., Oklahoma City 73118.

■ PANHANDLE DISTRICT MEDICAL SOCIETY, Amarillo, Oct. 17, 1970. Mrs. Carlie Umphres, Box 3276, Amarillo 79106, Exec. Sec.

SOUTHERN PSYCHIATRIC ASSOCIATION, West Palm Beach, Fla., Oct. 4-6, 1970. Mrs. Annette S. Boutwell, P.O. Box 10387, Raleigh, N. C. 27605, Exec. Sec.

NOVEMBER

AMERICAN ASSOCIATION FOR THE ACCREDITATION OF LABORATORY ANIMAL CARE, Chicago, Nov. 2-6, 1970. Joseph J. Garvey, 4 E. Clinton St., Suite 605, P. O. Box 13, Joliet, Ill. 60434, Exec. Sec.

AMERICAN ASSOCIATION FOR INHALATION THERAPY, New Orleans, Nov. 14-18, 1970. Mark T. Bowers, 3554 Ninth St., Riverside, Calif. 92501, Exec. Sec.

AMERICAN CANCER SOCIETY, annual, New York, Nov. 4-6, 1970. Norman R. Hollis, 219 E. 42nd St., New York 10017, Asst. Sec.

AMERICAN DENTAL ASSOCIATION, Las Vegas, Nov. 8-12, 1970. Dr. C. Gordon Watson (DDS), 211 E. Chicago Ave., Chicago 60611, Exec. Dir.

AMERICAN HEART ASSOCIATION, Atlantic City, Nov. 12-17, 1970. Dr. James M. Hundley, 44 E. 23rd St., New York 10010, Exec. Officer.

AMERICAN MEDICAL ASSOCIATION, clinical session, Boston, Nov. 29-Dec. 2, 1970. AMA, 535 N. Dearborn St., Chicago 60610.

AMERICAN MEDICAL RECORD ASSOCIATION, Colorado Springs, Nov. 1-6, 1970. Mrs. Mary-j Waterstraat, 211 E. Chicago Ave., Chicago 60611, Exec. Officer.

AMERICAN MEDICAL WOMEN'S ASSOCIATION, INC., Puerto Rico, Nov. 7-10, 1970. Gertrude F. Conroy, 1790 Broadway, New York 10019, Exec. Dir.

AMERICAN SOCIETY OF CLINICAL HYPNOSIS, Miami Beach, Nov. 4-8, 1970. F. D. Nowlin, 800 Washington Ave., SE, Minneapolis 55414, Exec. Sec.

AMERICAN SOCIETY OF CYTOLOGY, Los Angeles, Nov. 4-7, 1970. Dr. Warren R. Lang, 7112 Lincoln Dr., Philadelphia 19119, Sec.-Treas.

ASSOCIATION OF MILITARY SURGEONS OF THE US, Washington, D.C., Nov. 29-Dec. 3, 1970. BG Frank E. Wilson, AUS, Ret., 8502 Conn. Ave., Chevy Chase, Md. 20015, Exec. Dir.

■ BLACKFORD MEMORIAL LECTURES, annual, Denison, Nov. 7, 1970. Dr. John D. Gleckler, 211 N. Fannin, Denison 75020, Chrmn.

CONGRESS OF COUNTY MEDICAL SOCIETIES, annual Cincinnati, Nov. 6-8, 1970. Dr. Joseph F. Boyle, P. O. Box 54571, Terminal Annex, Los Angeles 90054, Chrmn., Bd. of Trustees.

INTERNATIONAL COLLEGE OF SURGEONS, Las Vegas, Nov. 20-24, 1970. Dr. Aldo Parentela, 1516 Lake Shore, Chicago 60610, Exec. Officer.

MEDICAL SOCIETY OF THE US AND MEXICO, annual, Guadalajara, Jal. Mexico, Nov. 4-7, 1970. Virginia E. Bryant, 333 W. Thomas Rd., #207, Phoenix 85013, Exec. Sec.

NATIONAL SOCIETY FOR THE PREVENTION OF BLINDNESS, INC., New York, Nov. 19, 1970. Margaret S. Banks, 79 Madison Ave., New York 10016, Admin. Asst.

RADIOLOGICAL SOCIETY OF NORTH AMERICA, Chicago, Nov. 29-Dec. 4, 1970. Mrs. Marguerite H. Henry, 713 E. Genesee St., Syracuse, N.Y. 13210, Exec. Dir.

■ SOUTHERN MEDICAL ASSOCIATION, Dallas, Nov. 16-19, 1970. Robert F. Butts, 2601 Highland Ave., Birmingham, Ala. 35205, Exec. Dir.

■ TEXAS ASSOCIATION FOR CHILDREN WITH LEARNING DISABILITIES, INC., Austin, Nov. 20-21, 1970. Mrs. William F. Howard, 4601 Small Drive, Austin 78731, Chrmn.

UNIVERSITY OF FLORIDA COLLEGE OF MEDICINE, seminar in obstetrics and gynecology, Gainesville, Fla., Nov. 19-20, 1970. Division of Postgraduate Education, University of Florida College of Medicine, J. Hillis Miller Health Center, Gainesville 32601.

A specific solution for tinea versicolor

Although tinea versicolor is not a serious disease it is chronic and recurrent and specific treatment is cosmetically important. "Of the wide variety of compounds recommended for the treatment of tinea versicolor, sodium thiosulphate still remains the standard."* However, when sodium thiosulfate is administered alone it decomposes rapidly and produces an offensive odor. These disadvantages have been largely eliminated by the development of TINVER Lotion, which contains sodium thiosulfate and salicylic acid in MICEL A® base.†

TINVER—the likable lotion for tinea versicolor—is clinically effective, cosmetically acceptable, and easy to apply. It produces rapid, visible improvement without the objectionable features of oily pastes and odorous solutions. Patient acceptability encourages continued therapy without interruption. TINVER is practical and economical for long-term therapy.

Indications: For topical use in the treatment of tinea versicolor.

Precautions: If signs of irritation or sensitivity develop, discontinue use. Do not use on or about the eyes.

Dosage and Administration: Thoroughly wash, rinse, and dry the affected area before applying medication. Apply a thin film of the lotion twice a day, or as directed. Although diagnostic evidence of the tinea versicolor may disappear in a few days, it is advisable to continue treatment for a much longer period. Clothing should be boiled to prevent reinfection.

Supply: 5 oz. polyethylene squeeze bottle.

*McClarin, W. M., and Knox, J. M.: Cutis 3:619 (June) 1967.

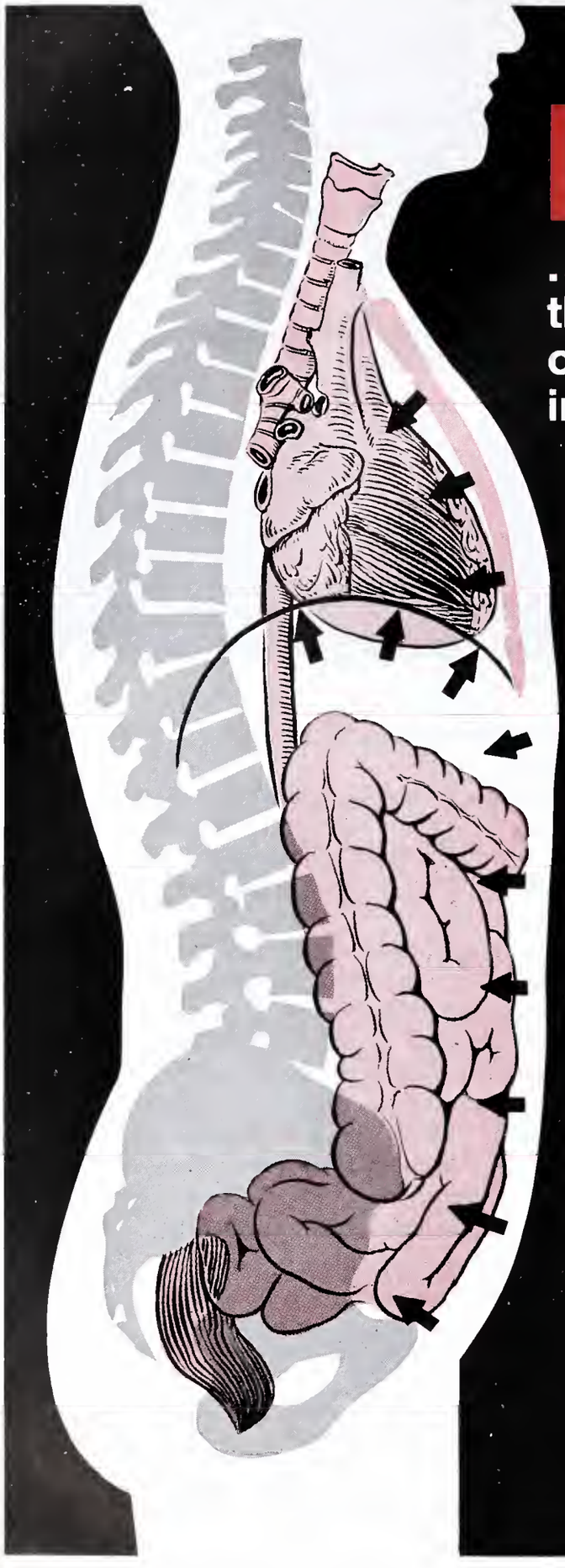
†The MICEL A® base is a thixotropic gel of colloidal alumina with unique compounding properties. The base dries to an invisible film that holds ingredients on the skin without powdering or flaking.

Tinver® Lotion

Sodium thiosulfate USP 25%, salicylic acid USP 1%, isopropyl alcohol NF 10%, and propylene glycol USP, in a MICEL A base of menthol USP, disodium edetate, colloidal alumina, and purified water USP.

BARNES-HIND LABORATORIES

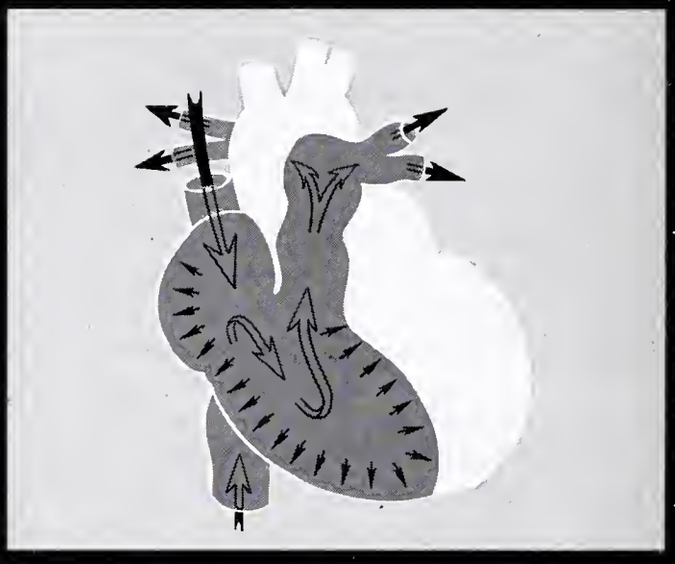
Subsidiary of Barnes-Hind Pharmaceuticals, Inc.
Sunnyvale, Calif. 94086



DOXIDAN®

...to reduce the hemodynamic "bind" of constipation in congestive heart failure

Constipation in the chronic heart failure patient carries with it the ever-present threat of acute cardiac decompensation while straining at stool. In the already weakened, distended heart, a sudden influx of blood on termination of the Valsalva maneuver is considered to be the mechanism of some of the deaths occurring in these cardiac patients during straining efforts.*



Doxidan is a gentle laxative designed to free your patient from the hemodynamic consequences of straining at stool. With a fecal softening agent to keep the stool soft and easy to evacuate, and with just enough peristaltic stimulation to urge the sluggish bowel, Doxidan reduces the hemodynamic "bind" of constipation.

Composition: Each capsule contains 50 mg. danthron N.F. and 60 mg. dioctyl calcium sulfosuccinate.

Dosage: Adults and children over 12—one or two capsules daily. Children 6 to 12—one capsule daily. Give at bedtime for two or three days or until bowel movements are normal.

Supplied: Bottles of 30, 100 (FSN 6505-074-3169) and 1000 (FSN 6505-890-1247).

*Best, C. H. and Taylor, N. B.: *The Physiological Basis of Medical Practice*, 7th edition, Williams and Wilkins, Baltimore, 1961, p. 480.

DOXIDAN®

HOECHST
PHARMACEUTICAL CO.
Div. American Hoechst Corp.
Cincinnati, Ohio 45229 U.S.A.

C-124

CONTINUING EDUCATION COURSES

Otolaryngology: The annual Otolaryngologic Assembly of 1970 will be held Sept. 19-25 in the Eye and Ear Infirmary of the University of Illinois Hospital, sponsored by the department of otolaryngology of the University of Illinois College of Medicine. Under the direction of Dr. Emanuel M. Skolnik, the course offers a condensed postgraduate basic and clinical program for practicing otolaryngologists. It is designed to bring to specialists current information in medical and surgical otorhinolaryngology. Inquiries may be directed to Otolaryngology, P. O. Box 6998, Chicago 60680.

A separate but correlated course, "Conference on Radiology in Otolaryngology and Ophthalmology," will be held Nov. 27-28 under the guidance of Dr. Galdino E. Valvassori. For further information about this course, contact Dr. Valvassori, Radiology Department, College of Medicine, University of Illinois at the Medical Center, P. O. Box 6998, Chicago, 60680.

Electroencephalography: The American Electroencephalographic Society will sponsor a continuation course on "Current Practice of Clinical Electroencephalography" Sept. 14-16, 1970, in Washington, D.C. The course is designed to review the principal applications of the EEG to clinical medical practice.

Requests for further details about the course or registration procedure may be addressed to Dr. Donald W. Klass, EEG Course Director, Mayo Clinic, Rochester, Minn. 55901.

Pediatric Allergy: The National Jewish Hospital and Research Center in Denver will be the site of a postgraduate course on pediatric allergy July 27-29, 1970, sponsored by the American Academy of Pediatrics. The course is designed to bring pediatricians and general practitioners up to date on recent advances in the field of pediatric allergy. During the morning sessions, material will be presented in lecture format, and afternoons will be devoted to small group seminars of approximately 15 registrants and seminar leaders. Six seminars will be given each afternoon and will run concurrently. Each seminar will last approximately one hour and fifteen minutes and will be presented twice during the afternoon so that each registrant may sign up for two different seminars each day. A cocktail-buffet reception will be held Tuesday evening, July 28, sponsored by the hospital.

Registration will be limited to 100. Tuition is $75 for academy members and $105 for nonmembers. Dr. Gerald E. Hughes, Director, Department of Educational Affairs, American Academy of Pediatrics, P. O. Box 1034, Evanston, Ill. 60204, will provide additional information.

Ophthalmology: Bi-monthly clinical conferences in ophthalmology have been scheduled by The University of Texas Southwestern Medical School at Dallas, Department of Ophthalmology and Division of Postgraduate Education. The conferences will be held in room 102 of Parkland Memorial Hospital on July 15, 1970; Sept. 16, 1970; Nov. 18, 1970; Jan. 20, 1971; May 19, 1971; and July 21, 1971. A Wednesday Conference in Ophthalmology will take place in room 104 of Parkland. A lecture will be given by a staff member, or a resident will conduct a seminar. Full time and clinical faculty are invited.

Inquiries may be addressed to Dr. John R. Lynn, Division of Ophthalmology, 5323 Harry Hines Blvd., Dallas 75235.

Pediatrics: Aspen, Colo., will be the site July 19-22 of a postgraduate course in pediatrics, sponsored by the University of Colorado School of Medicine. Designed for the practicing pediatrician to help him keep abreast of significant new developments in his broad field and its many branches and related fields, the course will also provide adequate time for leisure activities such as fishing, hiking, golfing, swimming, and sightseeing. The Aspen Music Festival will be in progress at the time of the course. Guest speakers will include Dr. Philip R. Dodge of St. Louis; Dr. Samuel L. Katz of Durham, N.C.; and Dr. Howard H. Higman of Boulder, Colo.

Tuition is $90. Contact the Office of Postgraduate Medical Education, University of Colorado School of Medicine, 4200 E. Ninth Ave., Denver 80220, for further details.

Sports Medicine: A special postgraduate course featuring national authorities in the field of sports medicine will be held Aug. 3-5, 1970, at the Hilton Hotel in San Francisco by the American Academy of Orthopaedic Surgeons. The three-day course of lectures and audio-visual demonstrations will be devoted to conditions of the knee in athletics and is directed toward orthopaedic surgeons. Topics to be discussed include conditioning, diagnosis, surgical repair, postoperative care, and knee anatomy and physiology. Also covered will be the relationship of field surfaces and knee injuries, as well as follow-up studies of high school football knee injuries. Closed circuit TV demonstrations of surgical techniques on the sport-injured knee are planned.

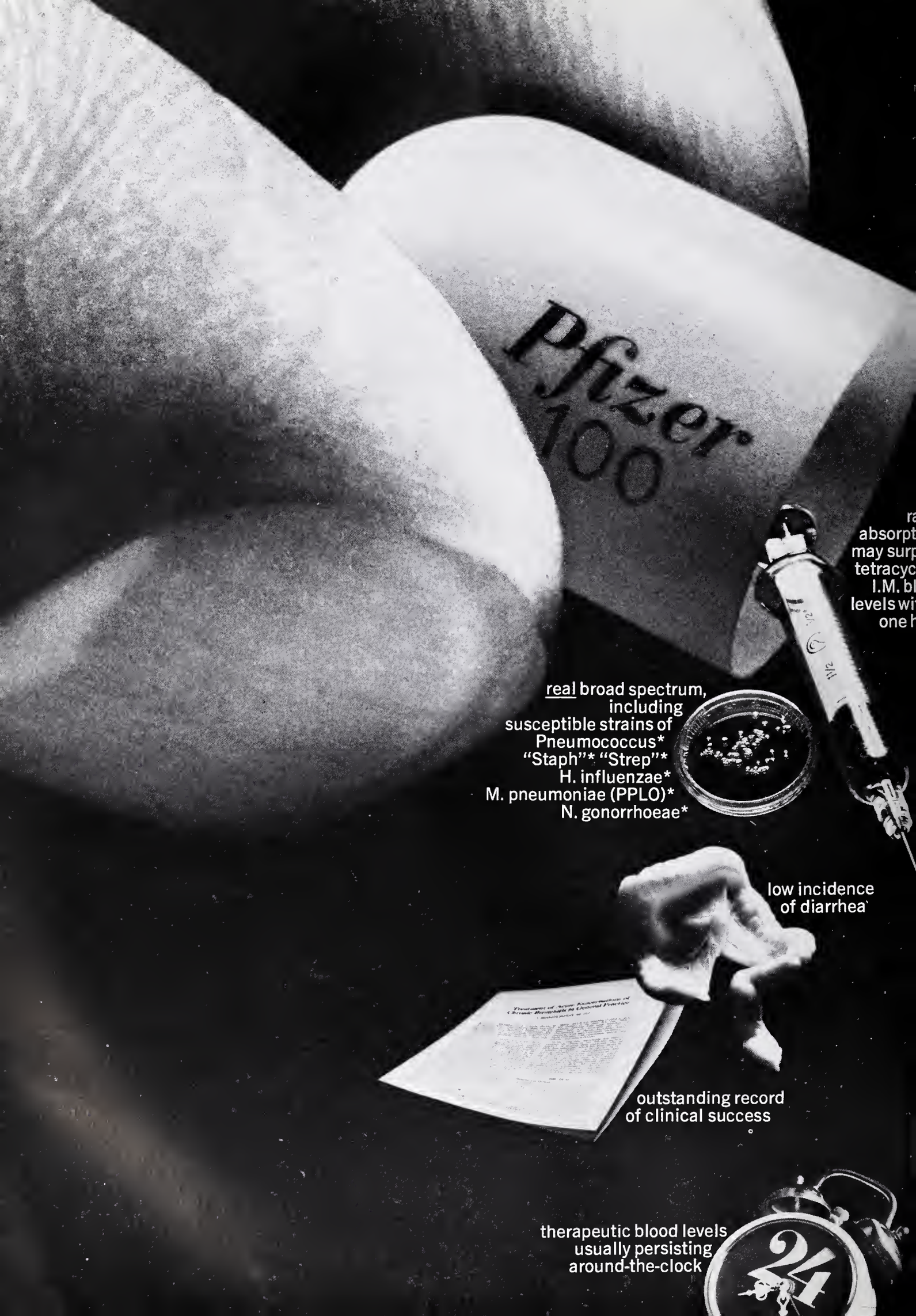
For application forms and more information, physicians may write to Dr. Fred L. Behling, 300 Homer Ave., Palo Alto, Calif. 94301, course chairman, or to American Academy of Orthopaedic Surgeons, 430 N. Mich. Ave., Chicago 60611.

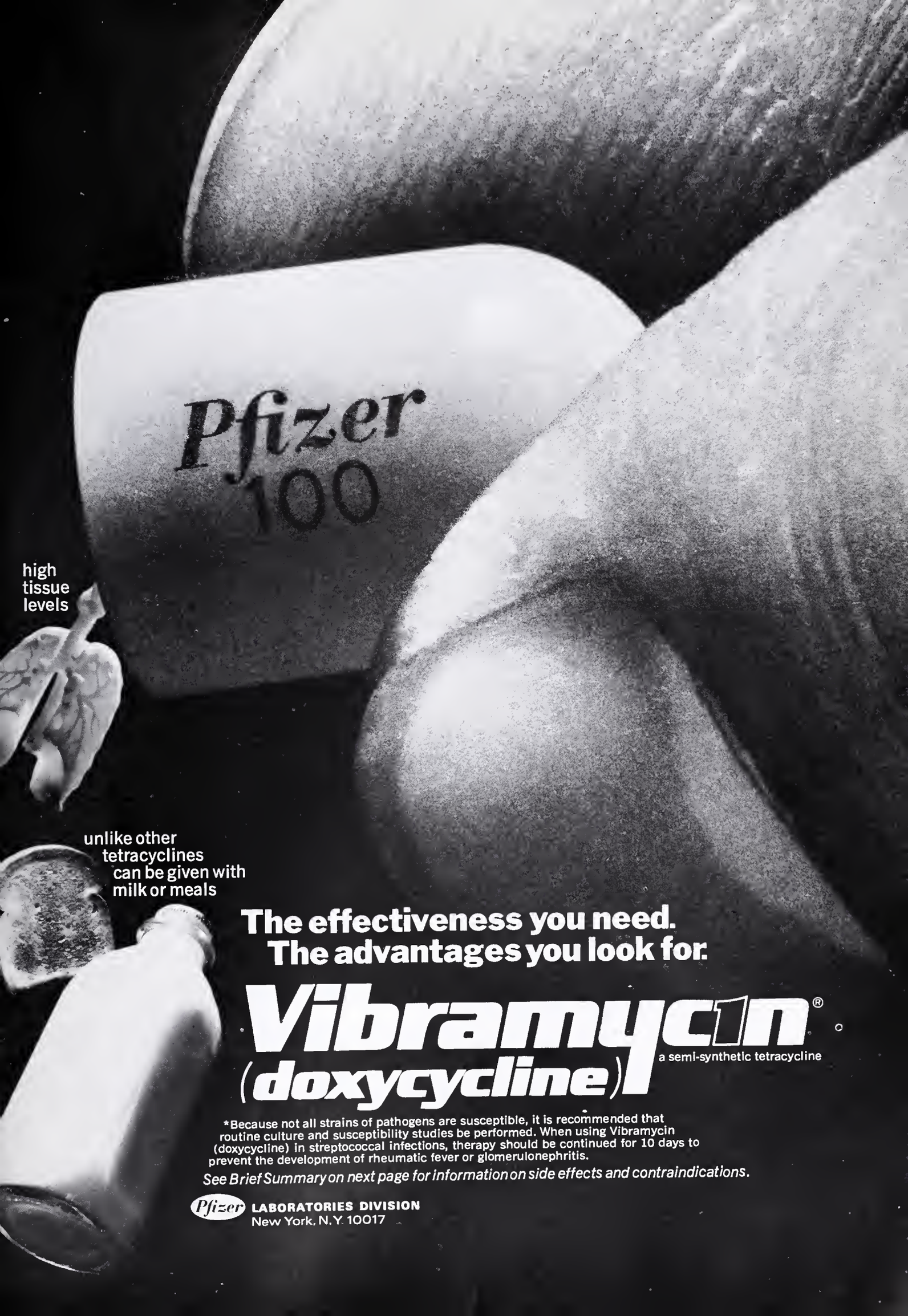
Internal Medicine: The YMCA Conference Center at Estes Park, Colo., will be the site of a postgraduate course in internal medicine July 27-31, sponsored by the University of Colorado School of Medicine. Designed specifically to help the practicing internist keep abreast of significant new developments in the broad field of internal medicine, the course will cover on separate days cardiology, gastroenterology, neurology, and rheumatology, and on half-days, clinical immunology and clinical pharmacology. Adequate time will be provided for leisure activities such as swimming, horseback riding, fishing, hiking, golfing, and sightseeing.

The tuition for the course is $90, including a non-refundable registration fee of $10. Write to the Office of Postgraduate Medical Education, University of Colorado School of Medicine, 4200 E. Ninth Ave., Denver 80220, for additional information.

Medical Staff: Designed specifically for physicians who hold staff leadership positions in community hospitals will be the seventh annual Hospital Medical Staff Conference Sept. 28-Oct. 2, 1970, at YMCA Conference Center in Estes Park, Colo. Approved for 32 prescribed hours of credit by the American Academy of General Practice, the conference is sponsored by the University of Colorado School of Medicine. Discussion seminars and a variety of plenary session presentations also will be included.

Tuition for the five days is $100 and should accompany the application for registration. All cancellations received prior to Sept. 21, 1970, will receive a full refund, however. Requests for further information should be addressed to the Office of Postgraduate Medical Education, University of Colorado School of Medicine, 4200 E. Ninth Ave., Denver, Colo. 80220.


Pfizer
100
real broad spectrum,
including
susceptible strains of
Pneumococcus*
"Staph"* "Strep"*
H. influenzae*
M. pneumoniae (PPLO)*
N. gonorrhoeae*
low incidence
of diarrhea
outstanding record
of clinical success
therapeutic blood levels
usually persisting
around-the-clock
24



The effectiveness you need. The advantages you look for.

Vibramycin® (doxycycline)

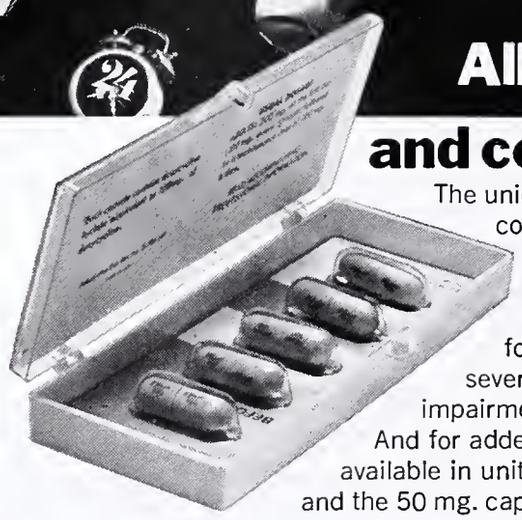
a semi-synthetic tetracycline

*Because not all strains of pathogens are susceptible, it is recommended that routine culture and susceptibility studies be performed. When using Vibramycin (doxycycline) in streptococcal infections, therapy should be continued for 10 days to prevent the development of rheumatic fever or glomerulonephritis.

See Brief Summary on next page for information on side effects and contraindications.

Pfizer LABORATORIES DIVISION
New York, N.Y. 10017

and convenience too.



The unique new Vibramycin (doxycycline) V-Pak is especially convenient for use both in your office practice and in the hospital outpatient department. It contains a typical four-day course of therapy for routine infections with easy-to-understand patient instructions. The dosage is low, just 100 mg. b.i.d. the first day followed by 100 mg. once a day for the next three days. In more severe infections, 100 mg. q.12 h. is recommended. If renal impairment exists, lower than usual doses are indicated.

And for added convenience in the hospital pharmacy, Vibramycin is available in unit-dose packs of 100 (10 x 10's) for both the 100 mg. and the 50 mg. capsules.

VIBRAMYCIN® (doxycycline)
BRIEF SUMMARY

Contraindicated: In individuals who have shown hypersensitivity to doxycycline.

Warnings: The usual dosage and frequency of administration of Vibramycin (doxycycline) differs from those of other tetracyclines. Exceeding the recommended dosage may result in an increased incidence of side effects.

If renal impairment exists, even usual doses may lead to excessive accumulation of the drug and possible hepatic toxicity. For such patients, lower than usual doses are indicated and, if treatment is prolonged, Vibramycin serum level determinations may be advisable.

Vibramycin, like other tetracyclines, may form a stable calcium complex in any bone-forming tissue, although *in vitro* Vibramycin binds calcium less strongly than other tetracyclines. The use of Vibramycin during tooth development (last trimester of pregnancy, neonatal period, and early childhood) may cause discoloration of the teeth (yellow-gray-brownish). This effect may occur mostly during long-term use, but also may occur with short-treatment courses.

Increased intracranial pressure with bulging fontanelles has been observed in infants receiving tetracyclines. This effect has disappeared rapidly on cessation of therapy with no sequelae.

In certain hypersensitive individuals treated with Vibramycin, exposure to direct sunlight may precipitate a photodynamic reaction. In individuals with a history of photoallergic reactions to tetracyclines, exposure to direct sunlight should be avoided and treatment should be discontinued at first evidence of skin discomfort.

Precautions: As with any antibiotic, overgrowth of nonsusceptible organisms may occasionally occur. Constant observation of the patient is essential. If such superinfections are encountered, Vibramycin should be discontinued and replaced by appropriate therapy.

When treating gonorrhea in which lesions of primary or secondary syphilis are suspected, proper diagnostic procedures, including dark-field examinations, should be utilized. In all cases in which concomitant syphilis is suspected, monthly serological tests should be made for at least four months.

Adverse Reactions: Nausea, vomiting, diarrhea, vaginitis, as well as reactions of an allergic nature such as dermatitis, urticaria, and anaphylaxis may occur but are rare. Glossitis, stomatitis, proctitis, onycholysis and discoloration of the nails may rarely occur during tetracycline therapy as with other antibiotics. If severe adverse reactions, individual idiosyncrasy, or allergy occur, discontinue medication.

As with other tetracyclines, elevation of SGOT or SGPT values, or elevated BUN have been reported, the significance of which is not known at this time. Anemia, neutropenia, and eosinophilia have been reported, as with other tetracyclines.

Animal Pharmacology: As with other tetracyclines, at doses greater than those recommended for human usage, Vibramycin produces discoloration of animal thyroid glands. Careful monitoring of animals and humans has disclosed no abnormalities of thyroid function studies. Also, as with other tetracyclines, at relatively high oral doses, evidence of hepatotoxicity has been noted in dogs and signs of gastrointestinal intolerance have been seen in both dogs and monkeys.

Dosage: The usual dose of Vibramycin is 200 mg. on the first day of treatment (administered 100 mg. every 12 hours) followed by a maintenance dose of 100 mg./day. The maintenance dose may be administered as a single dose, or as 50 mg. every 12 hours. In the management of more severe infections (particularly chronic infections of the urinary tract), 100 mg. every 12 hours is recommended. The recommended dosage schedule for children weighing 100 pounds or less is 2 mg./lb. of body weight divided into two doses on the first day of treatment, followed by 1 mg./lb. of body weight given as a single daily dose or divided into two doses, on subsequent days. For more severe infections up to 2 mg./lb. of body weight may be used. For children over 100 lbs. the usual adult dose should be used.

Acute gonococcal anterior urethritis in males —a single dose of 300 mg. or 100 mg. b.i.d. for 2-4 days.

Acute gonococcal infections in the adult female should be treated with doses of 100 mg. b.i.d. until cure is effected.

Therapy should be continued beyond the time that symptoms and fever have subsided. When used in streptococcal infections, therapy should be continued for 10 days to prevent the development of rheumatic fever or glomerulonephritis.

If gastric irritation occurs, it is recommended that Vibramycin be given with food or milk. Studies indicate that the absorption of Vibramycin is not markedly influenced by simultaneous ingestion of food or milk.

Simultaneous administration of aluminum hydroxide gel given with tetracycline antibiotics including Vibramycin has been shown to decrease absorption.

Supply: Vibramycin Hyclate (doxycycline hyclate) is available as capsules containing doxycycline hyclate equivalent to 50 mg. of doxycycline, bottles of 50, unit-dose pack of 100 (10 x 10's), and X pack of 50 (5 x 10's); capsules containing doxycycline hyclate equivalent to 100 mg. of doxycycline, bottles of 50, unit-dose pack of 100 (10 x 10's), and V pack of 25 (5 x 5's).

Vibramycin Monohydrate (doxycycline monohydrate) is available as a dry powder for oral suspension containing when reconstituted doxycycline monohydrate equivalent to 25 mg. of doxycycline per 5 cc. (each teaspoonful), with a pleasant-tasting raspberry flavor, 2 oz. bottles.

More detailed professional information available on request.

Pfizer LABORATORIES DIVISION
New York, N.Y. 10017

Vibramycin®
(doxycycline)

a semi-synthetic tetracycline

PROTEIN CONTENT / 7 oz. Serving*

Bean with Bacon	6.8	Green Pea with Ham (Frozen)	7.6
Beef	8.0	Hot Dog Bean	8.4
Chicken Broth	5.5	Pepper Pot	6.1
Chicken 'N Dumplings	5.8	Split Pea with Ham	10.2
Chili Beef	6.2	Vegetable Beef	5.0
Green Pea	6.9	Vegetable with Beef (Frozen)	5.4

When protein is the focal point in your patients' special diets, Campbell's Soups can be a convenient supplementary source of that essential nutrient.

* From "Nutritive Composition of Campbell's Products" which gives values of important nutritive constituents of all Campbell's Products. For your copy, write to Campbell Soup Company, Dept. 365, Camden, New Jersey 08101.

There's a soup for almost every patient and diet ...for every meal and, it's made by Campbell

You Can't Blame a Girl...

(when her husband's at fault)

Flagyl® brand of metronidazole

Cures Trichomoniasis in Both Women and Men

About half of all husbands of infected women harbor *Trichomonas vaginalis.**

Few of these men have symptoms. Even so, all are capable of perpetuating the infection and rendering treatment of a woman alone futile.

Only a systemically active medication like Flagyl is capable of reaching the hidden reservoirs of infection in the genitourinary tracts of both men and women.

Only Flagyl has been able to achieve rates of cure consistently above 90 per cent and often up to 100 per cent in trichomonal infections in both men and women.

Indications: For the treatment of trichomoniasis in both male and female patients and the sexual partners of patients with a recurrence of the infection provided trichomonads have been demonstrated by wet smear or culture.

Contraindications: Evidence of or a history of blood dyscrasia, active organic disease of the central nervous system and the first trimester of pregnancy.

Warnings: Use with discretion during the second and third trimesters of pregnancy and restrict to patients not cured by topical measures. Flagyl (metronidazole) is secreted in the breast milk of nursing mothers. It is not known whether this can be injurious to the newborn.

Precautions: Mild leukopenia has been reported during Flagyl use; total and differential leukocyte counts are recommended before and after treatment with the drug, especially if a second course is necessary. Avoid alcoholic beverages during Flagyl therapy because abdominal cramps, vomiting and flushing may occur. Discontinue Flagyl promptly if abnormal neurologic signs occur. There is no accepted proof that Flagyl is effective against other organisms and it should not be used in the treatment of other conditions. Exacerbation of moniliasis may occur.

Adverse Reactions: Nausea, headache, anorexia, vomiting, diarrhea, epigastric distress, abdominal cramping, constipation, a metallic, sharp and unpleasant taste, furry or sore tongue, glossitis and stomatitis possibly associated with a sudden overgrowth of *Monilia,* exacerbation of vaginal moniliasis, an occasional reversible moderate leukopenia, dizziness, vertigo, drowsiness, incoordination and ataxia, numbness or paresthesia of an extremity, fleeting joint pains, confusion, irritability, depression, insomnia, mild erythematous eruptions, "weakness," urticaria, flushing, dryness of the mouth, vagina or vulva, vaginal burning, pruritus, dysuria, cystitis, a sense of pelvic pressure, dyspareunia, fever, polyuria, incontinence, decrease of libido, nasal congestion, proctitis, pyuria and darkened urine have occurred in patients receiving the drug. Patients receiving Flagyl may experience abdominal distress, nausea, vomiting or headache if alcoholic beverages are consumed. The taste of alcoholic beverages may also be modified.

Dosage and Administration: *In the Female.* One 250-mg. tablet orally three times daily for ten days. Courses may be repeated if required in especially stubborn cases; in such patients an interval of four to six weeks between courses and total and differential leukocyte counts before, during and after treatment are recommended. Vaginal inserts of 500 mg. are available for use, particularly in stubborn cases. *When the vaginal inserts are used* one 500-mg. insert is placed high in the vaginal vault each day for ten days and the oral dosage is reduced to two 250-mg. tablets daily during the ten-day course of treatment. Do not use the vaginal inserts as the sole form of therapy. *In the Male.* Prescribe Flagyl only when trichomonads are demonstrated in the urogenital tract, one 250-mg. tablet two times daily for ten days. Flagyl should be taken by both partners over the same ten-day period when it is prescribed for the male in conjunction with the treatment of his female partner.

Dosage Forms: Oral tablets . . . 250 mg.
Vaginal inserts . . 500 mg.

*References available on request.

SEARLE P. O. Box 5110 Chicago, Illinois 60680

Research in the Service of Medicine

Owner Breaks Arm When Yacht Runs Agroun

Schuyler, Oct. 31. Harry Waters of Covesville incurred a fractured arm tially capsized. The fire depar had to rescue Waters by small Damage to the yacht is estima

Hasn't the skipper had enough excitement for one day?

For the patient who has been through an accident, the worry and anxiety following the mishap may actually heighten the perception of pain. This is why there's a classic ¼ grain *sedative* dose of phenobarbital in Phenaphen with Codeine—to take the nervous "edge" off, so the rest of the formula can control the pain more effectively.

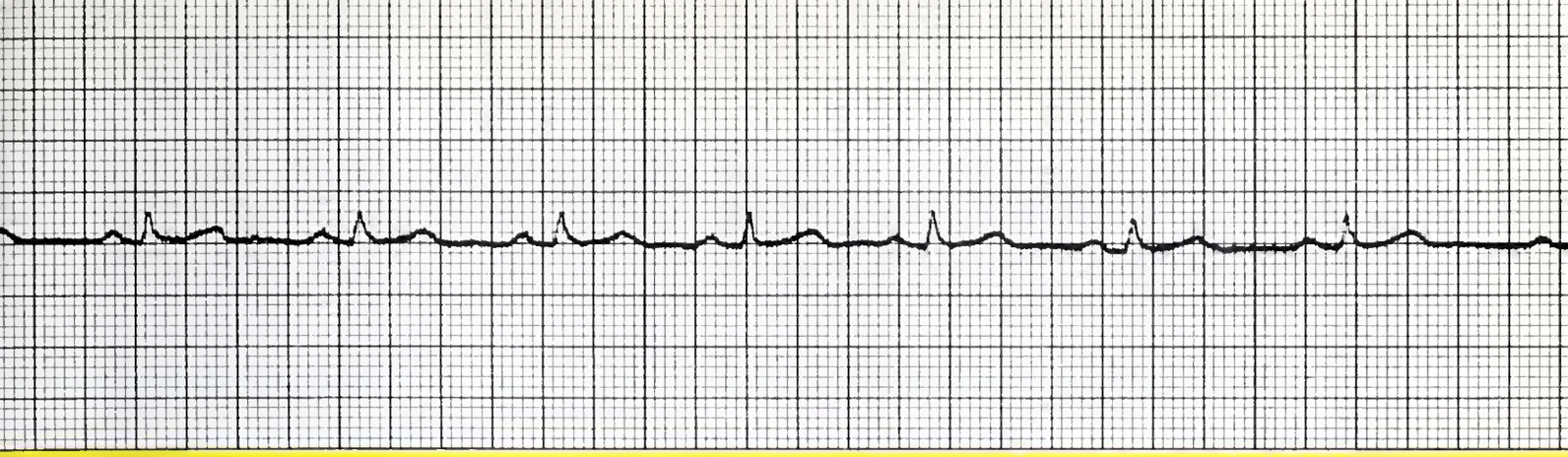
A.H. Robins Company, Richmond, Va. 23220 A·H·ROBINS

Phenaphen® with Codeine

Phenaphen with Codeine Nos. 2, 3, or 4 contains: Phenobarbital (¼ gr.), 16.2 mg. (warning: may be habit forming); Aspirin (2½ gr.), 162.0 mg.; Phenacetin (3 gr.), 194.0 mg.; Hyoscyamine sulfate, 0.031 mg.; Codeine Phosphate, ¼ gr. (No. 2), ½ gr. (No. 3), or 1 gr. (No. 4) (warning: may be habit forming).

The compound analgesic that calms instead of caffeinates

Indications: Phenaphen with Codeine provides relief in severer grades of pain, on low codeine dosage, with minimal possibility of side effects. Its use frequently makes unnecessary the use of addicting narcotics. **Contraindications:** Hypersensitivity to any of the components. **Precautions:** As with all phenacetin-containing products excessive or prolonged use should be avoided. **Side effects:** Side effects are uncommon, although nausea, constipation and drowsiness may occur. **Dosage:** Phenaphen No. 2 and No. 3—1 or 2 capsules every 3 to 4 hours as needed; Phenaphen No. 4—1 capsule every 3 to 4 hours as needed. For further details see product literature.



When disease is ruled out and psychic tension is implicated

Valium® (diazepam) helps relax the patient and relieve his somatic symptoms

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Tension and anxiety states; somatic complaints which are concomitants of emotional factors; psychoneurotic states manifested by tension, anxiety, apprehension, fatigue, depressive symptoms or agitation; acute agitation, tremor, delirium tremens and hallucinosis due to acute alcohol withdrawal; adjunctively in skeletal muscle spasm due to reflex spasm to local pathology, spasticity caused by upper motor neuron disorders, athetosis, stiff-man syndrome, convulsive disorders (not for sole therapy).

Contraindicated: Known hypersensitivity to the drug. Children under 6 months of age. Acute narrow angle glaucoma.

Warnings: Not of value in psychotic patients. Caution against hazardous occupations requiring complete mental alertness. When used adjunctively in convulsive disorders, possibility of increase in frequency and/or severity of grand mal seizures may require increased dosage of standard anticonvulsant medication; abrupt withdrawal may be associated with temporary increase in frequency and/or severity of seizures. Advise against simultaneous ingestion of alcohol and other CNS depressants. Withdrawal symptoms have occurred following abrupt discontinuance. Keep addiction-prone individuals under careful surveillance because of their predisposition to habituation and dependence. In pregnancy, lactation or women of childbearing age, weigh potential benefit against possible hazard.

Precautions: If combined with other psychotropics or anticonvulsants, consider carefully pharmacology of agents employed. Usual precautions indicated in patients severely depressed, or with latent depression, or with suicidal tendencies. Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.

Side Effects: Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances, stimulation, have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice; periodic blood counts and liver function tests advisable during long-term therapy.

ROCHE

Roche
LABORATORIES
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

Now available for your prescribing needs

Cordran® Tape

Flurandrenolide Tape (4 mcg. per sq. cm.)

Additional information available upon request • Eli Lilly and Company, Indianapolis, Indiana 46206

000121

Lilly

TEXAS MEDICINE

VOLUME 66 NUMBER 6 JUNE 1970

Devoted to the interests of the medical profession and public health in Texas

BOARD OF PUBLICATION
Charles P. Hardwicke, MD, Austin
Chairman
James A. Hallmark, MD, Fort Worth
John M. Smith, Jr, MD, San Antonio
Vice Chairman
R. Harvey Bell, MD, Palestine
N. L. Barker, MD, Paris
C. W. Yates, MD, Rosenberg
Don G. Harrel, MD, Dallas

TMA OFFICERS
Walter Walthall, MD, San Antonio
President
C. Lincoln Williston, Austin
Executive Secretary

EDITORIAL AND BUSINESS OFFICES
1801 North Lamar Blvd, Austin
Telephone: 477-6704
Marilyn Baker, Managing Editor
Rae Vajgert, Assistant Managing Editor
Nancy Arthurs, Assistant Editor
Sharon Walker, Editorial Assistant
Judy Harris, Editorial Secretary
E. Maxwell Jones, Business Manager
Jon R. Hornaday, Advertising Director
Anne Sheinutt, Advertising Assistant

PRINTING OFFICES
c/o Stafford-Lowdon Company
1114 West Daggett, Fort Worth 76104

Subscriptions: $3 per year for members; $6 for nonmembers; $8 for foreign; $3 for medical students. Single copy: $1.

Copyright 1970 by The Texas Medical Association
Owned and issued monthly by the Association.

THE PHYSICIAN AS BIOLOGIST AND ECOLOGIST

The function of the AMA Council on Environmental and Public Health is to inform itself of, and pass on to the profession, such knowledge as develops with regard to environmental hazards and public health problems.

Environmental hazards include both restricted and general problems. Examples of restricted problems are the specific geographic distribution of coccidioidomycosis, cultural patterns that lead to exclusive use of corn or rice as a cereal, the specific niches occupied by disease-transmitting insects, and both climatic and physiographic features that contribute to stagnation of polluted atmospheres.

More general in effect are the wastes of highly industrialized societies. Some aspects are pollution of atmosphere, water, and land by the unused or unusable remnants and by-products of industry and transportation. Of no less concern are the persistent direct products of technological activity. Examples are nondegradable detergents, persistent pesticides, radioactive wastes of long half-life, the hulks of automobiles, and many types of containers.

These problems are interwoven with two aspects of human life—the capacity to increase population at an exponential rate, and the demand for energy that, in highly developed nations, is increasing at an even higher exponential rate than the population.

The Council sees one function of the physician as that of a practicing human ecologist. His job, both as a citizen and as an expert in problems of human survival, is to provide guidance and advice in those areas in which he is knowledgeable. To these ends, the Council is now stimulating formation of environmental groups at all levels of professional organization, and urging physicians to participate actively in all aspects of environmental affairs that pertain to human health in the widest sense.

The significance of the physician's participation lies in his ability to direct measures for environmental management toward the goal of health. Decisions should not be based solely on engineering, political, or economic considerations. The physician's task is to see that they are not.

John S. Chapman, MD, Dallas.

FUNCTIONAL ASPLENIA—A CONCEPT

Two recent articles, appearing independently, put forth an exciting concept that deserves immediate attention by all physicians who treat patients with sickle cell anemia as well as other diseases which may result in "reticuloendothelial blockade."

Kabins and Lerner, in discussing fulminant pneumococcemia and sickle cell anemia,[1] mention the gross similarity between the behavior of pneumococcal infections in their patients with sickle cell disease and in those reported in splenectomized children. The authors speculate that the products of hemolysis have overloaded the spleen and reticuloendothelial system, thereby quantitatively diminishing its ability to perform the functions related to host defense against infection. Experimentally, it has been shown that the spleen is the primary site for phagocytosis and the major site for early antibody formation. This quantitative concept correlates well with clinical experience involving overwhelming post-splenectomy infection, since the reported incidence is highest in patients with underlying disorders of the reticuloendothelial system and lowest in otherwise normal children who undergo splenectomy for traumatic rupture. Although Kabins and Lerner plead for more prompt diagnosis and therapy when infection occurs in patients with sickle cell disease, they do not provide objective evidence to support their hypothesis. In fairness, they balanced their discussion by referring to an article by Robinson and Watson,[2] who had concluded that autosplenectomy could not be held responsible for severe infection since 5 of their 11 patients had palpably enlarged normal-sized spleens at the time. The latter authors, however, were also of the opinion that the mass of reticuloendothelial tissue may be altered in patients with chronic hemolytic anemia.

The second article (which actually appeared first) is "Functional Asplenia in Sickle-Cell Anemia" by Pearson, Spencer, and Cornelius.[3] Utilizing one of the newest techniques of the nuclear medicine age, splenic scanning with a sulfur colloid tagged with a short-lived radioactive isotope of technetium, ^{99m}Tc, these authors have shown clearly and objectively that the function of the spleen can indeed be reduced in such patients. Without case documentation it was their conclusion that functional asplenia might well account for the fulminant infections observed in some children with sickle cell disease. Obviously many questions remain, but the facts are clear that such conditions must be detected and the patients must be protected. Continuous prophylactic penicillin treatment will prevent many of the infections common to these patients; most of the remaining ones run less fulminant courses. But prophylaxis is no substitute for prompt recognition and therapy of febrile illnesses in these children.

Not long after the Pearson article appeared, a 2-year-old child with sickle cell disease was admitted to Texas Children's Hospital with pneumococcal meningitis and septicemia. By using

the same radioisotope technique, the Nuclear Medicine Service was able to demonstrate almost complete absence of splenic function. Since this child had *Haemophilus influenzae* septicemia at 1 year of age, at which time his spleen still was palpably enlarged, we can question whether or not the splenic function was intact at that time regardless of the size of the organ. Statistical data of the type provided by Robinson and Watson cannot answer this.

Fortunately, techniques now appear to be available to shed light on the long-standing controversy surrounding overwhelming post-splenectomy infection. It is also possible that the application of nuclear medicine techniques will provide clinicians with more objective data about the function of the reticuloendothelial system in patients with any type of severe infection.

In the meantime, it must be concluded that patients with sickle cell disease can be at risk from "functional asplenia" or "reticuloendothelial blockade" at a very early age.

Donald J. Fernbach, MD, and John A. Burdine, Jr, MD, Houston.

REFERENCES

1. Kabins SA, Lerner C: Fulminant pneumococcemia and sickle cell anemia. JAMA 211:467-471, 1970.

2. Robinson MG, Watson RJ: Pneumococcal meningitis in sickle-cell anemia. New Eng J Med 274:1006-1008, 1966.

3. Pearson HR, Spencer RP, Cornelius EA: Functional asplenia in sickle-cell anemia. New Eng J Med 281:923-926, 1969.

communications to TEXAS MEDICINE

Management of Ocular Emergencies

After reading "Ocular Emergencies," by Drs. Crawford and Gillett in the March 1970 issue of *Texas Medicine,* I felt I had to comment on part of the article's content.

In referring to the suggested handling of arc flash or welder's burn the authors, intentionally or unintentionally, indicated that the use of topical anesthetic drops as a treatment for this type of injury was advised.

I was taught, and learned by experience after having seen cases where topical anesthesia had been used as treatment for such burns, that the treatment was highly contraindicated. It is all well and good to use topical anesthesia as an aid during the examination to determine the extent of injury and do the definitive treatment, but to use drops as part of a continuing treatment program is ill-advised. This might be substantiated by an article by Drs. D. L. Epstein and D. Patton concerning keratitis from misuse of corneal anesthetics (New Eng J Med 279:396-399, 1968).

I think this is an important point because a great deal of this type of medication is dispensed in industrial clinics by nurse and physician personnel who staff these stations or act as company physicians.

My comments are made in the interests of clarification, and I hope that the authors will receive them in that light.

Ralph R. Gammill, MD, Lubbock.

Reply

Dr. Gammill's point is well taken. It was not the authors' intention to advocate continued use of topical anesthetics in the treatment of welder's burns.

Topical anesthetics instilled into the eye at the time the patient first presents for treatment will greatly facilitate a more thorough examina-

tion of the eye and will calm the patient by the usual dramatic relief of symptoms, but recurring pain in the next 24-48 hours is best controlled by sedation and oral analgesics.

Robert B. Gillett, MD, Houston.

"Aspirin—Prescribed by All Doctors, And Always Safe"

There is yet another pill that should concern us—*aspirin,* of which 13 million pounds are said to be "consumed" annually. The promulgated impression that "all doctors prescribe it" and that "it is safe" no doubt contributes materially to the indiscriminate use of the drug.

Despite the monotonous plethora of advertisers' allegations to the contrary, *not all* physicians prescribe aspirin for febrile respiratory illnesses for fear of disguising a more serious illness, of abetting additional exposure by creating a false sense of well-being or by induced sweats and chilling, and of possibly impairing the immune mechanism role.

The purveyors of this panacea, now in the 70th year, claim effectiveness in a manner such that symptomatic relief and cure become synonymous to laymen, who are presumed to be competent to distinguish insignificant symptoms from those of serious import. Paramount is the inference that aspirin is without dangerous effects, which is fallacious because *aspirin is not always safe.*

Well known are the fortunately rare but serious anaphylactic reactions which have been attributed to aspirin; less well known and less serious—but more common—are other, often subtle, allergic reactions to aspirin manifesting as bronchial asthma, urticaria, and vasomotor rhinitis. Increasingly, aspirin has become suspect in exacerbations of peptic ulcerations, and recent evidence indicates that some gastric bleeding may be a common occurrence indeed following ingestion of the drug. Additionally, studies are implicating interference of hemostatic processes clinically manifesting as increased bleeding time due to inhibition of platelet aggregation by aspirin. The drug likewise has been incriminated as a cause of aplastic anemia on occasion, and as interfering with the clotting mechanism in hemophilia.

Judicious use of aspirin as an anti-inflammatory and analgesic agent in the rheumatic diseases is beneficial. However, its abuse in self-medication with potential dangers of which the public is not apprised, and the false implication of universal approval by all physicians, warrant that the public be truthfully informed by amending the advertising accordingly, and further, that consideration be initiated toward eventual supervision or regulation of the sale of aspirin and aspirin compounds.

Victor E. Schulze, MD, San Angelo.

Reflections on a Historic Meeting

The 103rd annual session of the Texas Medical Association, one of its greatest and most important meetings, is now history. It was a *great* meeting because of the excellence of the program; the meeting format; the graciousness of our hosts, the Dallas physicians and people; the attendance; and the interest shown by all. It was important because it was held at a time of crisis, a crisis threatening every concept on which our way of life is based.

The House of Delegates met in a businesslike manner, intent on conducting its business with fairness and efficiency. It studied the report of the AMA Committee on Planning and Development thoroughly, and sent its fine AMA delegation to the June meeting with specific instructions regarding several resolutions plus specific instructions regarding the report.

One of the pressing items considered was the Department of HEW Food and Drug Administration's proposal to require that each package of birth control pills dispensed to patients include printed information regarding risks and possible adverse reactions. The delegates adopted a resolution condemning this proposal as an unprecedented intervention in the physician-patient relationship. Subsequently, the Texas Medical Association submitted a formal protest against the proposal, pointing out that such intervention could cause unnecessary alarm to the patient, might influence her to doubt or even disregard her physician's advice, and could have possible legal implications. Such matters, the letter of protest insisted, must remain between the patient and her physician.

We remain deeply concerned about the care of the poor in the ghettos of our cities and in rural areas where there are no physicians. These problems must remain in focus until some solution is found.

There are four graduating classes of senior medical students. The Texas Medical Association congratulates them, wishes them every happiness, hopes that they will stay in Texas, and that they will join with us and allow us to serve them as we have served the young physicians of Texas for more than a century. They are the future of Texas Medicine!

Walter Walthall, M.D.

Walter Walthall, MD, President, Texas Medical Association.

Serving Texas Physicians for Over Forty Years

Precision-engineered, functionally-built equipment

SMR keeps you and your patients' comfort and satisfaction in mind . . . a room that reflects professional good taste.

SMR has manufactured medical and Dental equipment for over forty years on a direct to user basis.

STAINLESS STEEL POLISH

SMR Stainless Steel Polish cleans, and preserves with superior results —ends fingerprints, watermarks and surface stains. 22 oz. economy $2.75 F.O.B. Plant

NEW CATALOG NOW AVAILABLE

SMR®

SURGICAL MECHANICAL RESEARCH, INC.

Post Office Box 1185 • (714) 646-4405

960 W. 16th St., Newport Beach, Calif. 92663

Established Over 40 Years

Factory Direct Sales

Vasomist

(ANTIHISTAMINIC)

VASOCONSTRICTOR, NASAL DECONGESTANT AND LOCAL ANTIHISTAMINIC

Active Ingredients:
Phenylephrine Hcl 0.25%
Phenylpropanolamine Hcl ...0.50%
Chlorobutanol 0.15%
Tripelennamine Hel 0.50%
In Isotonic Solution

Vasomist

(PLAIN)

VASOCONSTRICTOR AND NASAL DECONGESTANT

Active Ingredients:
Phenylephrine Hcl 0.25%
Phenylpropanolamine Hcl ...0.50%
Chlorobutanol 0.15%
In Isotonic Solution

USE: Temporary relief of nasal congestion due to colds and hay fever.

DIRECTIONS: Adults and Children: Instill two or three drops into each nostril, using no more than needed to provide relief. Repeat every three to four hours as needed but not oftener.

AVAILABILITY

In plastic squeeze bottles containing ¾ fluid oz. and in dropper bottles containing 1 fluid oz.

HUMCO LABORATORY
TEXARKANA, ARK.-TEX.

HUMCO LABORATORY

TEXARKANA, ARK.-TEX.

Our Integrity is Your Guarantee

Painful night leg cramps...

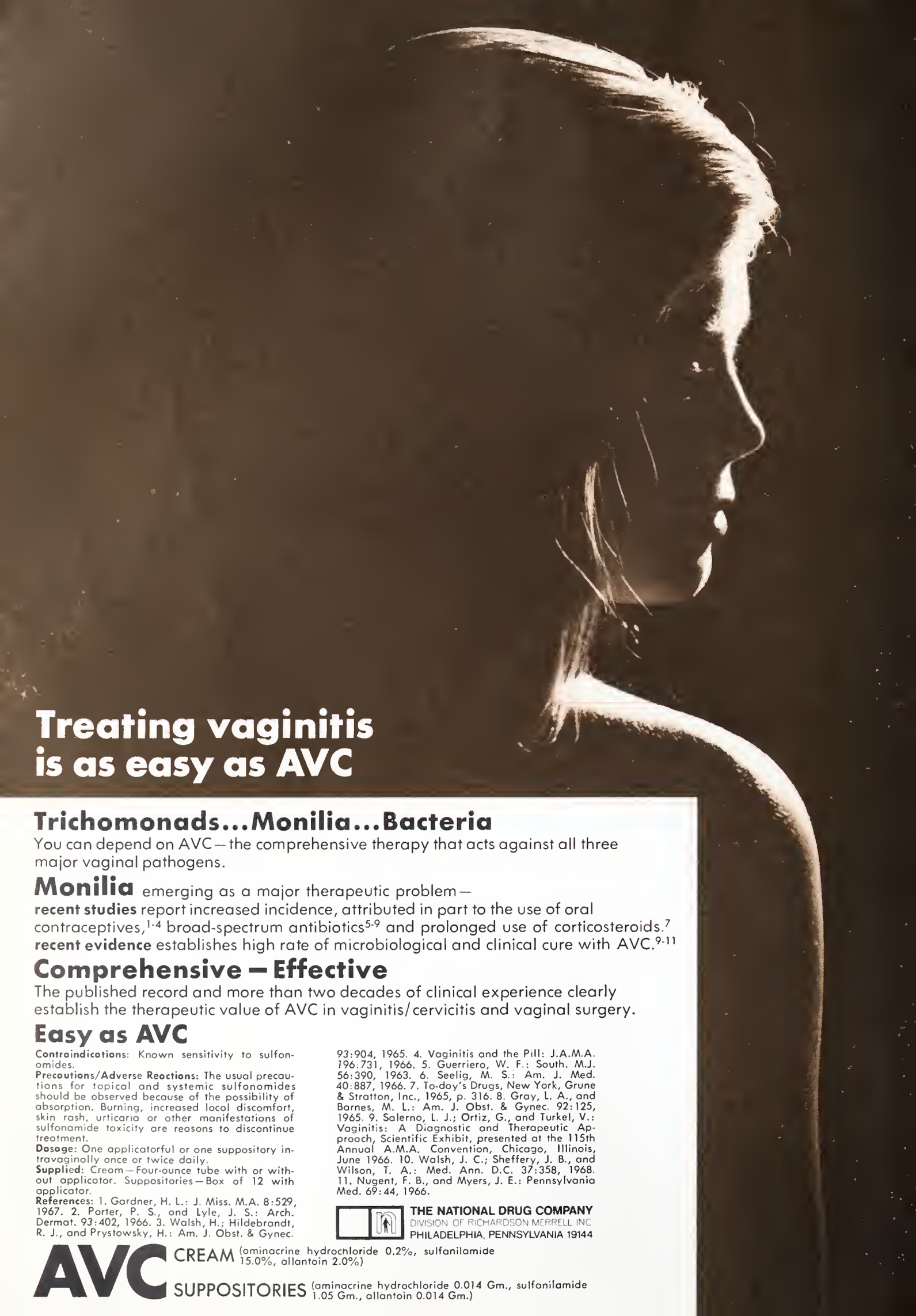
unwelcome bedfellow for any patient– including those with arthritis, diabetes or PVD

One thing patients can sleep without, particularly patients with chronic disease conditions such as arthritis, diabetes or PVD, is painful night leg cramps. Although seldom the presenting complaint, night leg cramps can tie your patients up in painful knots. Now, just one tablet of QUINAMM at bedtime can usually bring an end to shattered sleep and needless suffering. Your patients will sleep restfully—gratefully—with QUINAMM, specific therapy to prevent painful night leg cramps.

Prescribing Information—Composition: Each white, beveled, compressed tablet contains: Quinine sulfate, 260 mg., Aminophylline, 195 mg. **Indications:** For the prevention and treatment of nacturnal and recumbency leg muscle cramps, including those assaciated with arthritis, diabetes, varicose veins, thrombophlebitis, arteriasclerosis and static foot deformities. **Contraindications:** QUINAMM is controlndicated In pregnoncy because af its quinine content. **Precautions/Adverse Reactions:** Aminophylline may praduce intestinal cramps in same instances, and quinine may praduce symptoms af cinchonism, such as tinnitus, dizziness, ond gastrointestinal disturbance. Discantinue use if ringing in the ears, deafness, skin rosh, or visual disturbances accur. **Dosage:** One tablet upon retiring. Where necessory, dasage may be increased to one tablet following the evening meal and one tablet upon retiring. **Supplied:** Bottles of 100 and 500 toblets.

THE NATIONAL DRUG COMPANY
DIVISION OF RICHARDSON-MERRELL INC.
PHILADELPHIA, PENNSYLVANIA 19144

Quinamm™ Specific therapy for night leg cramps
(quinine sulfate 260 mg., aminophylline 195 mg.)



Treating vaginitis is as easy as AVC

Trichomonads...Monilia...Bacteria

You can depend on AVC—the comprehensive therapy that acts against all three major vaginal pathogens.

Monilia emerging as a major therapeutic problem—
recent studies report increased incidence, attributed in part to the use of oral contraceptives,[1-4] broad-spectrum antibiotics[5-9] and prolonged use of corticosteroids.[7]
recent evidence establishes high rate of microbiological and clinical cure with AVC.[9-11]

Comprehensive—Effective

The published record and more than two decades of clinical experience clearly establish the therapeutic value of AVC in vaginitis/cervicitis and vaginal surgery.

Easy as AVC

Contraindications: Known sensitivity to sulfonamides.
Precautions/Adverse Reactions: The usual precautions for topical and systemic sulfonamides should be observed because of the possibility of absorption. Burning, increased local discomfort, skin rash, urticaria or other manifestations of sulfonamide toxicity are reasons to discontinue treatment.
Dosage: One applicatorful or one suppository intravaginally once or twice daily.
Supplied: Cream—Four-ounce tube with or without applicator. Suppositories—Box of 12 with applicator.

References: 1. Gardner, H. L.: J. Miss. M.A. 8:529, 1967. 2. Porter, P. S., and Lyle, J. S.: Arch. Dermat. 93:402, 1966. 3. Walsh, H.; Hildebrandt, R. J., and Prystowsky, H.: Am. J. Obst. & Gynec. 93:904, 1965. 4. Vaginitis and the Pill: J.A.M.A. 196:731, 1966. 5. Guerriero, W. F.: South. M.J. 56:390, 1963. 6. Seelig, M. S.: Am. J. Med. 40:887, 1966. 7. To-doy's Drugs, New York, Grune & Stratton, Inc., 1965, p. 316. 8. Gray, L. A., and Barnes, M. L.: Am. J. Obst. & Gynec. 92:125, 1965. 9. Salerno, L. J.; Ortiz, G., and Turkel, V.: Vaginitis: A Diagnostic and Therapeutic Approoch, Scientific Exhibit, presented at the 115th Annual A.M.A. Convention, Chicago, Illinois, June 1966. 10. Walsh, J. C.; Sheffery, J. B., and Wilson, T. A.: Med. Ann. D.C. 37:358, 1968. 11. Nugent, F. B., and Myers, J. E.: Pennsylvania Med. 69:44, 1966.

THE NATIONAL DRUG COMPANY
DIVISION OF RICHARDSON MERRELL INC.
PHILADELPHIA, PENNSYLVANIA 19144

AVC CREAM (ominacrine hydrochloride 0.2%, sulfanilamide 15.0%, allantoin 2.0%)

SUPPOSITORIES (aminacrine hydrochloride 0.014 Gm., sulfanilamide 1.05 Gm., allantoin 0.014 Gm.)

LACTINEX®

TABLETS & GRANULES

■ **to help restore and stabilize the intestinal flora**

■ **for fever blisters and canker sores of herpetic origin**

Lactinex contains both *Lactobacillus acidophilus* and *L. bulgaricus* in a standardized viable culture, with the naturally occurring metabolic products produced by these organisms.

Lactinex has been shown to be useful in the treatment of gastrointestinal disturbances, and for relieving the painful oral lesions of fever blisters and canker sores of herpetic origin.[1,2,3,4,5,6,7,8]

No untoward side effects have been reported to date.

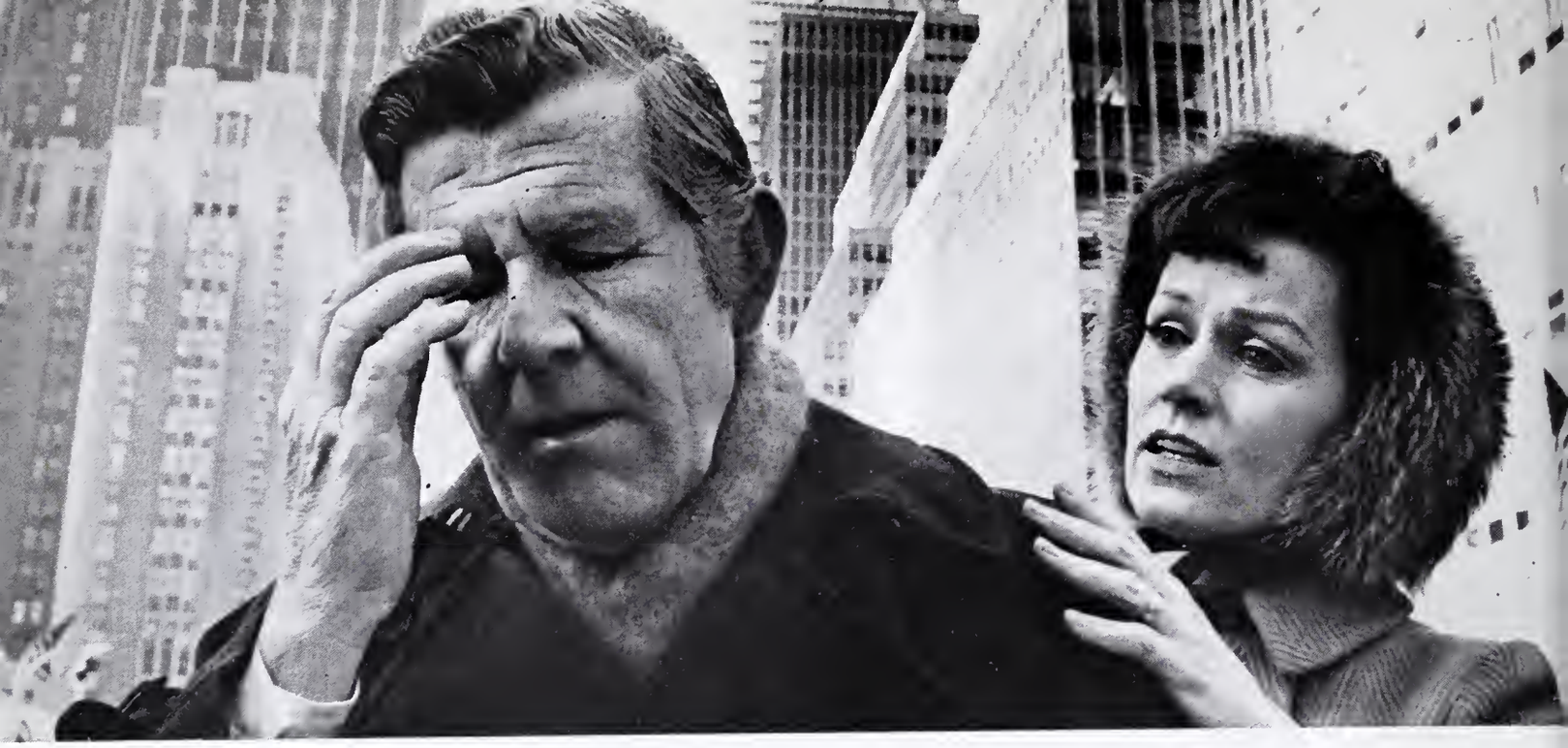
Literature on indications and dosage available on request.

HYNSON, WESTCOTT & DUNNING, INC.

Baltimore, Maryland 21201

(LX-05)

References:
(1) Siver, R. H.: CMD, *21*:109, September 1954. (2) Frykman, H. H.: Minn. Med., *38*:19-27, January 1955. (3) McGivney, J.: Tex. State Jour. Med., *51*:16-18, January 1955. (4) Quehl, T. M.: Jour. of Florida Acad. Gen. Prac., *15*:15-16, October 1965. (5) Weekes, D. J.: N.Y. State Jour. Med., *58*:2672-2673, August 1958. (6) Weekes, D. J.: EENT Digest, *25*:47-59, December 1963. (7) Abbott, P. L.: Jour. Oral Surg., Anes., & Hosp. Dental Serv., 310-312, July 1961. (8) Rapoport, L. and Levine, W. I.: Oral Surg., Oral Med. & Oral Path., *20*:591-593, November 1965.



Yesterday, he had another dizzy spell.

(Did he mention it when you checked his glucose tolerance?)

A dizzy spell now and then... an increase in irritability... a few gaps in his memory: The early warnings of cerebrovascular disease are often subtle, easy for the patient to dismiss.

But they are by no means uncommon.

You are most likely to detect them, of course, in the diabetic, the hypertensive, the cardiac patient... surprisingly often during their forties and fifties.

Detecting these warnings, however, may require careful questioning, sometimes of the family as well as the patient. You can't always trust the patient to speak of them spontaneously.

It pays to be suspicious. Early diagnosis of transient ischemia means more viable vascular muscle capable of responding to the direct spasmolytic and dilating action of Cyclospasmol... a better chance to protect and maintain adequate cerebral circulation.

Cyclospasmol has a smooth, gradual onset of action... chances for the desired result increase with continued use... it is notably free of adrenergic, cardiostimulant and other unwanted effects.

Before transient cerebral ischemia gives way to lasting damage

Cyclospasmol® (cyclandelate)

For long-term enhancement of cerebral blood flow See facing page for Brief Summary

Cyclospasmol
(cyclandelate)

ACTIONS: Cyclospasmol (cyclandelate) is an orally effective peripheral spasmolytic and vasodilator that acts directly on the vascular smooth musculature to produce a gradual and progressive relaxation that enhances the peripheral and cerebral blood flow. **INDICATIONS:** For adjunctive therapy in occlusive and vasospastic diseases of the vascular system associated with an impaired circulation, such as: intermittent claudication; arteriosclerosis obliterans; thrombophlebitis (to control associated vasospasm and muscular ischemia); nocturnal leg cramps; local frostbite; Raynaud's phenomenon; as an aid to encourage healing of diabetic and trophic ulcers of the legs; and for selected cases of ischemic cerebral vascular disease. A faster response may be expected in conditions in which vasospasm is predominant in the pathological process. The drug is not intended to substitute for an adequate medical or surgical program in the treatment of peripheral or cerebral vascular disease. It is imperative that the patient continue to follow established therapy, e.g., foot care, discontinuance of smoking, etc., while taking Cyclospasmol. Since cerebrovascular disease is diagnosed most frequently only after destruction of nerve tissue, it cannot be expected that signs and symptoms arising from an interruption of neuronal function can be completely reversed by correcting the exciting cause. Nevertheless, restoration of blood flow towards more normal levels with cyclandelate may often produce marked relief from such signs and symptoms as head noises, ringing in the ears, a feeling of weakness, unsteady gait, mental confusion, temporary fluctuations in hearing acuity, poor memory and slurred speech. More important, the drug may provide prophylaxis against further circulatory embarrassment, particularly if the diminished circulation is associated with spasm of the vascular wall. **CONTRAINDICATIONS:** Cyclospasmol is contraindicated in cases of known hypersensitivity to the drug. **WARNINGS: 1.** Cyclandelate should be used with extreme caution in patients with severe obliterative coronary artery or cerebral vascular disease, since there is a possibility that these diseased areas may be compromised by vasodilatory effects of the drug elsewhere. **2. USE IN PREGNANCY:** The safety of cyclandelate for use during pregnancy or lactation has not been established; therefore, it should not be used in pregnant women or in women of childbearing age unless, in the judgment of the physician, its use is deemed absolutely essential to the welfare of the patient. **3.** Although no prolongation of bleeding time has been demonstrated in humans in therapeutic dosages, it has been demonstrated in animals at very large doses. Therefore, the hazard of a prolonged bleeding time should be carefully considered when administering cyclandelate to a patient with active bleeding or a bleeding tendency. **PRECAUTIONS:** Since Cyclospasmol is a vasodilator, it should be used with caution in patients having glaucoma. Consult direction circular before prescribing. **ADVERSE REACTIONS:** Gastrointestinal distress (pyrosis, pain and eructation) may occur with Cyclospasmol. These symptoms occur infrequently and are usually mild. Relief can often be obtained by taking the medication with meals or by the concomitant use of antacids. Mild flush, headache, feeling of weakness or tachycardia may occur, especially during the first weeks of administration. **SUPPLIED:** 200 mg. blue capsules in bottles of 100 and 500; 100 mg. orange tablets in bottles of 100 and 500.

May we send you reprints, detailed literature or professional samples?

IVES LABORATORIES INC.
685 Third Avenue, New York, N.Y. 10017

Ives

Rich Maender thought safety belts were just for high speed driving.

What's your excuse?

ADVERTISING COUNCIL

GREEN CROSS FOR SAFETY

Advertising contributed for the public good.

Summer time...monilia time!

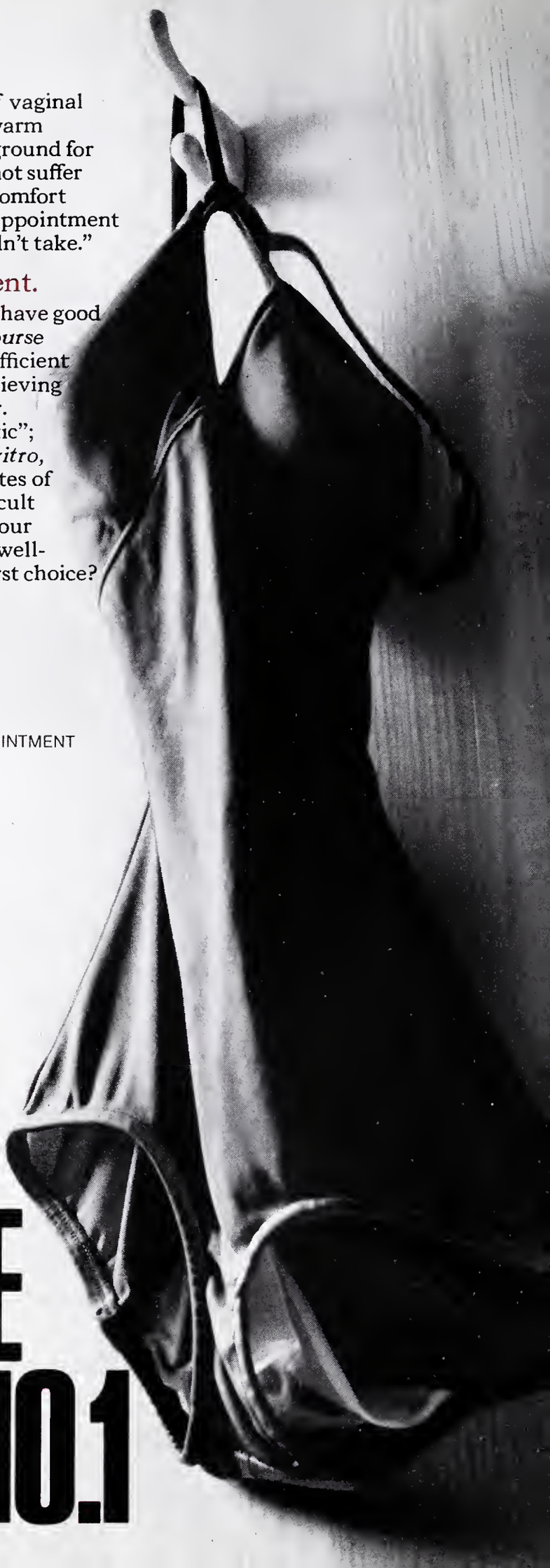
No wonder you see so many more cases of vaginal moniliasis during this season. A damp, warm bathing suit provides a perfect breeding ground for fungal invaders. But your patients need not suffer the pain, the embarrassment and the discomfort of these stubborn infections. Nor the disappointment which comes when they find "the cure didn't take."

Candeptin avoids disappointment.

With CANDEPTIN, you and your patients have good reason for confidence. *A single, 14-day course of therapy* with CANDEPTIN is usually sufficient to eradicate the invader, while rapidly relieving itching, burning, discharge and malodor. And CANDEPTIN is "cidal" as well as "static"; 100 times more potent than nystatin *in vitro,* it has achieved culture-confirmed cure rates of 90% and more (even in notoriously difficult pregnant patients). Why not maximize your chances of success by adopting effective, well-tolerated CANDEPTIN as your agent of first choice?

Agent of first choice

Candeptin®
candicidin VAGINAL TABLETS/OINTMENT



the fortnight fungicide for

PRIVATE ENEMY NO.1

Candeptin® CANDICIDIN

Formula:
CANDEPTIN Vaginal Ointment contains a dispersion of candicidin powder equivalent to 0.6 mg. per gm. or 0.06% candicidin activity in U.S.P. petrolatum. 3 mg. of candicidin is contained in 5 gm. of ointment or one applicatorful. CANDEPTIN Vaginal Tablets contain candicidin powder equivalent to 3 mg. (0.3%) candicidin activity dispersed in starch, lactose and magnesium stearate.

Indications:
Vaginal moniliasis due to Candida albicans and other Candida species.

Contraindications:
Patient sensitivity to any of the components. During pregnancy manual tablet insertion may be preferred since the use of the ointment applicator or tablet inserter may be contraindicated.

Caution:
Clinical reports of sensitization or temporary irritation with CANDEPTIN Vaginal Ointment or Vaginal Tablets have been extremely rare. To avoid re-infection, it is recommended that the patient refrain from sexual intercourse during treatment or the husband wear a condom.

Dosage:
One vaginal applicatorful of CANDEPTIN Ointment or one Vaginal Tablet is inserted high in the vagina, twice a day, in the morning and at bedtime, for 14 days. Treatment may be repeated if symptoms persist or reappear.

Dosage forms:
CANDEPTIN Vaginal Ointment is supplied in 75 gm. tubes with applicator (14-day regimen requires 2 tubes). CANDEPTIN Vaginal Tablets are packaged in boxes of 28, in foil, with inserter—enough for a full course of treatment. Store under refrigeration.

Federal law prohibits dispensing without prescription. CANDEPTIN is a registered trade-mark of Julius Schmid, Inc.

JULIUS SCHMID
PHARMACEUTICALS
New York, N.Y. 10019

Con-ven-ience!

Dicarbosil®
ANTACID

Your ulcer patients and others will praise it. Specify DICARBOSIL 144's—144 tablets in 12 rolls.

ARCH LABORATORIES
319 South Fourth Street, St. Louis, Missouri 63102

T. ROWE PRICE GROWTH STOCK FUND, INC.

Est. 1950

A NO-LOAD FUND

Investing in stocks carefully selected for long term growth possibilities

Individuals & institutions are invited to request free prospectus

NO SALES CHARGE

T. Rowe Price Growth Stock Fund, Inc.
One Charles Center, Dept. F-1
Baltimore, Md. 21201 Phone (301) 539-1992

Name _____

Address _____

_____ Zip _____

One of seven dosage forms

Thorazine®

brand of chlorpromazine HCl

Spansule®

brand of sustained release capsules

Available in 30 mg., 75 mg., 150 mg., 200 mg. and 300 mg. strengths.

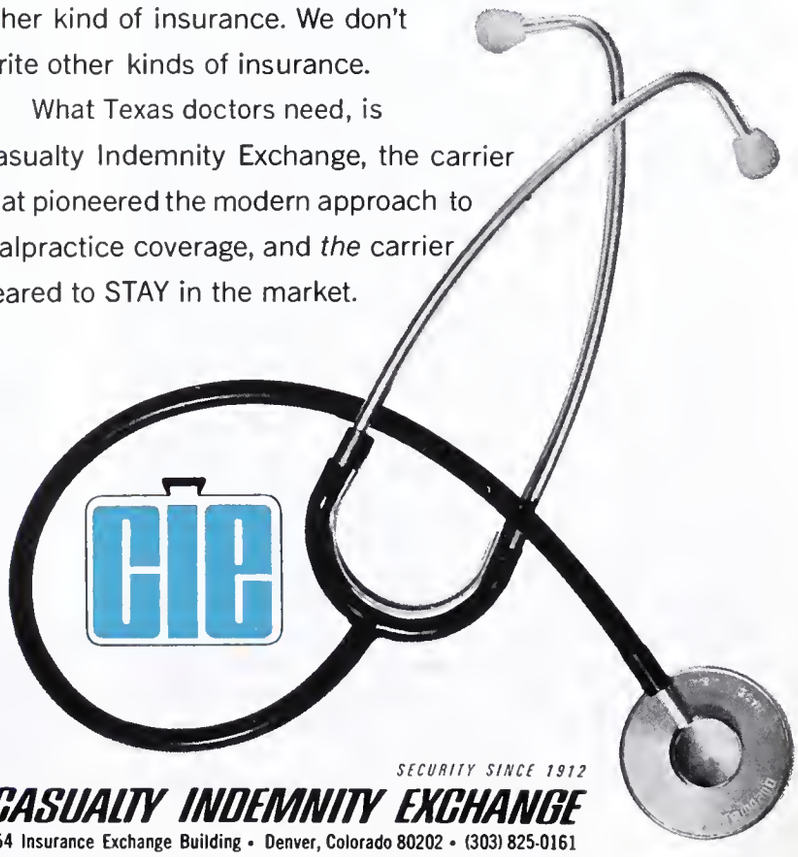
Smith Kline & French Laboratories
Philadelphia, Pa. 19101

What Texas doctors need, is a Malpractice Liability Carrier that won't fade when trouble comes.

This means the up-to-date carrier. The one that's replete with innovations and new developments in this clouded, sensitive area of liability protection. And the one that doesn't talk malpractice coverage just to get a foot in the door for every other kind of insurance. We don't write other kinds of insurance.

What Texas doctors need, is Casualty Indemnity Exchange, the carrier that pioneered the modern approach to malpractice coverage, and *the* carrier geared to STAY in the market.

Contact your local agent or
RUSSELL GRACE INSURANCE
2304 W. 7th St.
Ft. Worth, Texas 76107
(817) 332-9269
In Dallas, Call
(214) 264-4300



SECURITY SINCE 1912
CASUALTY INDEMNITY EXCHANGE
754 Insurance Exchange Building • Denver, Colorado 80202 • (303) 825-0161

PITFALLS IN RATTLESNAKE

RATTLESNAKE BITE can end in disaster for patient and physician, for there are many pitfalls. The literature fails to tell the doctor exactly what to do in all circumstances, and often is prejudiced in favor of some particular mode of treatment. Even the information supplied in the package with antivenin is treacherously misleading. At the present time there are two well established methods of treatment which complement each other and are effective: (1) prompt, massive, intravenous administration of antivenin,[1] and (2) prompt, adequate, subfascial drainage of the bite wound.[2,3] Many pitfalls remain.

Severity of Envenomation: A pitfall exists in the information supplied with antivenin. The physician is misled to believe that he can look at the skin in the early hours after the bite and gauge the severity of envenomation as "grade 0, 1, 2, 3 or 4,"[4] thereby to decide whether no antivenin or 5 units or more of Wyeth's North and South American polyvalent antivenin is needed. Unfortunately, the fang of the snake can deposit a large amount of active venom *beneath* the deep fascia but leave little or no venom in the skin or subcutaneum. Seeing little reaction in the skin, the physician is lulled into a false sense of security, misjudges the actual severity, and fails to give an adequate dose of antivenin in the early hours when it is most needed. After 12 hours, venom will have destroyed the capillary bed in the area of envenomation, and the bloodstream can no longer carry antivenin to the center of destruction. This situation occurs particularly when the dorsum of the hand or foot is bitten; here the skin, subcutaneum, and deep fascia are thin and the fang easily enters the musculotendinous spaces. Severe, permanent disability is the probable result, and the physician may face a lawsuit!

It is impossible to know the severity of envenomation in the early hours after the bite unless incisions are made through the deep fascia at every fang mark and in every case of rattlesnake bite! Through these incisions the physician can easily see the dark, greenish discoloration of tissues characteristic of rattlesnake bite both above and beneath the deep fascia. Although the reaction may appear to be quite severe if envenomation is limited to the subcutaneum, permanent disability is not likely because the more valuable tissues are protected by deep fascia. In about 20% of cases, venom is deposited beneath the deep fascia where it acts on important blood vessels, nerves, muscles, and tendons, and some degree of permanent disability is probable unless treatment reverses the natural process.

Subfascial Drainage: In the emergency room, after administering local anesthesia, the surgeon makes linear incisions through each fang hole 1 or 2 inches in length and down to and just through the deep fascia. To cut more deeply would risk injury to arteries, nerves, or tendons, but a hemostat may be plunged safely into subfascial tissues—following the path of the fang—and the jaws of the hemostat opened to provide drainage of fluids from tissue injured by venom from the very center of envenomation. A copious drainage will occur for several days, and then secondary closure of the incision is done. Although it is most effective immediately after the bite, subfascial drainage is effective in releasing isolated venom at any time.

Antivenin: Intracutaneous 1:10 horse serum could precipitate anaphylaxis; so this test for allergy is delayed until skin-scratch and conjunctival tests have proved negative.[5] If tests indicate allergy to horse serum, antivenin should not be given—desensitizing procedures

BITE

Rattlesnake bite can lead to physical disability or death for the patient, and legal disaster for the physician if he fails to (1) hospitalize the patient, (2) obtain consultation, (3) provide prompt and adequate treatment, and (4) keep full and accurate records. Limited experience in treating snakebite makes many physicians vulnerable to the pitfalls discussed here, not the least of which is gauging the severity of envenomation according to information supplied with the package of antivenin.

W. E. LOCKHART, MD

are too slow to be effective—and in such a case subfascial drainage remains as effective treatment. *Antivenin should be given exclusively by the intravenous route,* which is safer than intramuscular injections. The latter cannot be retrieved after a reaction is manifest, but intravenous administration can be stopped or slowed and antiallergy drugs (phenylephrine, antihistamine, or cortisone) may be given. Local injection of antivenin fails to contact venom, causes swelling, and impairs circulation. After 6 hours have passed and after 6 units of antivenin have been given, additional antivenin yields diminishing returns.

Another pitfall is present when the victim is a small child; these are the cases in which most deaths occur. Incisions should be made to determine the severity of envenomation and to provide subfascial drainage from the center of envenomation. A cut-down should be done, and antivenin in proportion to the amount of venom injected—not the weight of the child—should be given with care not to overload the circulation and cause pulmonary edema.

Other Measures: *Tourniquet:* Although a firm, continuous tourniquet may be effective in preventing respiratory paralysis en route to the hospital after a Mojave rattlesnake bite, a tourniquet interrupts tissue perfusion, and causes tissue congestion, delaying contact of antivenin with venom, and does more harm than good in rattlesnake bite. Death is rare on the first day of the bite.[6]

Incision and Suction: Subfascial drainage is not to be confused with traditional incision and suction, which was limited to the skin and subcutaneum. It is unwise for laymen in the field to make incisions that penetrate the deep fascia, and shallower incisions do no good for severe, subfascial envenomation which is the real problem in rattlesnake bite. Oral suction would add infection to the wound, and suction is not necessary in subfascial drainage. Excision of the bite area could not extend beneath the deep fascia, and therefore is of no value.

Cryotherapy: Another pitfall is cryotherapy (immersion of the extremity in fresh-water ice). This method has been defined and tried,[7] but experience has proved the method to be inadequate for severe, subfascial envenomation. It is an excellent and unchallenged first aid measure for relieving pain and immobilizing the patient, but it should not be used as definitive treatment for rattlesnake bite.

Medicolegal Aspects: Snakebite usually is an emergency with which the physician has had limited experience. The associated controversy, treacherous outcome, and medicolegal liability are such that the patient should be admitted to a hospital and telephone consultation should be obtained. Treatment should be prompt, correct, and thorough. Full and accurate records should be kept, for these are a physician's best friends in the courtroom.

REFERENCES

1. Parrish HM: Intravenous antivenin in clinical snake venom poisoning. A preliminary report. Missouri Med 60:240-244, 1963.

2. Lockhart WE: Treatment of snake bite. Southwestern Med 50:22-24, 1969.

3. Glass, TG Jr: Cortisone and immediate fasciotomy in the treatment of severe rattlesnake bite. Texas Med 65:41-47 (July), 1969.

4. Wood JT, Hoback WW, Green TW: Treatment of snake venom poisoning with ACTH and cortisone. Virginia Med Month 82:130, 1955.

5. Fein BT, Kamin PB, Meyer GA: Near fatal reaction to tetanus antitoxin skin test. Texas Med 60:236-239, 1964.

6. Parrish HM: Texas snakebite statistics. Texas Med 60: 592-598, 1964.

7. Lockhart WE: Treatment of snakebite. JAMA 193:336-338, 1965.

Dr. Lockhart, 401 North Fourth St, Alpine, Tex 79830.

OSTEOGENESIS IMPERFECTA: Biochemical cancer resistance? Family pedigree and review of literature

HARVEY A. ROSENSTOCK, MD

Osteogenesis imperfecta (OI) is a rare, idiopathic, inheritable disorder of the mesenchyme. Blue sclerae, brittle bones, and early deafness constitute a classic diagnostic triad. The literature alerts one to the multiplicity of secondary and tertiary manifestations related to the wide range of expressivity and penetrance. However, with one exception,[1] there appears to be no group analyzing the correlation between OI and the simultaneous occurrence of cancer. This article presents a family pedigree with OI and cancer, considers the hypothesis that OI may afford protection from cancer, and reviews the literature.

THE FIRST DESCRIPTION of OI may be the biblical reference (Numbers 24:8) which Rashi, the most famous commentator on the Old Testament, interprets as follows: "Their enemies shall be consumed by a disease of the bones characterized by thinning and loss of marrow so that they will become broken at the slightest blow."[2] Notwithstanding, since 1788 many observers have described patients with brittle bones, blue sclerae, or otosclerosis, or all three.[3-7]

Lobstein's disease, periosteal dysplasia of Porak and Durante, Vrolik disease, osteopsathyrosis congenita, Spurway syndrome, Eddowes' disease, Van der Hoeve's syndrome, hereditary hypoplasia of the mesenchyme, and fragilitas ossium are among the many terms for variants of OI. It will be assumed that these all represent the same disease. For convenience, OI will be discussed as congenita (OIC) and tarda (OIT) forms.

OIC is obvious at birth. The neonate is deformed, having suffered multiple fractures in utero and during delivery. Caput membranaceum, micromelia, and progressive hydrocephalus are not unexpected. The infant rarely survives; death often results from intracranial hemorrhage.[8] While the incidence of OIC is unknown, estimates range between 1/21,000 and 1/60,000 newborns.[9-11] Of all abnormal newborns, OIC is thought to account for 1/543.[12] That OIC can be diagnosed prenatally[13] and appropriate precautions taken may render the prognosis less ominous.

In OIT, the patient first suffers fractures from trivial insults in early childhood. Susceptibility to fractures often ceases at puberty only to recur postmenopausally. The bones are not tender; fractures are not unusually painful and heal quickly, often with prolific callus formation.

Clinically, the patient is characterized by a short, asthenic stature with anterior leg bowing. Facial triangularity, a bitemporally bulging calvarium with obvious craniofacial disproportion, and misshapen, discolored teeth (dentinogenesis imperfecta) are typical.

Aberrant collagen maturation will be invoked to explain the universal involvement of ligaments, tendons, fascia, skin, and capillaries. Easy bruisability, trophic skin changes, muscular hypotonia, frequent hernias, habitual dislocations, and hyperlaxity are logical secondary manifestations. The thin sclerae allow reflection of the choroidal pigment and assume their characteristic color. Arcus corneae (embryotoxon and gerontoxon), hypermetropia, and keratoconus are among other ocular manifestations.[14-16]

Otosclerosis often develops during the second decade. Eventually, codfish deformities of the vertebrae, nucleus pulposus herniations, kyphoscoliosis, pectus excavatum, platybasia, and spinal cord compression may appear.[8] Ter-

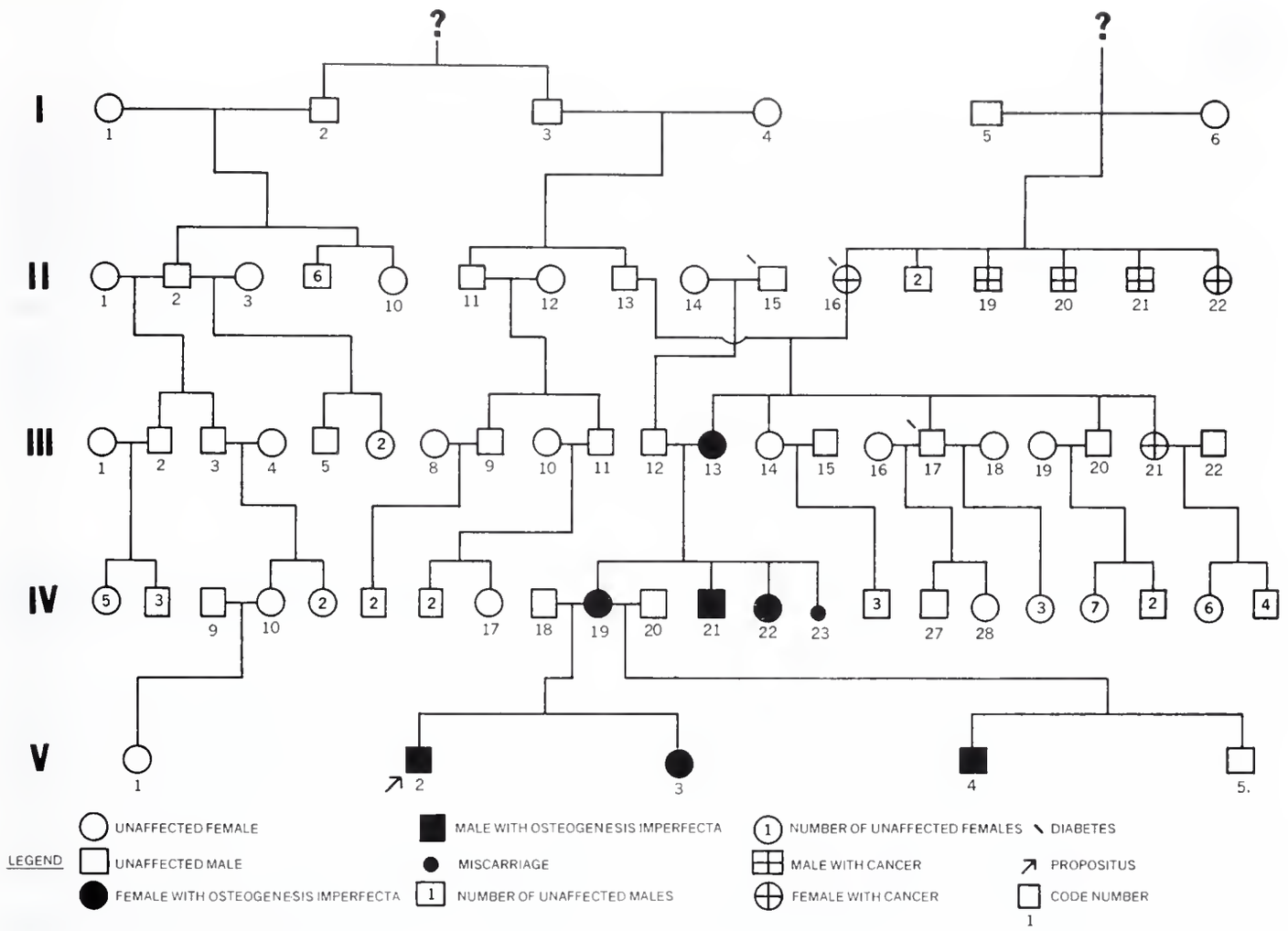


Fig 1. Pedigree of family with osteogenesis imperfecta and cancer-prone generation.

tiary manifestations such as premature emphysema and cor pulmonale may follow. McKusick cites premature arteriosclerosis and calcification of large peripheral arteries, reporting specifically neonatal pulmonary artery and cerebral artery calcification.[8]

Notwithstanding divers biological investigations, the etiology remains obscure. Neither hydroxyproline tolerance nor results of the usual blood chemistries are diagnostic. Total bone salt content is diminished, although the calcium-to-phosphorus ratio in bone tissue is normal.[11] Racial and sexual propensities for developing OI are not apparent. Neither is there a significant association between OI and the Rhesus, ABO, and MN blood groups.[17]

Classically, OI is transmitted as an autosomal dominant (Fig 1); however, evidence for recessive transmission is not denied. The latter stems from studies of affected siblings of normal parents, consanguinity investigations, and from 25% sibling incidence ratios.[15-16]

OI is a type of osteoporosis by definition. Many have therefore advocated therapeutic supplements of androgens and estrogens,[18] exogenous albumin (a bone matrix precursor),[8] sodium fluoride, strontium, prednisone, vitamin D, Dilantin, and acetylsalicylic acid.[19] Certainly corrective orthopedic procedures are advocated and well tolerated. Obstetrically, OI constitutes a special threat with respect to uterine rupture, hemorrhagic diathesis, and pelvic deformities.[20]

Because the forme fruste is common, the differential diagnosis should include rickets, achondroplasia, congenital hyperphosphatasia,[19] Marfan's syndrome, Ehlers-Danlos syndrome, and cleidocranial dysostosis. (The last manifests a wormian skull mosaic not unlike OI). Osteogeneic sarcoma is mentioned only because in OI, healing fractures may be roentgenologically indistinguishable.[1,21]

OI Pedigree Investigation: This writer first raised the question of a correlation between cancer and OI in 1967 when investigating the family pedigree reported here (Fig 1), and described in the *Journal of the American Medical Association.*[22] Although there is a decidedly strong familial tendency toward cancer in generation II, it is conspicuous that there are no members with concurrent cancer and OI; moreover, once

OI became apparent in generation III, the incidence of cancer dropped precipitously.

It is worthwhile to compare the expected number of deaths from cancer of all types in the American population (15%) and the expected occurrences of cancer of all sites in the American population (25%)[23] with the pedigree in Fig 1. The number of individuals with cancer in generation II (five) is accurately predicted, considering the expected occurrences of cancer of all sites (5.50). The observed incidence of cancer in generation IV is zero (Table 1). Whether or not this can be explained by the relatively young age of those in generation IV (Table 2) is difficult to ascertain. What is known of the major causes of morbidity and mortality with respect to the ages of those in the kindred (Table 2) lends support to the hypothesis that OI may afford its victims protection against some forms of cancer. Admittedly, many such kindreds will have to be scrutinized in order to test this hypothesis statistically.

Segregation of the autosomal dominant gene for OI in this kindred is clear with at least a 75% incidence in generation IV and a 75% incidence in generation V, notwithstanding an expected incidence of 50%. Further, the penetrance and expressivity in this kindred (Fig 1, Table 3) is extremely high.

The concurrence of OI and neoplasia is so rare that it has been hypothesized retrospectively that OI affords biochemical resistance against cancer.[1] Perhaps the metabolic requisites for the proliferation of malignant cells are denied secondary to a deficit (or an abundance) of one or more enzymes. Lemon[24] postulates a congenital lack of growth-inducing agents in procollagen which in effect restrains epithelial proliferation, "resulting in imperfect bone and little risk of cancer."

One can postulate that in generation III a spontaneous mutation occurred which conferred on succeeding generations a maturational aberrancy affecting the primary elements of the mesenchyme. Alternatively, one may consider the occurrence of OI in generation III as a "dominant" extrapolation of the "recessive" maturational abnormality in generation II. Therefore, that one finds either OI or cancer, but not both, is not incongruous.

In summary, the cancer-protection hypothesis attributes a welcomed prognosis for longevity, but the evidence is inconclusive. Multiple genetic factors may be involved. This, combined with the rarity of OI per se (in this case one family in a community of 15,000) contributes to the novelty of the concurrence of cancer and OI. The need for further investigations, especially with adequate biochemical and tissue culture facilities, is self-evident. Even the significance of diabetes mellitus in the pedigree described—itself negatively correlated with neoplasia[1]—is obscure. It is reasonable to assume that these points will be clarified as we learn more about the intricacies of the inborn errors of metabolism.

REFERENCES

1. Lynch HT, Lemon HM, Krush AJ: A note on "cancer-susceptible" and "cancer-resistant" genotypes: implications for cancer detection and research. Nebraska Med J 51:209-211, 1966.

2. Brim CJ: Medicine in the Bible. New York, J J Little and Ives Company, 1936.

3. Axmann E: Merkwurdige fragilitat der knochen ohne dyskrasische ursache alkrankhafte eigentumlichkeit dreier Geschwister. Ann J ges Heilk Jahrg 4:58, 1831.

4. Eddowes A: Dark sclerotics and fragilitas ossium. Brit Med J 2:222, 1900.

5. Ekman OJ: Description et casus aliquot osteomalaciae-Upsalise. J Edman, 1788.

6. van der Hoeve J, de Kleyn J: Blauesclerae, Knochenbrüchigkeit und Schwerhörigkeit. Arch f Ophth, Leipz 95:81-93, 1918.

7. Lobstein JG: Lehrbuch der pathologischen anatomie. Deutsch bearbeitet von A Neurohr, Stuttgart, F Brodhag, 1835.

8. McKusick VA: Heritable Disorders of Connective Tissue. St Louis, C V Mosby Company, 1966.

9. Potter EL: Pathology of the Fetus and the Newborn, Chicago, Year Book Publishers, 1952.

10. Posner AC, Goldman JA: A case of osteogenesis imperfecta diagnosed in utero. Amer J Obstet Gynec 73:1143-1147, 1957.

11. Freda VJ, Vosburgh GJ, Di Liberti C: Osteogenesis imperfecta congenita; a presentation of 16 cases and review of the literature. Obstet Gynec 18:535-547, 1961.

12. Sarma V: A case of intrauterine osteogenesis imperfecta. Brit Med J 2:1856-1857, 1960.

13. Greenberg EI, Faegenburg D: The antepartum diagnosis of osteogenesis imperfecta congenita: A report of two cases recognized in utero. J Mt Sinai Hosp 31:90-96, 1964.

14. Smars G: Osteogenesis Imperfecta in Sweden. Kungl Boktryckeriet, P A Norstedt & Sonner, Stockhold, 1961.

15. Ibsen KH: Distinct varieties of osteogenesis imperfecta. Clin Orthop 50:279-290, 1967.

16. Fontaine P, et al: La fragilite osseuse constitutionelle. Ann Pediat 8:124-135, 1968.

17. Smars G, Beckman L, Book JA: Osteogenesis imperfecta and blood groups. Acta Genet (Basel) 11:133-136, 1961.

18. Smith JH: Preliminary report on osteogenesis imperfecta. J Internat Coll Surg 42:533-538, 1964.

19. Eyring EJ, Eisenberg E: Congenital hyperphosphatasia. J Bone Joint Surg 50:1099-1117, 1968.

20. Young B, Gorstein F: Maternal osteogenesis imperfecta. Obstet Gynec 31:461-470, 1968.

21. Koskinen EVS: Massive hyperplastic callus formation simulating osteogenic sarcoma in osteogenesis imperfecta; report of a severe case. Ann Chir Gynec Fenn 47:257-271, 1958.

22. Rosenstock HA: Osteogenesis imperfecta. JAMA 204: 740-741, 1968.

23. Lynch HT: Personal communication.

24. Lemon HM: Personal communication.

Dr. Rosenstock, 11606 Rampart, Houston, Tex 77035.

Generation	Expected Deaths, All Cancer (15%)*	Expected Occurrence of Cancer, All Sites (25%)*	Incidence of Cancer in Kindred
I	0.9	1.50	0
II	3.30	5.50	5 (22.7%)
III	3.30	5.50	1 (4.5%)
IV	7.50	12.50	0

*American population.

Table 1. Expected and observed incidence of cancer in kindred.

Table 2. Ages and major causes of morbidity and mortality in kindred.

Code	Age	Age at Death	Diagnosis	Remarks
II-15		67	Diabetes	Fatal coronary
II-16		77	Diabetes, pulmonary cancer	
II-19		72	Cancer, unknown origin	
II-20		18	Cancer, unknown origin	
II-21		64	Cancer, unknown origin	
II-22		52	"Neck cancer"	
III-13	46		OI	Blue sclerae, multiple fractures
III-17	40		Diabetes	
III-21		46	Gastric cancer	
IV-19	26		OI	Blue sclerae, multiple fractures
IV-21	12		OI	Blue sclerae, multiple fractures, frequent dislocations
IV-22		2	OI	Died of meningitis
IV-23		2 months' gestation	?	Miscarriage
V-2	4		OI	Blue sclerae, multiple fractures
V-3	2		OI	Blue sclerae
V-4	10		OI	Blue sclerae, multiple fractures

HARVEY L. GORDON, MD
L. RUSSELL MALINAK, MD
ROBERT R. FRANKLIN, MD

THE MALE FACTOR IN INFERTILITY

The investigation of male infertility can be challenging and satisfying. The elements of diagnostic evaluation and treatment are discussed. With the increasing interest of urologists, gynecologists, immunologists, endocrinologists, and basic research workers in this field, rapid and dramatic developments may be anticipated.

IN THE POPULATION seeking pregnancy, 50% will have conception within one month, 80% within one year, and 90% within two years; 10% will never achieve pregnancy without medical assistance. The male is the significant factor in about 30% of infertile couples and is an important contributing factor in an additional 20%. The problems in the male are as varied and complex as those in the female and deserve the same painstaking investigation.

Significant advances are being made daily in the investigation and treatment of male infertility. Nonetheless, there is a lamentable medical apathy about the infertile male. The attitude of many consulted physicians, including some urologists, is that the work-up usually reveals nothing and treatment is to little avail. This attitude, the result of poor experiences with em-

pirical treatment, is in a field that increasingly lends itself to precise, orderly, scientific diagnosis. Our experience indicates that there need not be pessimism in approaching the study of the infertile male. Indeed, such an attitude is quickly sensed by the patient and may discourage his interest in pursuing a thorough investigation.

This article reflects the investigation and treatment of the infertile male as practiced at Baylor College of Medicine. Since several problems often coexist, both partners should be studied concurrently. In the fourth decade, 30% of couples can be helped; in the third decade, 50% can be helped. Considerable time in the overall investigation and therapy can be saved by attacking coexistent problems simultaneously. Relatively simple methods of improving the fertility potential of either or both partners may result in a pregnancy early in the investigation.

The frustrated maternal instinct is a strong motivation for the woman to seek help from her gynecologist. The man, however, often is reluctant to be studied. This is because many men associate infertility with incomplete masculinity. When the urologist first sees the patient for infertility evaluation, he should explain that the hormonal and reproductive functions of the testis are independent, and that although there may be a deficiency in the semen, this in no way implies a deficiency in male hormones or complete masculinity. Tact, assurance and optimism on the part of the urologist are unusually important in establishing a satisfactory professional relationship with the infertile male.

The Semen Analysis: When the patient first makes an appointment, he is asked to bring a semen specimen for analysis prior to the initial visit. The preferred method of collection is by masturbation. If a culture is desired, the penis should be thoroughly washed and a sterile receptacle utilized. The specimen should be brought to the laboratory preferably within one hour of its collection, and certainly no later than two hours. If travel considerations preclude prompt delivery, the specimen should be collected in the office. Patients who are unable to masturbate may collect a specimen by coitus interruptus. The Catholic patient, who may practice neither of these techniques, may use a Milex seminal pouch to collect the specimen. He may make a pinhole in the side of the pouch if required for purposes of personal conscience.

Two methods of collection are to be condemned. Condom collection is of no value, since materials used in the preparation of the condom have sperm-immobilizing properties that interfere with any evaluation of sperm motility. Johnson has recommended a "slide sandwich" technique where, after ejaculation, the last drop of semen is touched to the slide.[14] The slide is then brought to the laboratory. This is not an acceptable technique because it does not provide a true sample of the semen.[5] In the vast majority of males the ejaculate is not homogenous, and thus it is imperative that the entire specimen be collected. In 89% of males, the initial portion of the ejaculate contains a much greater concentration of sperm than does the terminal portion. In 5%, the portions are roughly equal, and in 6% there is a higher concentration of the sperm in the second portion. This is because ejaculation usually proceeds in a specific sequence. The initial contribution is a small volume from Cowper's glands. Prostatic fluid is then released, followed by sperm from the ampullary portion of the vas deferens. Finally, there is a large volume from the seminal vesicles.

Liquid semen ordinarily coagulates immediately after ejaculation and then reliquifies within 5 to 20 minutes. Failure of coagulation is often associated with congenital bilateral absence of the vas deferens and seminal vesicles.[4] However, this determination can be made only if the semen is examined within a minute or two of collection, and this is rarely possible. The normal semen is viscous, but can be poured drop by drop. High viscosity may preclude an accurate sperm count. When accompanied by sluggish motility, high viscosity may be a significant cause of infertility. The color of semen is grayish white. The average volume is 2 to 4 cc. The usual pH is 7.0 to 7.4. Minor variations in pH are of no consequence.

A drop of semen is examined on a glass slide with a coverslip under high dry magnification. An estimate is made of the density of the sperm, and motility and morphology are evaluated. In most fertile men, at least 40 to 60% of the sperm show purposeful forward motility.[17] It is emphasized that the quality of the motility is equally important as the number of

motile cells. Since seminal fluid is not a physiologic medium for sperm, repeat evaluation of motility in the same specimen as time progresses has no correlation in vivo.[21] Normal forms should constitute 60 to 80% of the sperm seen.[18] Although a stained smear of the sediment is helpful, a good differential can be done by an experienced examiner using the wet mount. In addition, leukocytes are noted, as are immature forms. The distinction between these two types of cells is not always simple, but with some experience, or with a stained preparation, it can be made readily. White blood cells may represent infection in the genital tract. In the absence of mature spermatozoa on a centrifuged, reexamined specimen, the presence of immature cell forms rules out the possibility of bilateral mechanical obstruction.

The sperm count is performed by dilution technique, as in a blood count. The majority of fertile men will have at least 20 to 40 million sperm per cc with a total of about 100 million per ejaculate.[17] Average values are higher than this. In deciding whether a semen specimen is of adequate quality, one must consider all parameters. For example, a count of 100 million sperm per cc with 3 or 4 cc in the ejaculate and no motility will almost certainly preclude conception.

In doing the count on a viscous specimen, sampling errors of tenfold magnitude may be introduced. It is important to reduce the viscosity. Two techniques are useful. The semen may be passed by syringe through an 18 or 19 gauge needle[3] until lysis occurs. Another technique is to mix the semen with Alevaire in a 1:1 solution and then multiply the final sperm count by two.[2]

In cases of azoospermia, we do a qualitative test for fructose. This is a simple reduction reaction, utilizing resorcinol and hydrochloric acid. An orange color signifies the presence of fructose. The absence of fructose is diagnostic of congenital absence of the vas deferens and seminal vesicles.[4] When this is determined, no further work-up is indicated, since this is an uncorrectable condition.

Occasionally, spontaneous head-to-head, tail-to-tail, or head-to-tail sperm agglutination may be noted. This is sometimes seen with *Escherichia coli* infection of the genital tract,[28] and in some patients who have serum antibodies which agglutinate sperm.[25] In our laboratory, we routinely incubate the serum of both the patient and his wife with his sperm.[7] If his semen is unsatisfactory, homologous sperm is used. Immobilization or agglutination is evidence of circulating antibodies of the sperm-agglutinating type. These antibodies appear to be species-specific only.

Workers in our institution have noted this phenomenon in 22% of known infertile men, many of whom have had known genital tract infections.[24] In six patients, the circulating antibodies disappeared after the infection was eradicated. Conception occurred in half of these cases. In 53 cases in which the male partner had persistent antibodies, only one conception occurred.

In some infertile couples where other causes for infertility cannot be demonstrated, sperm agglutination occurs when semen is exposed to the wife's serum.[7] This agglutination is due to an antigen-antibody reaction. In some cases, the antibody titer drops when the woman is no longer exposed to sperm. Pregnancy occurs in 60% of cases where the antibody titer drops significantly.[8]

It is often useful to determine the motility of sperm in the wife's cervical mucus. This can be carried out by in vivo examination of the cervical mucus within several hours of coitus, or by in vitro mixing of a specimen of cervical mucus with the husband's sperm.[8] Hostile cervical mucus may be indicated by diminished or absent sperm motility.

The History: At the time of the initial visit, a complete history is taken. We initiate the history with a questionnaire in order to avoid important omissions. The physician should be aware that febrile illness,[20] emotional shock, viral hepatitis, or infectious mononucleosis may reduce the sperm count for months. Elevated scrotal temperature secondary to hot baths, occupational exposure, or tight-fitting underclothing may cause reversible spermatogenic arrest at the secondary spermatocyte level. A careful urologic history must be obtained. Inflammatory disease of the epididymis and vas deferens can cause bilateral obstruction. There is also evidence that obstructing inflammatory disease may cause autoimmunization with production of sperm agglutinating antibodies.[25] Particular attention is paid to symptoms which might suggest an endocrine disorder. Recent severe allergic reactions may be factors. Excessive alcohol intake can produce liver damage and secondary hyperestrinism with suppression

of spermatogenesis. Is the diet adequate? Does the patient get enough rest and exercise? Particularly important are medications which the patient takes. Have there been any antihypertensive drugs prescribed, or does he take hormones such as thyroid or testosterone? Has he had any surgical procedures which might have damaged the vas deferens? Did he have an undescended testicle?

A good history of marital and sexual adjustment must be obtained. Faulty sexual technique may account for as much as 10% of the problems encountered. These only require explanation. Is coitus practiced frequently enough for there to be a reasonable possibility of impregnation? It has been shown that continence of ten days can lead to impairment of motility.[19] Although daily ejaculation may have no significant effect on the sperm count of the fertile male, frequent coitus may reduce the sperm count in the patient who does not have high sperm production. If the count is borderline, it may be preferable to recommend coitus on alternate days during the period of maximum fertility.

The patient who produces no semen with orgasm may have retrograde ejaculation. This can be caused by surgical ablation of the bladder neck. It may also follow surgical or medical sympathectomy, as in patients receiving guanethidine[26] or having had abdominal perineal resections. This is also seen in some diabetics.[9] Impotence, an obvious cause of infertility, is seen occasionally. This is often of psychogenic origin, and although many patients can be treated by encouragement, education or superficial psychiatric support, some patients will require deep psychotherapy. Several antihypertensive drugs may produce impotence in some men.[26]

The Physical Examination: A complete physical examination is done. The patient should be fully disrobed so that possible endocrine stigmata can be appreciated more readily. The thyroid is examined. Particular attention is paid to the testicles—their location, consistency, and size. Any nodularity or swelling in the vas deferens could represent obstruction. Chronic epididymitis has the same significance. The vas deferens should be palpated carefully on each side. Varicocele is more apparent when the patient remains in an erect position for several minutes before being examined, or when the Valsalva maneuver is performed. The significance of this finding will be mentioned later.

The urethral meatus should be of adequate size. Penile malformations which could preclude successful intromission with intravaginal ejaculation, such as chordee or hypospadias, are noted. The prostate and seminal vesicles are examined. Rarely, prostatitis may cause temporary impotence. Occasionally it may be associated with sperm agglutinating antibodies and, as noted, *E coli* infection in the ejaculate may cause sperm agglutination. Prostatitis ordinarily has little effect on fertility. In treating prostatitis, it should be noted that nitrofurantoin has been reported to cause reversible damage to the seminiferous tubules in some patients.[23]

Endocrine Evaluation: If the history and physical examination do not reveal the cause of infertility, or if an endocrine etiology is suggested, the investigation should proceed in that direction. Initially, we measure thyroid function by any appropriate test. It should be stressed that there is no evidence that giving thyroid or related drugs to the euthyroid patient will improve semen quality. The hyperthyroid patient as well as the hypothyroid patient may have poor semen quality which will improve with restoration of the euthyroid state.

When the patient is euthyroid, adrenal cortical function is evaluated. Since gonadotropin is necessary for spermatogenesis, any adrenal cortical abnormalities which will inhibit pituitary gonadotropin release can cause oligospermia or azoospermia. This is the same mechanism by which exogenous estrogen or testosterone reduces the sperm count.[10] The adrenogenital syndrome is not always clinically apparent in the adult male. In this situation, failure of hydroxylation of 17-hydroxyprogesterone to compound S in the zona fasciculata leads to inadequate formation of hydrocortisone. This elicits outpouring of ACTH, which is ineffective in increasing the amount of hydrocortisone produced, but which has the effect of stimulating the zona reticularis to increased production of 17-ketosteroids. These sex steroids, in turn, inhibit the pituitary formation of gonadotropin and thereby cause decreased spermatogenesis. The diagnosis is suggested by elevated urinary 17-ketosteroids and increased levels of pregnanetriol in the urine. This syndrome can be treated by administering exogenous glucocorticoids.

Low levels of 17-ketosteroids with normal follicle-stimulating hormone (FSH) values, if associated with a biopsy suggesting the possibility of improvement, may respond either to gona-

dotropin therapy or to primary testosterone administration. The latter approach requires cautious use of a slowly released testosterone, to avoid secondary suppression of endogenous gonadotropin production.[1]

When the 17-ketosteroid value is normal, urinary gonadotropin is assayed. An elevated FSH level suggests primary testicular failure. A low FSH level with a biopsy showing reasonably normal architecture warrants a trial of gonadotropic therapy. Equine pituitary gonadotropin is of limited value because of its immunogenic properties and its reduced specificity. It has been used with some success in conjunction with human chorionic gonadotropin.[1]

Testicular Biopsy: The patient whose oligospermia or azoospermia is otherwise unexplained is a candidate for testicular biopsy. This should be done in the hospital and either local or general anesthesia may be used. Extreme gentleness is required in handling the tissue because of the great susceptibility of the seminiferous tubules to artifact. Bouin's fluid is preferable to harsh fixatives such as formaldehyde. Several patterns may be seen. Patients with azoospermia and bilateral obstruction may have normal testicles. This would be an indication for vasography and scrotal exploration to reestablish patency. With spermatogenic maturation arrest, few cells beyond the primary spermatocyte level are seen. Peritubular fibrosis is an entity of unknown etiology, with progressive atrophy and hyalinization of the tubules. One may see germinal cell aplasia or hypoplasia. In this setting, it is striking that the tubules contain only Sertoli's cells. Prognosis here is poor.

Tubular dysgenesis is the finding in Klinefelter's syndrome.

Chromatin Studies: In the azoospermic patient, the buccal epithelial cells or peripheral white blood cells may show a nuclear chromatin pattern suggesting a genetic chromosomal aberration.[27] Of patients with Klinefelter's syndrome, 75% have a positive chromatin pattern.[1] Sophisticated chromosome studies are not required ordinarily, and at this time they are primarily of research interest.

Therapeutic Considerations: Initially, it must be appreciated that it requires 74 days for the type A spermatocyte to evolve into a mature spermatozoon.[11] Subsequently, there is approximately a three-week transit time from the testis to the ejaculatory ducts. Therefore, after the underlying cause of hypospermia is modified it might take three months before improvement will be visible in the ejaculate.

General measures include the eradication or control of constitutional diseases. Correction of specific endocrine disorders has been discussed.

Direct artificial insemination, using the husband as the donor, is helpful in several conditions. This can overcome the problem of a small semen volume. The split ejaculate may reveal which portion is more suitable for insemination. The patient with a highly viscous semen may be found, upon split ejaculate, to have a much less viscous first portion. Severe problems with viscosity can be overcome by passage through a needle or by admixing with Alevaire prior to insemination. Material for insemination may be obtained from the impotent patient through masturbation or electroejaculation. In the patient with retrograde ejaculation, viable sperm have been recovered by bladder catheterization.[12] Specimens thus collected have been used successfully in artificial insemination.

A precoital douche with 60 cc of Alevaire has allowed conception in a few cases of increased viscosity.[1]

With a high semen volume and a better initial fraction, withdrawal after the beginning of ejaculation sometimes has been successful. This method of coitus is employed only during the fertile portion of the cycle.[1]

Varicocele as a cause of infertility is producing great interest among workers in the field. The characteristic pattern of male infertility associated with varicocele consists of oligospermia, with poor motility and a high percentage of abnormal forms. Tapering forms and sperm precursors are prominent.[22] The mechanism of varicocele effect has not been established. It is known that there is sufficient collateralization so that injection of an incompetent left internal spermatic vein will opacify the right and left pampiniform plexuses. There is some evidence that failure of heat exchange occurs and leads to elevated testicular temperatures. Other workers believe that there is retrograde flow of blood from the left adrenal vein across the renal vein and down the left internal spermatic vein. Surgical interruption of the left internal spermatic vein above the internal inguinal ring will allow a pregnancy to ensue after 9 to 12 months in up to 41% of carefully selected cases.[22] Pregnancy may result despite a persistently low sperm count and abnormal morphology, but

motility usually will have been improved.

Titers of sperm-agglutinating antibody may fall in the female after several months of sperm avoidance. Except for the treatment of infection, no specific measures to eradicate antibodies in the male have been found.

In the patient with surgical or inflammatory obstruction of the vas deferens, vasovasostomy may be performed by any of the standard techniques.[13] Sperm will appear in the ejaculate in 45% of cases. There are no adequate studies of the pregnancy rate following vasovasostomy. When there is obstruction in the tail of the epididymis or in the very proximal vas deferens, vasoepididymostomy may be performed.[13] Twenty-five percent of these patients will have sperm in the ejaculate.

Sperm do not normally agglutinate because the semen contains an antiagglutinin. This substance is active only in the chemically reduced state. Ascorbic acid, a reducing agent normally present in the semen, has been administered with some success to patients with spontaneous agglutination.

A short course of testosterone will suppress spermatogenesis by inhibiting gonadotropin secretion. In some cases, when the testosterone administration is stopped, there is a rebound release of gonadotropin.[7] This may cause a sustained rise in sperm count. However, in some patients permanent azoospermia has resulted.

There is no evidence that giving thyroid medication to the euthyroid patient is of any benefit.

Clomiphene citrate has been used to increase pituitary gonadotropin;[15] we have not found it to be particularly effective in improving semen quality. Jeffries has noted that empiric administration of 10 mg a day of cortisone acetate to oligospermic men will, in some cases, produce significant improvement. The mechanism of action has not been determined. Some recent work suggests that a combination of progestational agents and androgens may be effective, but this has not yet been evaluated sufficiently.

REFERENCES

1. Amelar MD: Infertility in Men. Philadelphia, F A Davis Company, 1966.

2. Amelar RD: Use of a mucolytic detergent in routine study of sperm morphology. Fertil Steril 7:346-348, 1956.

3. Amelar RD: Coagulation, liquefaction and viscosity of human semen. J Urol 87:187-190, 1962.

4. Amelar RD, Hotchkiss RS: Congenital aplasia of the epididymides and vasa deferentia: Effects on semen. Fertil Steril 14:44-48, 1963.

5. Amelar RD, Hotchkiss RS: The split ejaculate; its use in the management of male infertility. Fertil Steril 16:46-60, 1965.

6. Charny CW: The use of androgens for human spermatogenesis. Fertil Steril 10:557-570, 1959.

7. Franklin RR, Dukes CD: Antispermatozoal antibody and unexplained infertility. Amer J Obstet Gynec 89:6-9, 1964.

8. Franklin RR, Malinak LR, Dukes CD: The infertile man. Human Sexuality 1:49, 1967.

9. Greene LF, Kelalis PP, Weeks RE: Retrograde ejaculation of semen due to diabetic neuropathy. Fertil Steril 14:617-625, 1963.

10. Heckel NJ, Rosso WA, Kestel L: Spermatogenic rebound phenomenon after testosterone therapy. J Clin Endocr 11: 235-245, 1951.

11. Heller CG, Clermont Y: Spermatogenesis in man: an estimate of its duration (abstr). Science 140:184-185, 1963.

12. Hotchkiss RS, Pinto AB, Kleegman S: Artificial insemination with semen recovered from bladder. Fertil Steril 6: 37-42, 1955.

13. Hotchkiss RS: "Infertility in the Male," in: Campbell, MF, Ed: Urology, ed 2, Philadelphia, WB Saunders Company, 1963, p. 675.

14. Johnson TH: A simple technique for direct semen examination. J Urol 89:262-263, 1963.

15. Jungck EC, Roy S, Greenblatt RB, et al: Effect of clomiphene citrate on spermatogenesis in the human: Preliminary report. Fertil Steril 15:40-43, 1964.

16. Kupperman HS, Epstein JA: Endocrine therapy of sterility. Amer Practit 9:547-563, 1958.

17. MacLeod J: The male factor in fertility and infertility; An analysis of ejaculate volume in 800 fertile men and in 600 men in infertile marriage. Fertil Steril 1:347-361, 1950.

18. MacLeod J, Gold RZ: The male factor in fertility and infertility. IV. Sperm morphology in fertile and infertile marriage. Fertil Steril 2:394-414, 1951.

19. MacLeod J, Gold RZ: The male factor in fertility and infertility. V. Effect of continence on semen quality. Fertil Steril 3:297-315, 1952.

20. MacLeod J, Hotchkiss RS: Effect of hyperpyrexia upon spermatozoa counts in men. Endocrinology 28:780-784, 1961.

21. MacLeod J: The semen examination. Clin Obstet Gynec 8:115-127, 1965.

22. MacLeod J: Further observations on the role of varicocele in human male infertility. Fertil Steril 20:545-563, 1969.

23. Nelson WO, Bunge RG: The effect of therapeutic dosages of nitrofurantoin (Furadantin) upon spermatogenesis in man. J Urol 77:275-281, 1957.

24. Quesada EM, Dukes CD, Deen GH, et al: Genital infection and sperm agglutinating antibodies in infertile men. J Urol 99:106-108, 1968.

25. Rumke P, Hellinga G: Autoantibodies against spermatozoa in sterile men. Amer J Clin Path 32:357-363, 1959.

26. Schirger A, Gifford RW, Jr: Guanethidine, a new antihypertensive agent: experience in the treatment of 36 patients with severe hypertension. Proc Staff Meet Mayo Clin 37:100-108, 1962.

27. Sohval AR: Sex chromatin, chromosomes, and male infertility. Fertil Steril 14:180-207, 1963.

28. Wilson L: Sperm agglutination due to autoantibodies. A new cause of sterility. Fertil Steril 7:262-267, 1956.

Dr. Gordon, Division of Urology; Dr. Malinak, Department of Obstetrics and Gynecology, Baylor College of Medicine, Texas Medical Center, Houston, Tex 77025.

Dr. Franklin, 1009 Medical Towers, Houston, Tex 77025.

Some of the investigations reported herein were supported in part by Rockefeller Foundation Grant No 67050 and Baylor College of Medicine General Research Support Grant P-69-1.

From the Roy and Lillie Cullen Department of Urologic Research, J Sayles Leach Laboratory, Division of Urology and the Department of Obstetrics and Gynecology, Baylor College of Medicine, Houston.

Make your plans
now to attend the

Texas Medical Association

Conference on Public Affairs and Public Relations

September 19, 1970
Austin

WICHITA FALLS CLINIC-HOSPITAL

GENERAL SURGERY
W. E. Crump, M.D., F.A.C.S.
James T. Lee, M.D.
Charles H. Wilson, M.D., F.A.C.S.

ORTHOPEDIC SURGERY
Jack E. Maxfield, M.D., F.A.C.S.
Clyde W. Parsons, M.D.
Mark E. Huff, Jr., M.D.

ORAL SURGERY
R. A. Mitchell, D.D.S.
Larry J. Cason, D.D.S.

RADIOACTIVE ISOTOPES
Claude D. Wilson, M.D., D.A.B.R.
Joe D. Steed, M.D., D.A.B.R.
Julian H. Acker, M.D.
David D. Salmon, M.D., D.A.B.R.

PEDIATRICS
George W. Slaughter, III, M.D., F.A.A.P.
Joseph Bilder, Jr., M.D.

LABORATORIES
Claude D. Wilson, M.D., D.A.B.R., Radiology
Joe D. Steed, M.D., D.A.B.R., Radiology
David D. Salmon, M.D., D.A.B.R., Radiology

MEDICINE
W. B. Whiting, M.D., Cardiology
R. F. Knox, M.D., Endocrinology
P. K. Smith, M.D., F.A.C.P., Diagnosis & Internal Medicine
I. L. Humphrey, Jr., M.D., Diagnosis & Internal Medicine
Julian H. Acker, M.D., Diagnosis & Internal Medicine
Preston McCall, M.D., Diagnosis & Internal Medicine
Julian C. Sleeper, M.D., Cardiology
Eugene Jackson, M.D., Diagnosis & Internal Medicine

GENERAL PRACTICE
J. B. Hathorn, Jr., M.D.
Melvin Horany, M.D.
John E. Worthen, Jr., M.D.

UROLOGY
Owen C. Berg, M.D., F.A.C.S.

OBSTETRICS AND GYNECOLOGY
W. L. Parker, M.D., F.A.C.S.
Warren T. Kable, M.D.
Frank J. Lee, M.D.

ADMINISTRATIVE OFFICER
Bertha McNeill, Administrator
Jesse E. Dobbs, Jr., Asst. Administrator

Brief Summary of Prescribing Information– 9-9/22/69. For complete information consult Official Package Circular.
Indications: Essential hypertension. Use cautiously in patients with renal insufficiency, particularly if they are digitalized.
Contraindications: Anuria, oliguria, active peptic ulceration, ulcerative colitis, severe depression or hypersensitivity to its components contraindicates the use of Salutensin.
Warnings: Small-bowel lesions (obstruction, hemorrhage, perforation and death) have occurred during therapy with enteric-coated formulations containing potassium, with or without thiazides. Such potassium formulations should be used with Salutensin only when indicated and should be discontinued immediately if abdominal pain, distension, nausea, vomiting or gastrointestinal bleeding occurs. Use cautiously, and only when deemed essential, in fertile, pregnant or lactating patients. *Use in Pregnancy:* Thiazides cross the placenta and can cause fetal or neonatal hyperbilirubinemia, thrombocytopenia, altered carbohydrate metabolism and possibly electrolyte disturbances. Fatal reactions may occur with reserpine during electroshock therapy; discontinue Salutensin 2 weeks before such therapy. Increased respiratory secretions, nasal congestion, cyanosis and anorexia may occur in infants born to reserpine-treated mothers.
Precautions: Azotemia, hypochloremia, hyponatremia, hypochloremic alkalosis and hypokaliemia (especially with hepatic cirrhosis and corticosteroid therapy) may occur, particularly with pre-existing vomiting and diarrhea. Potassium loss or protoveratrine A may cause digitalis intoxication. *Potassium loss responds to potassium-rich foods, potassium chloride or, if necessary, discontinuation of therapy. Stop therapy if protoveratrine A induces digitalis intoxication.* Serum ammonia elevation may precipitate coma in precomatose hepatic cirrhotics. Discontinue therapy 2 weeks before surgery or if myocardial irritability, progressive azotemia or severe depression occur. Exercise caution in patients with chronic uremia, angina pectoris, coronary thrombosis or extensive cerebral vascular disease *or bronchial asthma* and in those with a history of peptic ulceration or bronchial asthma; in post-sympathectomy patients; in patients on quinidine; and in patients with gallstones, in whom biliary colic may occur. Patients who have diabetes mellitus or who are suspected of being prediabetic should be kept under close observation if treated with this agent.
Adverse Reactions: Hydroflumethiazide: Skin rashes (including exfoliative dermatitis), skin photosensitivity, urticaria, necrotizing angiitis, xanthopsia, granulocytopenia, aplastic anemia, orthostatic hypotension (potentiated with alcohol, barbiturates or narcotics), allergic glomerulonephritis, acute pancreatitis, liver involvement (intrahepatic cholestatic jaundice), purpura plus or minus thrombocytopenia, hyperuricemia, hyperglycemia, glycosuria, malaise, weakness, dizziness, fatigue, paresthesias, muscle cramps, skin rash, epigastric distress, vomiting, diarrhea and constipation. *Reserpine:* Depression, peptic ulceration, diarrhea, Parkinsonism, nasal stuffiness, dryness of the mouth, weight gain, impotence or decreased libido, conjunctival injection, dull sensorium, deafness, glaucoma, uveitis, optic atrophy, and, with overdosage, agitation, insomnia and nightmares. *Protoveratrine A:* Nausea, vomiting, cardiac arrhythmia, prostration, blurring vision, mental confusion, excessive hypotension and bradycardia. (Treat bradycardia with atropine and hypotension with vasopressors.)
Usual Dose: 1 tablet b.i.d.
Supplied: Bottles of 60, 600, and 1000 scored 50 mg. tablets.

Salutensin®
hydroflumethiazide, 50 mg./reserpine, 0.125 mg. protoveratrine A, 0.2 mg.

BRISTOL
BRISTOL LABORATORIES
Division of Bristol-Myers Company
Syracuse, New York 13201

The antihypertensive therapy that is easy to live with.*

When successive blood pressure readings confirm essential hypertension, consider Salutensin for:

Easy-to-live-with control. Gradual reduction of blood pressure leading to decisive, comfortable control is the common clinical response.

*Salutensin is usually well-tolerated (however, serious side effects can occur; see adjacent column for brief summary of prescribing information).

Easy-to-live with dosage. Two tablets a day usually achieves control. One to two tablets a day often maintains control without need for additional antihypertensive agents.

Easy-to-live with cost of therapy. The one to two tablets a day maintenance dose makes Salutensin economical to stay with. Important, because long-term control calls for long-term therapy.

Salutensin®

hydroflumethiazide, 50 mg./reserpine, 0.125 mg. protoveratrine A, 0.2 mg.

PERINEAL NEUROFIBROMA

A large, perineal neurofibroma arising from the left pudendal nerve caused symptoms of urinary tract obstruction in a 42-year-old man. Its removal was followed by complete return of function.

NEUROFIBROMAS ARE BENIGN tumors derived from the neural crest. They are classified among those tumors arising from the neural sheath.[1] These tumors may be solitary or multiple. Multiple distal nerve tumors with associated skin manifestations constitute a syndrome, described by von Recklinghausen in 1882, which is considered a maldevelopment of the entire nervous system. Solitary tumors are less likely to become malignant than the multiple type. This may represent only the factor of exposure.

Neurofibromatosis is known to cause symptoms of urinary tract disorders. In 1936 McDonnell reported a man with von Recklinghausen syndrome who developed acute urinary retention after frequency and nocturia of several years' duration. Postmortem examination revealed extensive circoid neurofibromatosis infiltration in and about the prostate, prostatic urethra, bladder, seminal vesicles, and penis.[2] In 1940 a similar case was reported with nocturia, frequency, and weakness of urinary stream. This patient was found to have neurofibroma arising from the plexus of nerves which supply the posterior surface of the bladder near the prostatic junction.[3] Partial obstruction of the bladder neck in a 4½-month-old boy was reported in 1963.[4] The obstruction was caused by neurofibromatosis involving the bladder, ureter and prostate.

Macroscopically, neurofibromatosis of the bladder usually involves and is localized primarily around the trigonal area.[5] The perineum and external genitalia may be involved,[7] and it may infiltrate the entire bladder wall.[6]

De Klerk and Campbell stressed that all patients with cutaneous neurofibromatosis should have a complete urological work-up because of the frequency of bladder involvement even without urinary symptoms.[8]

The following case is that of a solitary pelvic neurofibroma apparently arising from the left pudendal nerve. Because of its size, this tumor caused mild symptoms of obstruction.

Case Report: A 42-year-old white man entered the hospital because a perineal mass had been present for more than one year. He also complained of difficulty in starting urination during the previous three months. Occasionally, he had to sit down and strain to urinate, although he observed that once the stream started it was

Fig 1. Photograph of the perineal mass.

Fig 2. Voiding cystourethrogram shows elevation of the base of the bladder.

Fig 3. The perineal mass has been partially dissected.

An unusual cause of urinary tract obstruction

ACE GIBSON POWERS, MD

of normal size. He denied frequency, nocturia, dysuria, hematuria, or urinary retention. This perineal mass was not painful, but the patient had been unable to have complete penile erections during the previous month and he had to sit forward on hard seats because of pressure on the mass (Fig 1). His bowel habits had not changed.

He gave no history of prior urinary tract disease or symptoms. He had received medical treatment for one year for duodenal peptic ulcer, and had a history of moderate alcoholism. There was no family history of skin disease or tumors.

The pertinent physical findings were limited to the perineal and rectal area. Bulging from the perineum was a smooth, firm, nontender, fleshy mass which elevated the scrotum and its contents. This 12 x 16 cm mass was anterior to the anus and was more prominent slightly to the left of the midline. The skin over the mass was freely movable.

The anal sphincter tone was normal. The perineal mass extended superiorly and deformed, but did not adhere to, the anterior rectal wall. The mass apparently was attached to the apical area of the prostate, and encroached on the prostatic urethra.

Urinalysis showed no abnormalities and a urine culture was negative. The blood count and chemistry values were within normal limits.

Bladder capacity was 400 cc Cystokon by gravity flow. A choke voiding cystourethrogram in the left oblique position showed slight flattening and possible elevation of the base of the bladder (Fig 2). There was questionable narrowing in the area of the prostatic urethra.

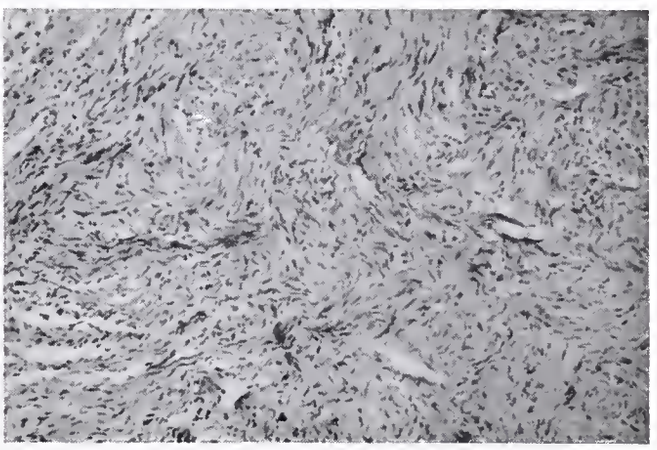
On cystoscopic examination the pendulous and bulbous urethra were within normal limits. The prostatic urethra was 3 cm in length. There was early lateral lobe hypertrophy. The bulbous urethra was deviated to the right but the panendoscope passed without difficulty. The bladder was within normal limits except for some elevation of the trigone area.

Surgical exploration was done under low spinal anesthesia, and with the patient in exaggerated dorsal lithotomy position, an inverted V-type incision was made above the anus and medial to the ischial tuberosities. After dissection through the medial raphe the encapsulated mass was encountered. This mass caused the bulbocavernosus muscle and its contents to be deviated to the right (Fig 3). The mass arose from the pudendal nerve and vessels. Its pedicle was clamped and doubly ligated, and the entire mass was removed. The fossa was drained and the incision closed in layers. The postoperative course was uneventful.

The patient has been completely asympto-

Fig 4. The pedicle has been sectioned and the mass opened.

Fig 5. Photomicrograph of neurofibroma shows palisading and wavy neurites.



matic; he has been able to void without hesitation, and his sexual ability has been restored.

The pathologist's report was as follows: "Gross: The mass measures 24 x 6 x 6 cm and has the shape of a stomach. It has been previously incompletely hemisectioned (Figs 4, 5). A vascular pedicle is present on one pole of the mass. The surface has a glistening, thin capsule which is somewhat adherent to the underlying mass of tissue. The mass is hard and fibrotic. The cut surface is gray-white and glistening. It has somewhat irregular trabeculation throughout. Microscopic: Multiple sections of the mass show a pseudo-capsule of compressed fibers. The mass is composed of intralacing bands and strands of nerve fiber and collagen. There are a few areas of loose myxoid degeneration. There is no pleomorphism of the individual cells or other evidence of malignant change (Fig 4). Diagnosis: Neurofibroma."

REFERENCES

1. Grinker RR, Bucy PC, Saho AL: Neurology, ed 5, Philadelphia, Charles C Thomas, 1960.

2. McDonnell CH: Neurofibromatosis of bladder and prostate. Amer J Surg 34:90-93, 1936.

3. Thompson GJ, McDonald JR: Benign tumors of the urinary bladder; report of a case of neurofibroma. J Urol 43:831-835, 1940.

4. Gonzalez-Angulo A, Reyes HA: Neurofibromatosis involving the lower urinary tract. J Urol 89:804-811, 1963.

5. Burghele T, Ioachim H, Goldstein J: Recklinghausen's disease with urinary manifestations. Amer J Surg 97:108-112, 1959.

6. Russell JYW: Neurofibromatosis; a bizarre disease. Brit J Surg 52:251-262, 1965.

7. Labardini MM, Kallet HA, Cerny JC: Urogenital neurofibromatosis simulating an intersex problem. J Urol 98:627-632, 1967.

8. de Klerk JN, Campbell WA: Neurofibromatosis of the bladder. J Urol 72:1167-1173, 1954.

Dr. Powers, Suite 25, Medical Arts Square NE, Albuquerque, N M 87106.

IN ASTHMA
IN EMPHYSEMA

optional therapy

THE mudranes®

All Mudranes are bronchodilator-mucolytic in action, and are indicated for symptomatic relief of bronchial asthma, emphysema, bronchiectasis and chronic bronchitis. **MUDRANE tablets** contain 195 mg. potassium iodide; 130 mg. aminophylline; 21 mg. phenobarbital (Warning: may be habit-forming); 16 mg. ephedrine HCl. **Dosage** is one tablet with full glass of water, 3 or 4 times a day. **Precautions** are those for aminophylline-phenobarbital-ephedrine combinations. **Iodide side-effects:** May cause nausea. Very long use may cause goiter. Discontinue if symptoms of iodism develop. **Iodide contraindications:** Tuberculosis; pregnancy (to protect the fetus against possible depression of thyroid activity). **MUDRANE-2 tablets** contain 195 mg. potassium iodide; 130 mg. aminophylline. **Dosage** is one tablet with full glass of water, 3 or 4 times a day. **Precautions** are those for aminophylline. **Iodide side-effects and contraindications are listed above. MUDRANE GG tablets** contain 100 mg. glyceryl guaiacolate; 130 mg. aminophylline; 21 mg. phenobarbital (Warning: may be habit-forming); 16 mg. ephedrine HCl. **Dosage** is one tablet with full glass of water, 3 or 4 times a day. **Precautions** are those for aminophylline-phenobarbital-ephedrine combinations. **MUDRANE GG-2 tablets** contain 100 mg. glyceryl guaiacolate; 130 mg. aminophylline. **Dosage** is one tablet with full glass of water, 3 or 4 times a day. **Precautions:** Those for aminophylline. **MUDRANE GG Elixir.** Each teaspoonful (5 cc) contains 26 mg. glyceryl guaiacolate; 20 mg. theophylline; 5.4 mg. phenobarbital (Warning: may be habit-forming); 4 mg. ephedrine HCl. **Dosage:** Children, 1 cc for each 10 lbs. of body weight; one teaspoonful (5 cc) for a 50 lb. child. Dose may be repeated 3 or 4 times a day. Adult, one tablespoonful, 4 times daily. All doses should be followed with ½ to full glass of water. **Precautions:** See those listed above for Mudrane GG tablets.

MUDRANE—original formula
First choice

MUDRANE-2
When ephedrine is too exciting or is contraindicated

MUDRANE GG
During pregnancy or when K.I. is contraindicated or not tolerated

MUDRANE GG-2
A counterpart for Mudrane-2

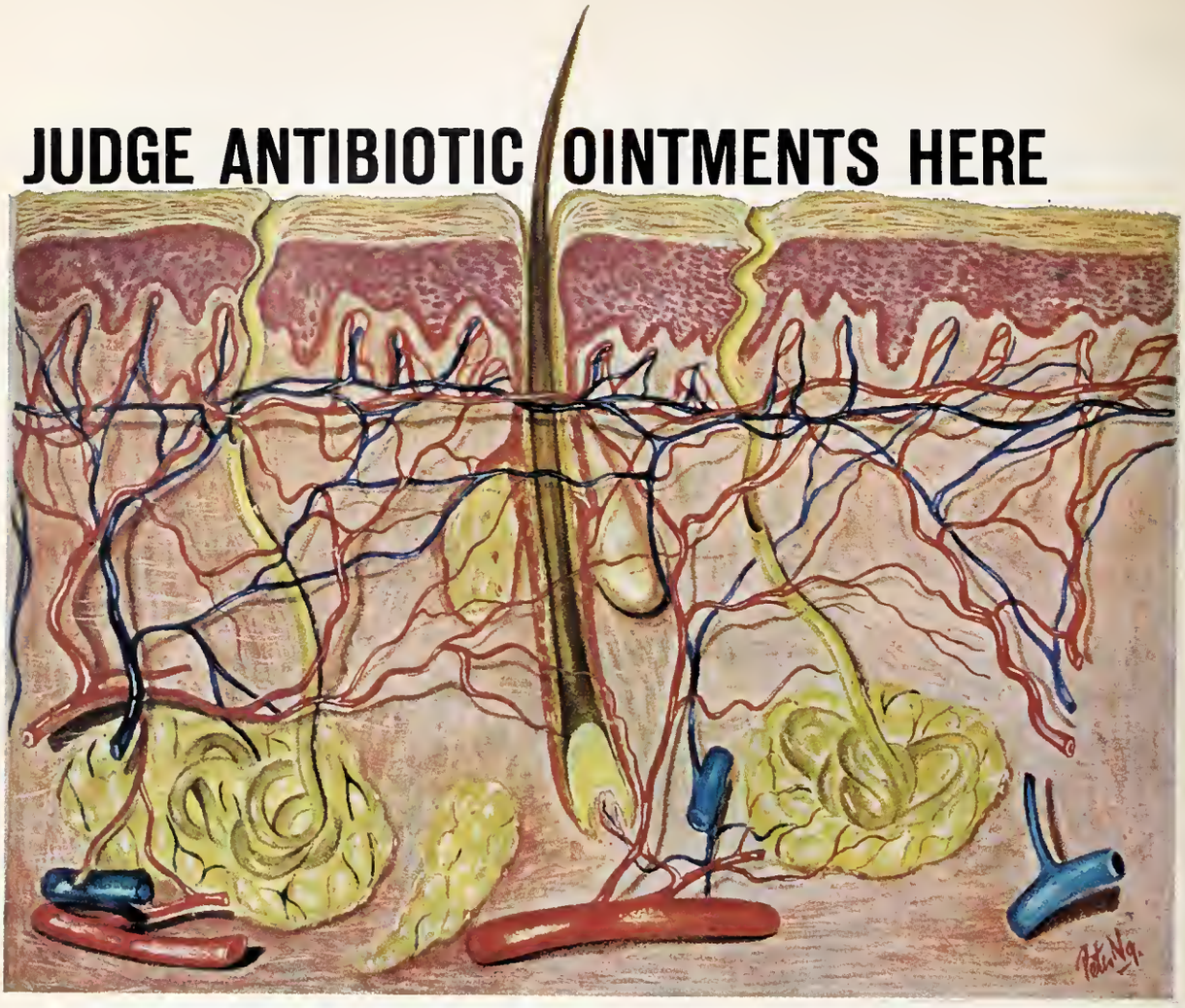
MUDRANE GG ELIXIR
For pediatric use or where liquids are preferred

Clinical specimens available to physicians.

WILLIAM P. POYTHRESS & COMPANY, INC., RICHMOND, VIRGINIA 23217

Manufacturers of Ethical Pharmaceuticals

JUDGE ANTIBIOTIC OINTMENTS HERE



Results on skin are final proof of any topical antibiotic's effectiveness

No in vitro test can duplicate a clinical situation on living skin. 'Neosporin' (polymyxin B—bacitracin—neomycin) Ointment has consistently proven its effectiveness in thousands of cases of bacterial skin infection. The spectra of the three antibiotics overlap in such a way as to provide bactericidal action against most pathogenic bacteria likely to be found topically. Diffusion of the antibiotics from the special petrolatum base is rapid since they are insoluble in the petrolatum, but readily soluble in tissue fluids. The Ointment is bland and nonirritating.

Caution: As with other antibiotic preparations, prolonged use may result in overgrowth of nonsusceptible organisms and/or fungi. Appropriate measures should be taken if this occurs. Articles in the current medical literature indicate an increase in the prevalence of persons allergic to neomycin. The possibility of such a reaction should be borne in mind.

Contraindications: This product is contraindicated in those individuals who have shown hypersensitivity to any of its components.

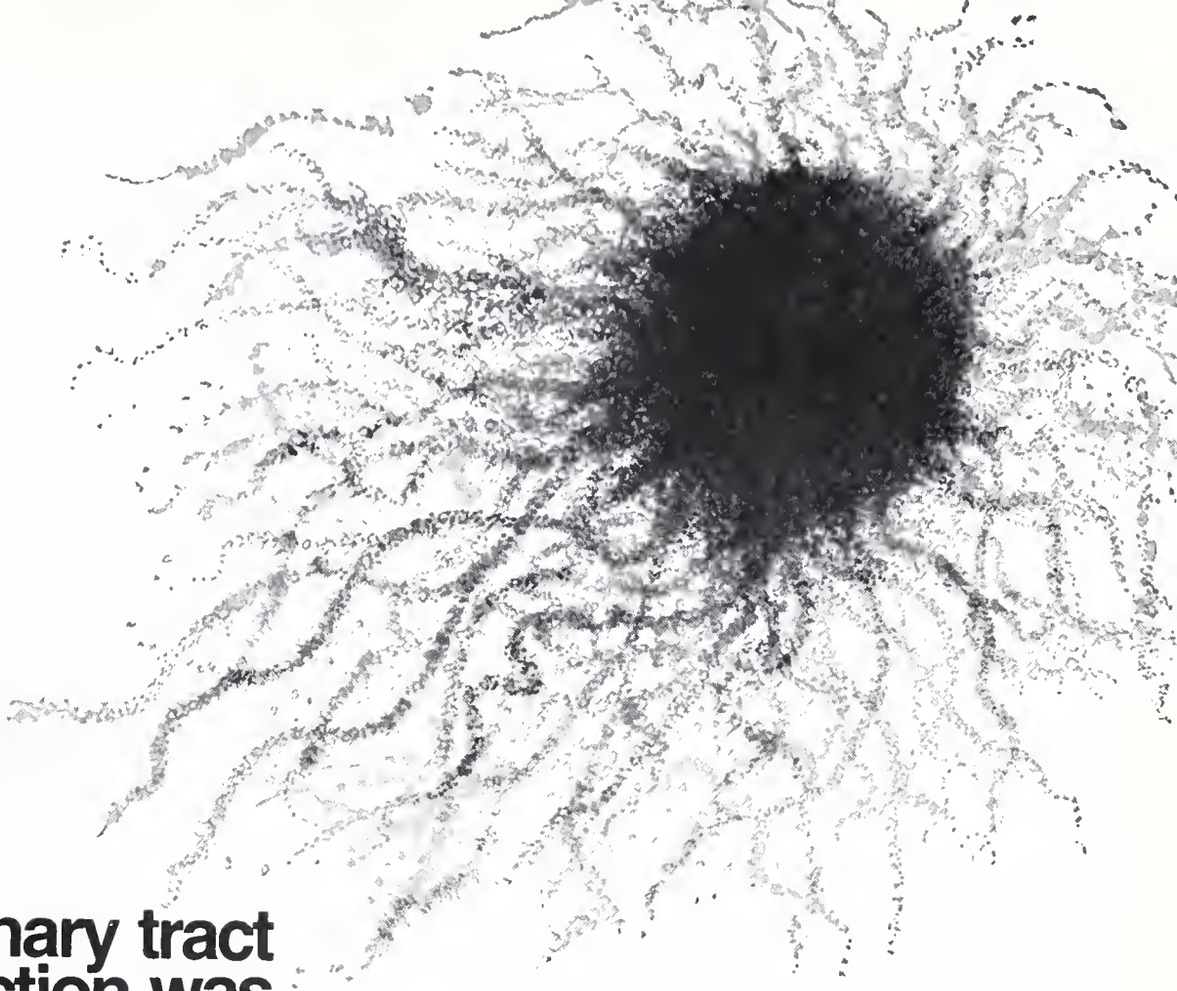
Supplied: Tubes of 1 oz., ½ oz. with applicator tip, and ⅛ oz. with ophthalmic tip.

Complete literature available on request from Professional Services Dept. PML.

'NEOSPORIN'®
brand

POLYMYXIN B-BACITRACIN-NEOMYCIN OINTMENT

BURROUGHS WELLCOME & CO. (U.S.A.) INC., Tuckahoe, N.Y.



A urinary tract infection was eliminated last week

Intestinal monilial overgrowth has appeared this week

For women who are diabetic or debilitated, oral antibiotic therapy often sets the stage for monilial overgrowth in the intestine.

When you anticipate such a problem, take action with DECLOSTATIN 300. It combines the broad-spectrum potency of demethylchlortetracycline with the antifungal effectiveness of nystatin—it helps avoid monilial take-over. Experience has shown DECLOSTATIN to be highly useful for many women patients; individual culture studies will show exactly where this usefulness may best be applied.

It doesn't let monilia begin where bacteria end. Declostatin® 300

Demethylchlortetracycline HCl 300 mg and
Nystatin 500,000 units Capsule-Shaped Tablets Lederle

Effectiveness: Because its antibacterial component is DECLOMYCIN® Demethylchlortetracycline, DECLOSTATIN should be equally or more effective therapeutically than other tetracyclines in infections caused by tetracycline-sensitive organisms. The antifungal component, nystatin, protects against superinfection by antibiotic-resistant fungal overgrowth (particularly monilia) in the intestinal tract.

Contraindication: History of hypersensitivity to demethylchlortetracycline or nystatin.

Warning: In renal impairment, usual doses may lead to excessive accumulation and liver toxicity. Under such conditions, lower than usual doses are indicated and, if therapy is prolonged, serum level determinations may be advisable. A photodynamic reaction to natural or artificial sunlight has been observed. Small amounts of drug and short exposure may produce an exaggerated sunburn reaction which may range from erythema to severe skin manifestations. In a smaller proportion, photoallergic reactions have been reported. Patients should avoid direct exposure to sunlight and discontinue drug at the first evidence of skin discomfort. Necessary subsequent courses of treatment with tetracyclines should be carefully observed.

Precautions: Overgrowth of nonsusceptible organisms may occur. Constant observation is essential. If new infections appear, appropriate measures should be taken. In infants, increased intracranial pressure with bulging fontanels has been observed. All signs and symptoms have disappeared rapidly upon cessation of treatment.

Side Effects: Gastrointestinal system—anorexia, nausea, vomiting, diarrhea, stomatitis, glossitis, enterocolitis, pruritus ani. Skin—maculopapular and erythematous rashes; a rare case of exfoliative dermatitis has been reported. Photosensitivity; onycholysis and discoloration of the nails (rare). Kidney—rise in BUN, apparently dose-related. Transient, reversible, nephrogenic diabetes insipidus with excessive thirst and polyuria (rare). Hypersensitivity reactions—urticaria, angioneurotic edema, anaphylaxis. Teeth—dental staining (yellow-brown) in children of mothers given this drug during the latter half of pregnancy, and in children given the drug during the neonatal period, infancy and early childhood. Enamel hypoplasia has been seen in a few children. If adverse reaction or idiosyncrasy occurs, discontinue medication and institute appropriate therapy. Demethylchlortetracycline may form a stable calcium complex in any bone-forming tissue with no serious harmful effects reported thus far in humans.

Average Adult Daily Dosage: One tablet b.i.d. Should be given 1 hour before or 2 hours after meals, since absorption is impaired by the concomitant administration of high calcium content drugs, foods and some dairy products. Treatment of streptococcal infections should continue for 10 days, even though symptoms have subsided.

Lederle LEDERLE LABORATORIES, A Division of American Cyanamid Company, Pearl River, New York

450-9

NONSUTURE REPAIR OF PELVIC FISTULAE

VESICOCOLONIC FISTULA was described as early as the second century, but a complete description was not given until 1888 by Cripps in England. The vesicovaginal fistula was first characterized by Avicenna (980-1037 AD), and reference to this lesion can be found in the writings of ancient Hindu medicine between 800 and 600 BC. For example, the "Vedas" states, "Care must be taken not to thrust the knife too far forward as it will wound the uterus and the urine will pass through the vagina forming a fistula." Falk,[1] in his chapter on prevention of pregnancy, states that the bulk of the fetus may cause a tear in the bladder which results in incontinence of urine.

The use of hysterectomy and other gynecological procedures for treatment of patients with several types of ailments results in increased frequency of vesicovaginal fistulae. Colonic resection may cause a fistula between the colon and urinary bladder, or colon and vagina. Prostatectomy and other pelvic operations also should be considered in the etiology of a fistula. Neoplastic disease of the rectosigmoid colon or of urinary bladder and intestines may result in fistula formation. Irradiation therapy for cervical carcinoma often has resulted in fistulae; vesicovaginal or rectovaginal fistulae develop in about 10% of patients who undergo radiotherapy.[2]

Although many types of surgical procedures have been devised for the repair of vesicovaginal,[3] vesicocolonic,[4] and rectovaginal[5] fistulae, the incidence of failure of repair is high. Reported cases giving good results usually are from selected groups of patients; also, poor results often are not reported. Repair has been most difficult in patients who have received irradiation because the tissue is friable and fails to hold the suture.

The use of a plastic adhesive (methyl 2-cyanoacrylate monomer)* in the repair of different types of body tissue has been reported previously.[6] The procedure includes linear and circumferential repair of blood vessels,[7] intestinal anastomosis,[8] and bronchial closure.[9] End-to-side small-vessel repair using a plastic adhesive also was described.[10] Generally, good results were obtained in most of these studies.

In this study, the use of plastic adhesive in the repair of vesicovaginal, vesicocolonic and rectovaginal fistulae is described. Also, an attempt to utilize a plastic adhesive to reinforce the suture line of the fistula closure is described; fewer sutures were used, and the closure was reinforced with the adhesive. The results of these procedures are compared with those in a control group in which accepted suture techniques were used (Table 1).

Materials and Methods: Normal mongrel female dogs weighing from 10 to 15 kg were used. Each animal was given an enema the morning of operation and an injection of 400,000 units of penicillin just before the operation. Anesthesia was induced with intravenous sodium pentothal (20 mg/kg) and was maintained with supplemental ether inhalation through an inserted endotracheal tube.

Three experimental and two control groups were studied. A low midline abdominal incision was made, and a vesicocolonic, vesicovaginal, or rectovaginal fistula measuring 3 to 4 cm in diameter was created, depending upon the

*Supplied by Ethicon, Inc, Somerville, N J.

AN EXPERIMENTAL STUDY

Plastic adhesive has been used successfully as an adjunct to treatment of pelvic fistulae. Experimental and clinical reports are presented and methods discussed.

KAMAL S. SHEENA, MD
JOHN E. HEALEY, JR, MD
H. STEPHEN GALLAGER, MD
CHARLES M. McBRIDE, MD

group. Each fistula was established by anastomosing the hollow viscus of one organ to the viscus of the other, using an outer layer of silk and an inner layer of catgut suture; then the abdominal incision was closed in layers. Three to four weeks later, the animals were taken to the operating room and the fistula was repaired. The fistula in each series was taken apart, and each viscus was repaired separately with plastic adhesive. A Satinsky clamp was placed at the base of the opening, and then the area for repair was dried with gauze sponges. The beveled point of a wooden applicator was used to apply a few drops of plastic adhesive to each repair site; gentle pressure was exerted with a flat-tipped forcep to bring the edges together and initiate polymerization. The animals then were observed and killed at intervals, and the areas of closure were studied grossly and microscopically.

Group I consisted of eight animals. A vesicovaginal fistula was created in each case by anastomosing the urinary bladder to the vagina. The fistulae were repaired using the adhesive as described.

Group II consisted of ten animals in which vesicocolonic fistulae were created by anastomosing the urinary bladder to the sigmoid colon. The fistulae were repaired three to four weeks later using the adhesive in a manner similar to group I.

Group III consisted of eight animals which had rectovaginal fistulae produced by anastomosing the vagina into the rectum, and repaired with plastic adhesive as in groups I and II.

Control group A was comprised of eight ani-

GROUP	NO. ANIMALS	FISTULA	CLOSURE
I	8	Vesicovaginal	Adhesive
II	10	Vesicocolonic	Adhesive
III	8	Rectovaginal	Adhesive
Control A	6	Vesicocolonic	Catgut suture
	2	Vesicovaginal	Catgut suture
Control B	5	Vesicocolonic	Catgut, adhesive
	5	Vesicovaginal	Catgut, adhesive

Table 1. Number and type of fistulae created and method of closure.

GROUP	NO. ANIMALS	SUCCESSFUL	UNSUCCESSFUL
I	8	8	0
II	10	9	1
III	8	8	0
Control A	6	6	0
	2	0	2
Control B	5	5	0
	5	5	0

Table 2. Number of successful and unsuccessful closures.

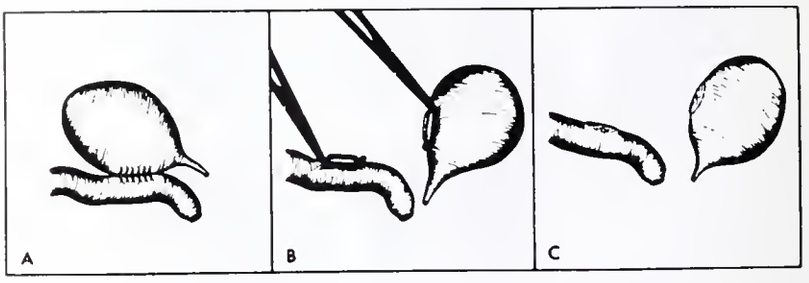


Fig 1. a. A fistula was created by anastomosing the urinary bladder to the colon or vagina. b. It was taken down four weeks later, and a Satinsky clamp was placed at the base of each opening. c. Plastic adhesive was applied to the repair site; clamps were removed and repair was completed.

mals. A fistula was created between the urinary bladder and the colon in six animals, and between the urinary bladder and vagina in two. These fistulae were repaired using chromic catgut only.

Control group B consisted of ten dogs. A vesicocolonic fistula was established in five of the animals, and a vesicovaginal fistula in the other five. These fistulae were repaired using both chromic catgut and plastic adhesive (Table 1).

Experimental Results (Table 2): In group I, all animals in which vesicovaginal fistulae were repaired with plastic adhesive survived the postoperative period. They were killed at six-week to one-year intervals. All had good healing and, in most cases, the area of closure could not be identified by gross examination. However, frequently on microscopic examination, there was a foreign body reaction to the suture used to create the fistula. Two of the animals became pregnant and had normal deliveries during the postoperative period.

In group II, nine of the ten animals had a normal recovery, but one died two days postoperatively. Autopsy examination showed urine in the peritoneal cavity which probably was caused by leakage from the bladder. The dog also had bilateral pneumonia.

In group III, all dogs survived the postoperative phase and were killed at intervals of eight weeks to one year. All showed good healing with no evidence of recurrence.

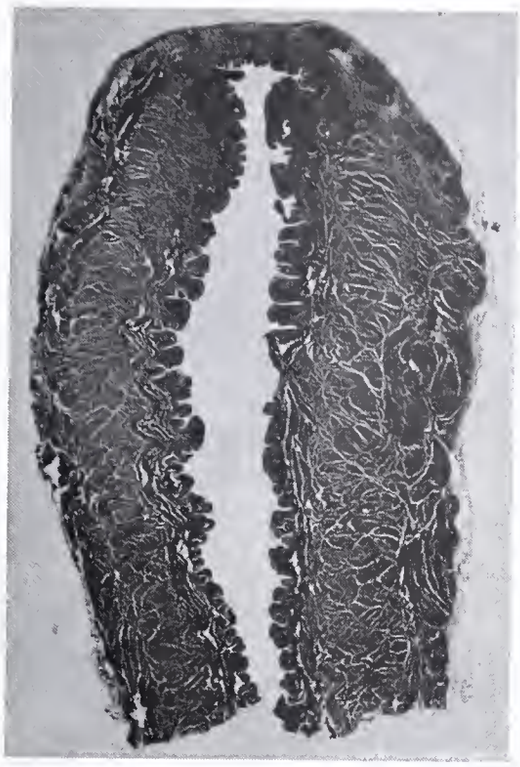
In control group A, all animals in which a vesicocolonic fistula was repaired with suture survived; there was no evidence of recurrence at the autopsy examination. The two dogs in which vesicovaginal fistulae were repaired with only one layer of catgut survived the postoperative period; however, follow-up studies showed recurrence in both animals.

In control group B, suture and plastic adhesive were used to close both vesicocolonic and vesicovaginal fistulae. All animals survived the postoperative period and showed good healing at follow-up examination.

Case Reports: A 62-year-old woman with vesicovaginal and rectovaginal fistulae caused by irradiation for cancer of the cervix was treated by colpocleisis on two occasions with breakdown of the suture line and recurrence of the fistulae. Both operations were done by the conventional method of closing the anterior and posterior vaginal walls to remove the fistula. Then the patient was taken to the operating room for the third time. During this procedure, the vaginal mucosa was excised, and the anterior and posterior walls were sutured with catgut over a piece of collagen to strengthen the vaginal wall. All suture lines were reinforced with plastic adhesive. At the end of the procedure, the repair appeared to be satisfactory. The patient was followed for several weeks without evidence of recurrence of the fistula; however, pain developed in the vagina, presumably from the retained collagen. The patient underwent surgery again; the repair was taken down and the sheet of collagen removed. Her pain disappeared. Another attempt will be made to repair the fistula without the collagen.

Eight weeks after resection procedures for carcinoma of the sigmoid colon, a 65-year-old woman developed high spiking fever, a vaginocolonic fistula, and a pelvic mass. At surgery, a pelvic abscess was drained, and the fistulous opening between the colon and the vagina was sutured separately with catgut and silk sutures reinforced with a plastic adhesive. The patient had a smooth postoperative course and an uneventful recovery. This vaginocolonic fistula, accompanied by infection, was repaired in a one-stage operation; results appear to be good.

Discussion: The etiology of fistulae may be divided into four categories. The first is congenital and is found in infants or children. These fistulae usually are associated with obstruction



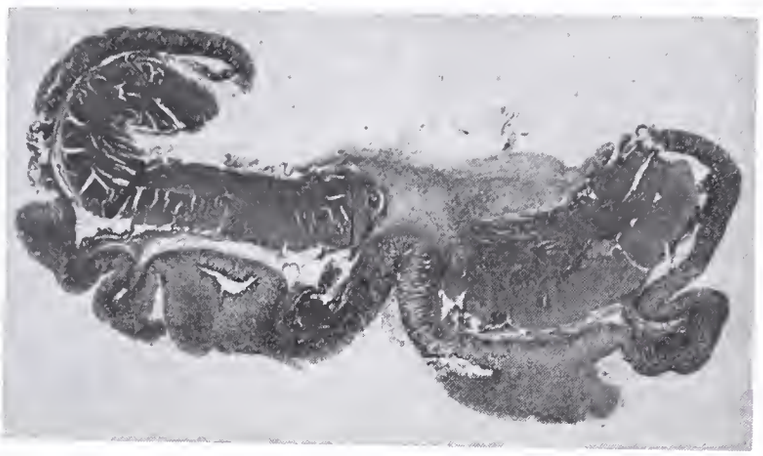


Fig 2. Vesicocolonic fistula ten weeks after repair. a. Left. In the bladder there is fibrous union at the point of closure. Numerous newly formed blood vessels and a few bundles of smooth muscles are interspersed between the fibrous tissue. b. Above. The bowel shows fibrous union with small blood vessels, lymphocytic infiltrate, and interruption of the muscular layer.

Fig 3. Vesicocolonic fistula 11 weeks after repair. The bladder wall consists of fibrous tissue, inflammation and plate-like fragments of adhesive.

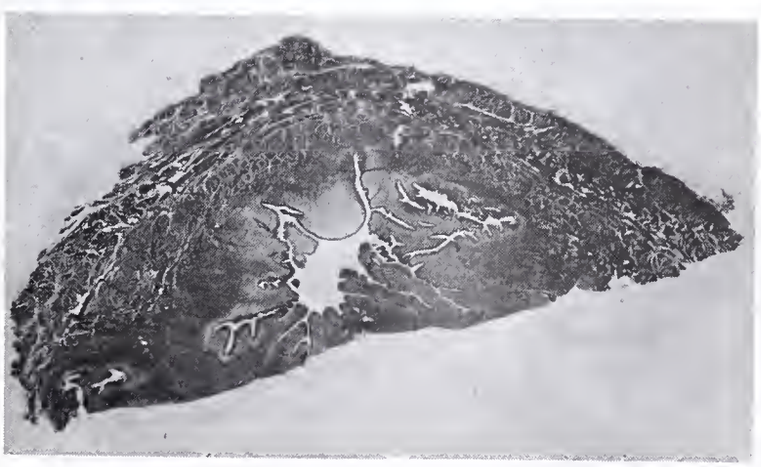


Fig 4. Vesicocolonic fistula 4½ months after repair. In the bladder healing is complete and focal fibrosis is seen in the submucosa.

of a channel, and they close rapidly after the channel is opened. The second category is inflammatory disease, including diverticulitis of the sigmoid or rectosigmoid area, but the bladder tumors which occasionally penetrate into the intestine also are in this category. The third category is trauma caused by prostatectomy and abdominal and vaginal hysterectomy, as well as irradiation therapy for carcinoma of the pelvis in the female and bladder in the male. The fourth category includes neoplastic diseases, tuberculosis, and fungal diseases such as actinomycosis.

Although bowel preparation and the use of antibiotics have contributed greatly to improved results, it remains difficult to obtain good results, especially for fistulae caused by irradiation. From the many procedures described, one can deduce that none is very effective. An adjunct to these operative procedures may be found in the use of plastic adhesives.

The results described show that there is obvious advantage in the use of plastic adhesives as an adjunct to operative procedures. The results were good when the plastic adhesive was used alone. The animals which had the suture line reinforced with plastic adhesives showed excellent results; all animals survived and showed no evidence of recurrence of the fistulae.

The use of the adhesive may not only improve the results, but also may decrease the number of operative procedures required in conventional repairs. In vesicocolonic fistulae, the repair frequently is accomplished by three operative procedures: (1) proximal colostomy, (2) repair of the fistula, and (3) closure of the colostomy. With the use of plastic adhesive, this may be reduced to two or even one procedure.

Irradiation therapy for carcinoma of the cervix occasionally is followed by the development of a fistula. In some of these cases, both vesicovaginal and rectovaginal fistulae develop. Colpocleisis usually is performed in these cases, but often with poor results. The application of a plastic adhesive to reinforce the suture may be of benefit for the irradiated and friable tissue.

Plastic adhesive was used for bladder closure by Malament.[11] His report mentioned the possibility that the adhesive acted as a nidus for bladder calculi and that the adhesive acted as a barrier preventing muscle regrowth into the granulation tissue. He stated, "The thinned scar area may offer in the human bladder a focal area of weakness that could lead to diverticulum formation in the presence of vesical outlet obstruction." Although these two complications appear possible, neither was encountered in this study. It was found that tissue regeneration becomes complete and the adhesive disappears. In this study, only one case of dehiscence of the bladder after closure with adhesive alone was encountered, whereas Malament reported bladder dehiscence in four of ten dogs. The type of adhesive, the mode of application, and the amount used are of great significance and may play an important role in the differences in these results.

Summary: The application of plastic adhesive as an adjunct to treatment for fistulae was studied in dogs. The study included vesicovaginal, vesicocolonic, and rectovaginal fistulae. When a plastic adhesive was used alone, the results were good; only one case of breakdown of the adhesive line was encountered in 26 experiments. Excellent results were obtained when a layer of catgut suture reinforced with plastic adhesive was utilized. In this category, no animal showed a breakdown of repair or recurrence of fistulae.

Two clinical reports also are presented and show evidence that good results can be obtained with this material.

This study indicates that a plastic adhesive may be of benefit when used as a reinforcement of the suture line in the repair of fistulae.

REFERENCES

1. Falk HC: Urologic Injuries in Gynecology. Philadelphia, F A Davis Company, 1957, p 85.

2. Kottmeier HL: Complications following radiation therapy in carcinoma of the cervix and their treatment. Amer J Obstet Gynec 88:854-866, 1964.

3. King HG: Repair of vesicovaginal fistula. J Med Ass State Ala 33:77-78, 1962.

4. Mannion RA, Cottrell TLC, Lloyd FA: Vesicoenteric fistula. Amer J Surg 103:116-118, 1962.

5. Gallagher DM, Scarborough RA: Repair of low rectovaginal fistula. Dis Colon Rectum 5:193-195, 1962.

6. Healey JE Jr, Gallager HS, Moore EB, et al: Experiences with plastic adhesive in the nonsuture repair of body tissues. Amer J Surg 109:416-423, 1965.

7. Healey JE Jr, Clark RL, Gallager HS, et al: The nonsuture repair of blood vessels. Ann Surg 155:817-926, 1962.

8. O'Neill P, Healey JE Jr, Clark RL, et al: Nonsuture intestinal anastomosis. Amer J Surg 104:761-767, 1962.

9. Healey JE Jr, Sheena KS, Gallager HS, et al: Bronchial closure following pneumonectomy utilizing a plastic adhesive. Ann Surg 159:172-179, 1964.

10. Weissberg D, Schwartz P, Goetz RH: Nonsuture end-to-side anastomoses of small blood vessels. Surg Gynec & Obstet 123:341-346, 1966.

11. Malament M: Experimental bladder closure with a tissue adhesive. Invest Urol 3:429-438, 1966.

The authors, The University of Texas MD Anderson Hospital and Tumor Institute, Houston, Tex 77025.

Supported in part by a grant-in-aid from Ethicon, Inc, and US Public Health Grant GM-12345.

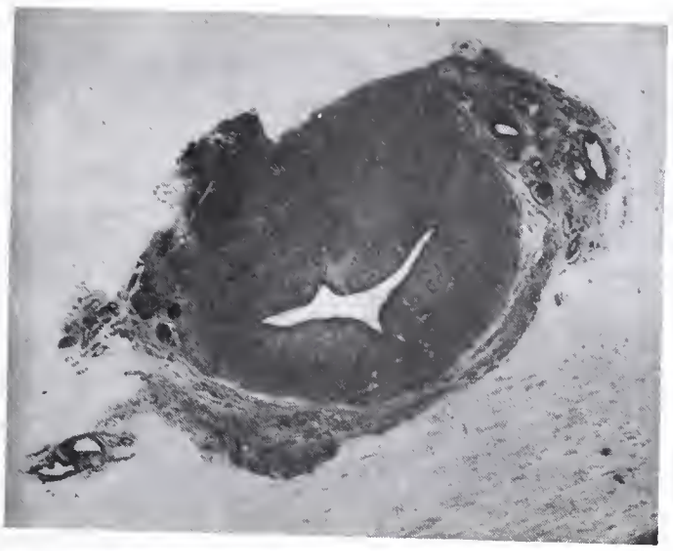


Fig 5. Rectovaginal fistula. In the vagina, one month after repair, there are moderately congested vessels in the submucosa and few small foreign-body granulomas in the wall with fragments of suture material (used in creation of the fistula). No adhesive is seen. The inflammatory reaction is minimal and all cells are mononuclear. Healing is satisfactory.

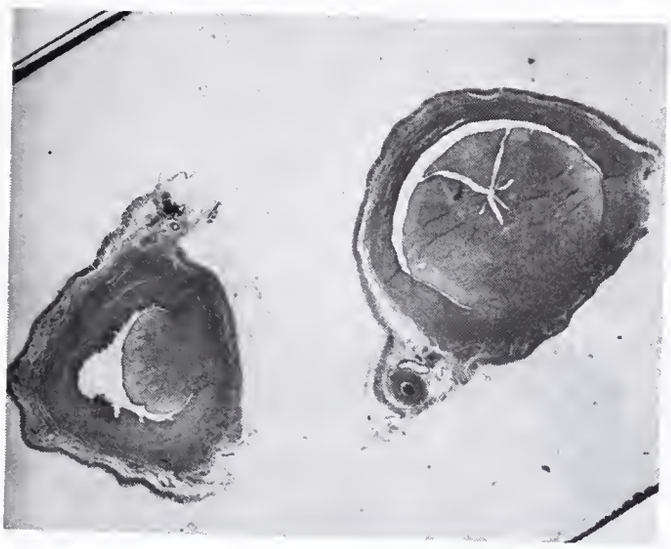


Fig 6. Rectovaginal fistula in vagina seven months after repair. Although there was slight recent hemorrhage in outer layers, healing is progressing normally.

Fig 7. Rectovaginal fistula in rectum seven months after repair. Healing is satisfactory.

PRIMARY MALIGNANT TUMORS

JAMES R. ARMSTRONG, MD; FRANK R. DENMAN, MD

Primary malignant tumors of the jejunum and ileum are difficult to detect preoperatively; the most helpful diagnostic tool is roentgenographic examination of the small bowel. The treatment is surgical, and at least a by-pass procedure or segmental resection should be done in all cases. Of the four most common malignant jejunal and ileal tumors—adenocarcinoma, carcinoid, lymphosarcoma, and leiomyosarcoma—carcinoid has the longest survival rate and adenocarcinoma the shortest.

WHILE ONLY 1 TO 6% OF ALL gastrointestinal neoplasms are in the small bowel,[1,2] they must be considered when seeking a cause for gastrointestinal bleeding, cramping abdominal pain, and other symptoms of abdominal disorder.

Often a diagnostic work-up is halted when roentgenograms of the upper gastrointestinal tract and a barium enema study show no cause for symptoms relating to the gastrointestinal tract. This fact, and the difficulty often encountered in diagnosing small bowel tumors,[3] contribute to their lethality. Not only are small bowel tumors frequently malignant (more than 75% in some series[2]), but their diagnosis and treatment often is delayed. The mortality from these lesions is greater than from those in any other portion of the gastrointestinal tract.[4]

Most discussions of small bowel malignancies include tumors of the duodenum, but we will consider only those of the jejunum and ileum. The small bowel differs from the duodenum with respect to the types of tumor encountered, the facility of their diagnosis, and the magnitude of the surgical procedure required.

Material: Hermann Hospital is a 639-bed private and charity teaching institution in Houston. In the 10½ years from January 1958 through June 1969, 864 malignancies of the gastrointestinal tract were encountered. During this same period only 25 primary malignant tumors of the ileum and jejunum were seen (Table 1). Only 80 were found in a large series reported by Ostermiller and associates.[4] We were unable to follow up all the patients in this series, but microscopic confirmation of the diagnosis was obtained in each case.

The four most common malignant tumors of the ileum and jejunum are adenocarcinoma, carcinoid, lymphosarcoma, and leiomyosarcoma; many series include only these types.[4] However, a wide variety of malignancies have been reported and are listed in order of frequency in Table 2. Some writers disagree on the order of frequency of less common types, but for practical purposes it may be said that the four major types account for more than

OF THE ILEUM & JEJUNUM

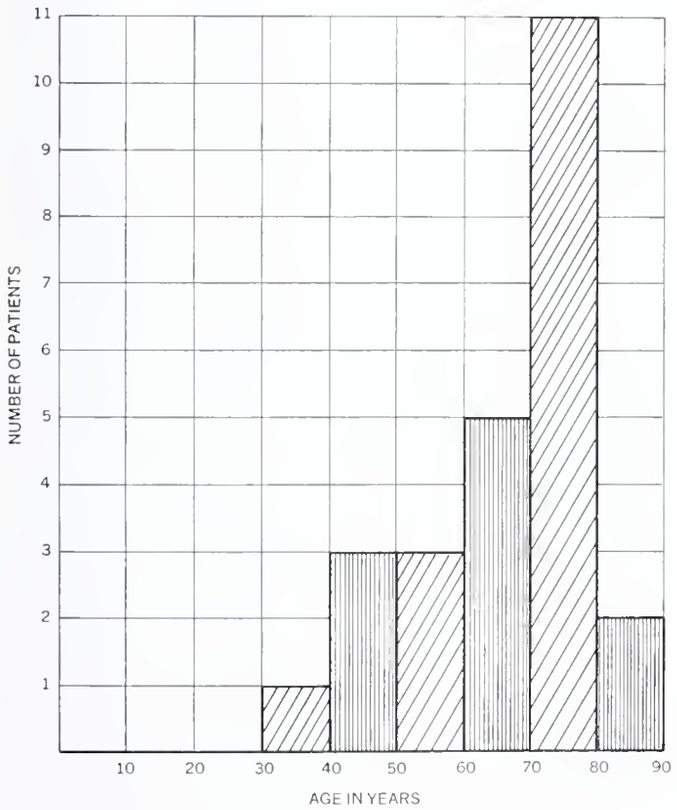


Fig 1. Incidence of malignant small bowel tumors.

Table 1. Total number of gastrointestinal malignancies with percentage of ileal and jejunal tumors.

MALIGNANCIES	NO. PATIENTS	%
Total gastrointestinal	864*	—
Total jejunal	10	1.1
Total ileal	13	1.5

*Two gastrointestinal tumors were listed as "small bowel."

Carcinoma
Carcinoid
Lymphoreticular
Reticular cell sarcoma
Lymphosarcoma
Giant follicular lymphoma
Hodgkin's*
Leiomyosarcoma
Fibrosarcoma
Malignant ganglioneuroma (neurosarcoma)
Angiosarcoma
Liposarcoma
Ectopic chorioepithelioma
Melanoma

*There is disagreement as to whether classical Hodgkin's actually has been seen.

Table 2. Malignant tumors of the jejunum and ileum in order of frequency.

TYPE	%
Carcinoma	35
Carcinoid	25
Malignant lymphoma	24
Leiomyosarcoma	11

Table 3. Relative incidence of most common malignant small bowel tumors.

Table 4. Presenting symptoms and signs.

SYMPTOM OR SIGN	% OF PATIENTS
Abdominal pain	70
Rectal bleeding	30
Anemia	5
Weight loss	10
Anorexia	5
Vomiting	5

TUMOR	% SURVIVAL
Carcinoma	18
Carcinoid	55
Leiomyosarcoma	31
Lymphoma	30

Table 5. Five-year survival rates for four most common small bowel tumors.

95% of all tumors of the mesenteric small intestine (Table 3).

The relative frequency of the various tumors in our series is not significantly different from that reported by others. However, two of the less frequently seen tumors—fibrosarcomas—were identified in this relatively small series.

Most malignant tumors of the jejunum and ileum occur in elderly patients (Fig 1), which is in accord with the usual behavior of malignancies located elsewhere. The ratio of male to female patients was one to one, while other series have showed a male predominance.[2,5]

Diagnosis: Patients with tumors of the jejunum and ileum do not have a variety of symptoms. The two most common initial symptoms that we observed were abdominal pain and gastrointestinal bleeding.

The pain usually was cramping, but often was also described as "vague epigastric," or "mild, periumbilical and postprandial." Certainly there is no pathognomonic symptom pattern associated with these tumors. Some patients presented with acute symptoms and signs of intestinal obstruction or rectal bleeding.

One patient, a 60-year-old man, presented with pain and a mass in the left lower quadrant of the abdomen. The preoperative diagnosis was perforated diverticulitis, but a leiomyosarcoma of the jejunum was found. It had hemorrhaged, presumably as a result of tumor necrosis or vessel involvement, and the blood clot was partly walled off by the mesosigmoid. Table 4 summarizes the presenting symptoms and signs encountered in this series.

The history of physical examination may suggest an ileal or jejunal tumor; but diagnosis can be confirmed preoperatively only by radiologic examination. Whereas some intra-abdominal lesions can be identified by a variety of radiological examinations, tumors of the jejunum and ileum can be definitely delineated only by the small bowel series. In the jejunum, a diagnostic accuracy of 90% has been claimed,[1] with greater difficulty encountered in the ileum. The chance of a correct diagnosis decreases as the distance of the lesion from the pylorus increases.[5]

In our series a correct preoperative diagnosis was obtained in only four cases (16%), but each of these patients had undergone a roentgenographic examination of the small bowel and in three cases the tumors were missed; this again demonstrates their elusiveness.

The average duration of symptoms was six months, excluding two patients in whom the symptoms were present less than a day.

Treatment and Results: Treatment of small bowel malignancies is surgical and laparotomy should be performed in all cases, as was done in this series. The usual procedure is resection of the involved segment. For lesions in the terminal ileum, resection of the terminal ileum and the right half of the colon should be carried out. In some cases in which metastatic areas were identified at the time of surgery, only biopsy and by-pass were performed.

Even for palliation, at least a by-pass or segmental resection of the involved area or areas should be performed. This alone is palliative in a disease whose natural history is one of early intestinal obstruction. Dockerty has recommended palliative removal of the tumor mass in all carcinoids, noting an average of eight years between onset of symptoms and death from metastases in this tumor.[6] Where no evidence of incurability is found, a standard cancer operation appropriate for the area of involvement should be carried out. Of the 13 five-year survivors reported by Dorman,[5] 12 had what was considered to be a curative surgical procedure.

Adjuvants to surgical therapy include irradiation and chemotherapy. Only five patients in this series are known to have undergone postoperative therapy; irradiation was used in three

cases of reticulum cell sarcoma and in two cases of lymphosarcoma. Because of inadequate follow-up, we cannot draw significant conclusions regarding the effectiveness of the adjuvant therapy.

Published reports indicate that postoperative irradiation is useful in the treatment of the lymphomas. Botsford and others[7] treated all lymphomas with postoperative irradiation. It has not proven to be significantly effective, however, for leiomyosarcoma, carcinoma, and carcinoid.

Chemotherapy has been investigated extensively in treatment of the malignant carcinoid syndrome. Approximately one in five patients with hepatic metastasis from carcinoids will develop this syndrome, and clinicians should be prepared to deal with it. Thus far, investigation has focused on both tumor ablation and the use of serotonin antagonists or metabolic blocking agents. The latter have not been particularly successful. On the basis of clinical experience and literature review, Reed and others[8] summarized that relief of symptoms and increased longevity could be expected from use of 5-fluorouracil (5-FU) and alkylating agents[9,10] when given both systemically and by hepatic artery infusion.

As is the case in malignancies in other areas, the most significant factors affecting survival are the type, extent, and location of the tumor at the time of operation. Generally, carcinoid has the best five-year survival rate (greater than 50%), and carcinoma the worst (less than 15%). A composite of the five-year survivals noted in other series is represented in Table 5.[2,5]

Comments: The preoperative diagnosis of small bowel malignancies is exceedingly difficult, and diagnosis usually is made during exploratory laparotomy. It is most important that these tumors be kept in mind when the more common causes for gastrointestinal symptoms are not found, for only with early diagnosis is there any significant hope for cure. Because of their anatomic location, these lesions often are large and well advanced before symptoms occur, and the tardiness of diagnosis has a most deleterious effect on the survival rates.

The importance of the small bowel series in establishing a preoperative diagnosis cannot be overemphasized. This is the only diagnostic examination which has a significant yield, and must not be omitted from a gastrointestinal work-up when the more frequently performed studies fail to establish a diagnosis.

Adjuvants to surgical therapy have been used, but results are not conclusive.

Acknowledgement: Sallie Taggart, BS, CT, ASCP, assisted in collating statistics for this article.

REFERENCES

1. Wood DA: Atlas of Tumor Pathology. sect VI, fasc 2, Armed Forces Institute of Pathology, 1967.

2. Pagtalunan RJG, Mayo CW, Dockerty MB: Primary malignant tumors of the small intestine. Amer J Surg 108:13-18, 1964.

3. Weber HM, Kirklin BR: Roentgenologic manifestations of tumors of small intestine. Amer J Roentgenol 47:243-253, 1942.

4. Ostermiller W, Joergenson EJ, Weibel L: A clinical review of tumors of the small bowel. Amer J Surg 111:403-409, 1966.

5. Dorman JE, Floyd CE, Cohn I Jr: Malignant neoplasms of the small bowel. Amer J Surg 113-131-136, 1967.

6. Dockerty MB: Carcinoid tumors. Calif Med 99:157-160, 1963.

7. Botsford TW, Crowe P, Crocker DW: Tumors of the small intestine. A review of experience with 115 cases including a report of a rare case of malignant hemangioendothelioma. Amer J Surg 103:358-365, 1962.

8. Reed ML, Kuipers FM, Vaitkevicius VK, et al: Treatment of disseminated carcinoid tumors including hepatic-artery catheterization. New Eng J Med 269:1005-1010, 1963.

9. Vroom FQ, Brown RE, Dempsey H, et al: Studies on several possible antiserotonin compounds in a patient with the functioning carcinoid syndrome. Ann Intern Med 56:941-945, 1962.

10. Pack GT, Ariel IM: Treatment of Cancer and Allied Diseases, vol 5. New York, Hoeber-Harper, 1962, p 294.

Drs. Armstrong and Denman, Department of Surgery, Hermann Hospital, Houston, Tex 77025.

The Lower Esophageal Ring: A Source of Dysphagia

LEE F. ROGERS, MD

IT HAS BEEN 25 YEARS since Templeton first described the lower esophageal ring.[1] Ordinarily one might expect that this would be sufficient time for full clarification of the anatomy and associated clinical findings. However, this is not the case. The anatomy and physiology of the terminal esophagus remain in dispute, and the pathophysiology of most diseases or disorders involving this area is embroiled in controversy. Certainly the lower esophageal ring is no exception.

Many radiologists prefer to avoid the issue, believing that the problem is not in diagnosing too few hernias but rather the opposite. The problem is compounded by the seemingly endless variety of appearances of the terminal esophagus, displaying many ring-like notches and contractions. I comfortably maintained neutrality in these matters until faced with the following case.

Case Report: A 51-year-old Caucasian man came to the emergency room with the following history: He had been to a cocktail party and was enjoying a steak dinner at a restaurant when, upon swallowing a piece of meat, he felt a "sticking" sensation in his substernal region. He stopped eating, thinking that it would pass as it had in similar instances which had occurred during the previous 2½ years. It did not. He drank a small quantity of water which only increased his distress. Finally, he went to the rest room where he tried to gain relief by regurgitating. This was unsuccessful. He, therefore, sought medical aid.

His history was remarkable only in that he had experienced intermittent dysphagia, always with meat, during the past 2½ years but always had been able to relieve the obstruction himself. He denied heartburn, and said that two previous upper gastrointestinal series had demonstrated a "Schatzki's ring."

Roentgenograms made after a swallow of barium showed a complete obstruction of the distal esophagus (Fig 1, left). While being prepared for esophagoscopy, the patient experienced spontaneous relief of his symptoms. The endoscopy was cancelled. A repeat barium swallow the following morning revealed the lower esophageal ring with a lumen measuring 18 mm in its transverse diameter (Fig 1, right). No therapy was given. He was cautioned to chew his food properly.

In the relatively short period of 11 months, I encountered six additional cases of dysphagia associated with a lower esophageal ring, which led to the following review and conclusions.

Historical: Templeton[1] published the first radiograph of a lower esophageal ring in the 1944 edition of "X-Ray Examination of the Stomach" with the following comment, "The cause of this annular indentation is unknown, but it must be recognized and not mistaken for organic structure." It was not until 1953 that the first reports of symptomatic rings appeared in articles by Ingelfinger and Kramer,[2] and Schatzki and Gary.[3] Because of Schatzki's initial contribution and continued interest, this disorder frequently is called "Schatzki's ring." Many articles have appeared since.[4-9]

The clinical, microscopic, and radiographic features of the lower esophageal ring are presented. The associated symptom complex of intermittent solid food dysphagia is stressed, and a rational approach to therapy is offered.

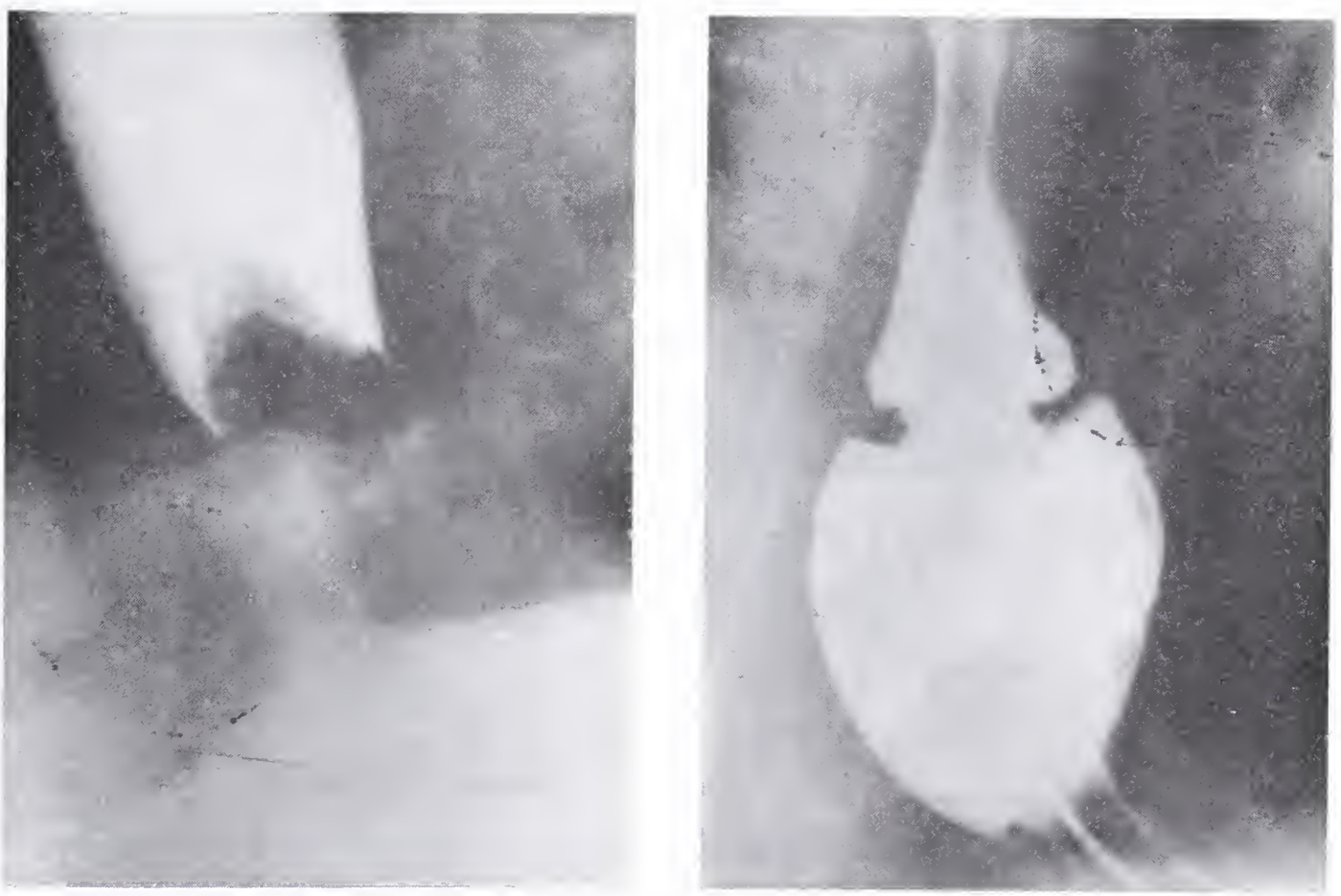


Fig 1. The initial barium swallow (left) shows a complete obstruction of the lower esophagus. The subsequent examination (right) reveals a lower esophageal ring with a lumen of 18 mm.

THE LOWER ESOPHAGEAL RING

Fig 2. Diagram of the morphology of the lower esophageal ring. The arrow points to the ring between the lower esophagus (1) and a small sliding hiatal hernia (2). The mucosal junction is at the inferior edge of the ring.

Pathology: The disorder is more common in men and is found chiefly in patients over 40 years of age. With few exceptions all of the rings which have been examined at surgery or autopsy or biopsied through the esophagoscope have demonstrated the following gross (Fig 2) and microscopic features: The ring is a thin (2-4 mm), symmetrical, concentric, diaphragm-like structure extending perpendicular to the esophageal wall. It is located 3.5 to 5.5 cm proximal to the diaphragm and is not palpable through the wall of the esophagus. The ring represents the squamo-columnar junction; that is, the superior surface of the ring is covered with squamous epithelium, while the lower surface presents normal gastric mucosa with the mucosal junction at or just inferior to the edge of the ring. Most authors state that the presence of the ring indicates the presence of a sliding hiatal hernia, and at surgery or autopsy this has proven to be true. Between the mucosal layers one finds only submucosal connective tissue and muscularis mucosa. The muscle layers of the esophageal wall do not participate in the formation of the ring. There is characteristically little or no evidence of mucosal inflammation, although variable amounts of inflammatory changes may be seen in the submucosa.

Symptoms: The characteristic symptom associated with the lower esophageal ring is intermittent, episodic dysphagia; that is, isolated occurrences of dysphagia with varying periods of complete freedom from distress. The dysphagia is commonly described as a substernal or epigastric "sticking" sensation which is always precipitated by the ingestion of solid food, normally either meat or bread. Symptoms are noted more frequently during periods of emotional stress or anxiety or while under the influence of alcohol, apparently because one is less likely to chew food properly under such circumstances. The combination of these circumstanc-

es, as in the case described, has given rise to the eponym "steakhouse syndrome."

Usually if the patient waits a short period of time the food seems to pass; at times the passage is aided by drinking liquids. On occasion regurgitation is necessary in order to obtain relief. Infrequently, the bolus becomes impacted within the ring; the patient is unable to dislodge it and must seek medical attention. The bolus is then removed endoscopically.

Schatzki[4] has found that dysphagia is dependent upon the size of the ring; the smaller the lumen, the greater the likelihood of dysphagia. By measuring the lumen of the ring on spot films of the barium-filled esophagus obtained during fluoroscopy, and correlating this dimension with dysphagia, he found that all patients with a lumen of 12 mm or less are symptomatic. Rings with lumen of 13 to 20 mm frequently give rise to symptoms. Dysphagia is rarely encountered when the lumen measures between 20 and 25 mm. This measurement is made without accounting for magnification. My experience is identical to Schatzki's (Fig 3). The diameter of the ring remains constant or decreases slowly over a period of years.

The dysphagia is passive in nature. The ring is flexible but has no contractile properties. The lumen is constant. If the diameter of the bolus of food is fixed (meat versus vegetable) and exceeds the diameter of the ring, delay in passage is inevitable and dysphagia results. The larger the bolus relative to the ring, the greater the delay in passage. Of course, if the bolus is smaller than the lumen of the ring no delay will occur. With proper mastication one should rarely swallow a bolus exceeding 1.5-2 cm in diameter.

In Schatzki's series,[4] 32.5% (108 of 332) of the patients in whom he identified a ring had experienced one or more episodes of dysphagia. This parallels my experience of 26.2% (11 of 42).

A small percentage of patients will admit to or complain of heartburn; however, this is normally secondary in severity to the dysphagia and rarely is distressing.

Approximately 20 to 25% of patients with lower esophageal rings will have associated peptic ulcer disease and/or cholelithiasis or cholecystitis.

Esophagoscopy: In contradistinction to its value in other esophageal diseases, the esophagoscopic examination is usually unrewarding in this disorder. The diameter of the commonly employed scope is 7-9 mm, a dimension exceeded by the lumens of most lower esophageal rings. If the lumen diameter is less than the diameter of the scope, the ring may be visualized. Usually, however, the scope passes easily into the stomach without visualization of the ring, occasionally encountering a sense of resistance at the gastroesophageal mucosal junction. The esophageal mucosa is characteristically normal; only infrequently is there evidence of esophagitis. The presence of a sliding hiatal hernia usually is confirmed.

Radiographic Findings: With the lower esophagus distended by barium solution or barium paste the lower esophageal ring presents as a smooth, thin, fixed, noncontractile, passive structure found approximately 4 to 5 cm above the diaphragm. It extends concentrically into the lumen of the esophagus perpendicular to the esophageal wall. The lumen of the ring usually is centrally located. The ring is not visualized unless the esophagus is distended beyond the diameter of the lumen of the ring, and therefore larger rings are easily overlooked by the use of an insufficient bolus of barium. Characteristically, despite the constriction of the esophagus, there is no esophageal dilatation proximal to the lesion regardless of the diameter of the lumen. Cineradiographic examination was performed on 14 patients. These proved to be of great value in the clarification of certain

THE LOWER ESOPHAGEAL RING

morphologic and physiologic features; particularly, they confirmed the lack of contraction, revealed that esophageal peristalsis ceases just proximal to the ring, and demonstrated that the ring maintains a fixed position relative to the esophagus.

The radiographic findings are so typical that there is only a limited differential diagnosis to offer. This is particularly true if one keeps in mind that the lower esophageal ring is thin—2 to 4 mm in thickness, never over 5 or possibly 6 mm—and that the ring is passive and therefore does not contract. The chief considerations are a lower esophageal sphincter, short esophageal stricture with a hiatal hernia, and a congenital esophageal web. The latter is grossly and histologically similar to the ring except that squamous epithelium covers both its superior and inferior surfaces. The web is generally found within the lower two-thirds of the esophagus and is not associated with a hiatal hernia. There may be a mild tubular stenosis in association with the web. The etiology is considered to be much the same as that of other congenital stenosis of the intestinal tract, namely abnormal or arrested coalescence of vacuoles during formation of the lumen. The main differential feature clinically is that most patients present with dysphagia in childhood or date the onset of symptoms to childhood. Dysphagia associated with a lower esophageal ring is unusual before age 25. The short esophageal stricture is actually a segment of fibrosing esophagitis secondary to gastric reflux. In three of my cases, the length of the stricture was between 10 and 15 mm and it was asymmetrical. Gastroesophageal reflux is readily produced or is spontaneous. Clinically heartburn, sour brash, and positionally dependent symptoms of a hiatal hernia precede and exceed those of dysphagia. Esophagoscopy reveals esophagitis, and confirms the presence of a stricture and reflux. The lower esophageal contraction ring or lower esophageal sphincter presents the greatest difficulty in differential diagnosis. Normally, the lower esophageal sphincter is within the infrahiatal or empty segment of the distal esophagus, that portion of the esophagus referred to by the physiologist as the high pressure zone. Here it is not evident radiographically. In the presence of a sliding hiatal hernia this segment is displaced superiorly out of the hiatus and becomes evident at fluoroscopy in a small percentage of cases. The reason it becomes evident is disputed. However, it is contractile, which is evident at fluoroscopy and on cineradiographs, and is thicker than a true ring. The minimum thickness seen at a maximum contraction is between 6-8 mm. The confusion arises when one views a single spot film, but is clarified with further films or fluoroscopy or both. If the contraction ring and lower esophageal ring coexist the contraction ring is always superior to the lower esophageal ring.

Treatment: The need for treatment is not based so much upon the size of the lumen as upon the frequency and severity of symptoms. If symptoms are mild and infrequent, the cause is identified and explained and the patient is cautioned to chew food properly. No further treatment is required.

If symptoms are frequent or incapacitating, some form of intervention is required. There are three approaches available: bougienage, pneumatic dilatation, and surgical excision or rupture of the ring. In the first instance repeated and progressive dilatations with mercury-filled bougies are performed until the lumen measures 20 mm or more in diameter. This may require three or four dilatations to achieve, and occasional subsequent dilatations to maintain.

McMahon and others[10] initially suggested, after an exhaustive study of an autopsy specimen, that pneumatic dilation could be utilized safely to rupture and dilate the ring. A Mosher bag or similar apparatus used in the treatment of achalasia has been utilized successfully.

The surgical approach most commonly advocated is a transabdominal hiatal hernia repair combined with a transgastric partial excision or rupture of the ring. Some have stated that a hiatal hernia repair alone is sufficient. This is

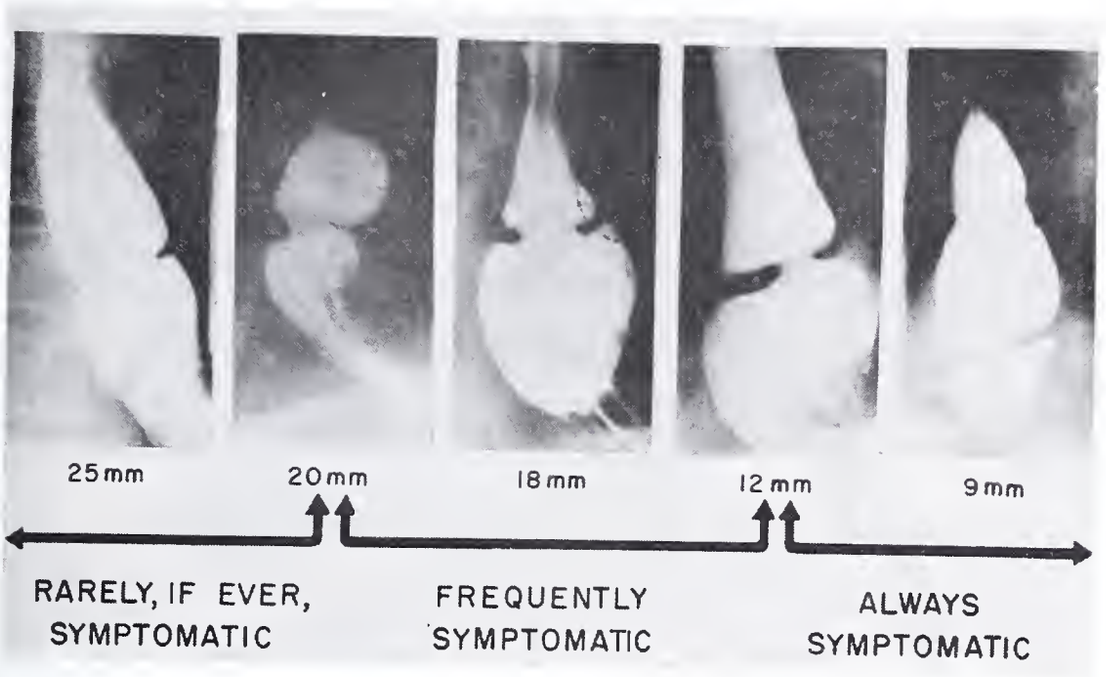


Fig 3. These radiographs illustrate the relationship of dysphagia to the size of lumen within the lower esophageal ring.

true providing that dysphagia is not a symptom and the ring is large. However, if the lumen is small and dysphagia present, partial excision or rupture of the ring is mandatory. The surgical approach should be reserved for those who fail to respond to more conservative measures or for the rare patient with esophagitis.

Comment: It is important to be aware of the symptom pattern associated with the lower esophageal ring in order to avoid labeling these patients as hypochondriacs. First, the dysphagia is intermittent; that is, there are widely varying periods of complete freedom from distress. This fact, when coupled with the appearance of dysphagia during emotional stress or under conditions such as those described in the present case report, tend to mislead the clinician into believing that no organic cause exists.

Second, the dysphagia is dependent upon the size and consistency of the bolus; it occurs with solid food and, in fact, is said to be the most common cause of solid food dysphagia.

Third, one cannot reasonably exclude a lower esophageal ring as the etiology of dysphagia without obtaining radiographs of the lower esophagus distended beyond 20 mm, the largest size lumen of lower esophageal rings commonly associated with dysphagia. By identifying the source of the patient's distress, reassuring him, and explaining how to avoid symptoms by chewing food properly, the physician usually can relieve undue concern and enable the patient to avoid further distress and occasional embarrassment. If symptoms are severe, corrective measures can be undertaken with a reasonable certainty that relief will be obtained.

REFERENCES

1. Templeton FE: X-ray examination of the stomach. The University of Chicago Press, 1944.

2. Ingelfinger FJ, Kramer P: Dysphagia produced by contractile ring in lower esophagus. Gastroenterol 23:419-430, 1953.

3. Schatzki R, Gary JE: Dysphagia due to diaphragm-like localized narrowing in lower esophagus ("lower esophageal ring"). Amer J Roentgenol 70:911-922, 1953.

4. Schatzki R: The lower esophageal ring; long term follow-up of symptomatic and asymptomatic rings. Amer J Roentgenol 90:805-810, 1963.

5. Wilkins EW, Jr, Bartlett MK: Surgical treatment of lower esophageal ring. New Eng J Med 268-461-464, 1963.

6. Sealy WC, Young WG, Jr: Schatzki's ring or lower esophageal web: a semantic and surgical enigma. J Thorac Cardiov Surg 47:143-150, 1964.

7. Postlethwait RW, Sealy WC: Experiences with the treatment of 59 patients with lower esophageal web. Ann Surg 165:786-796, 1967.

8. Johnston JH, Jr, Griffin JC, Jr: Anatomic location of the lower esophageal ring. Surgery 61:528-534, 1967.

9. Wiggins CA: The lower esophageal ring. Aust Radiol 11:140-149, 1967.

10. MacMahon HE, Schatzki R, Gary JE: Pathology of a lower esophageal ring; report of a case, with autopsy, observed for nine years. New Eng J Med 259-1-8, 1958.

Dr. Rogers, Department of Radiology, The University of Texas Medical School at San Antonio, 7703 Floyd Curl Drive, San Antonio, Tex 78216.

"Mommy,
I don't feel
so good..."

Young heads and stomachs often can't manage the pace of hurry-up-and-stop for the light... or going up hill, down hill, and around the curve. All too quickly a pleasant drive can become an upsetting trip. *Motion sickness makes children—and their parents—absolutely miserable.*

You can help make young patients better passengers with

BONINE®

(MECLIZINE HCl)

Bonine protects most patients—young or old—against nausea and vomiting up to 24 hours with a single dose. Pleasant-tasting Bonine tablets are chewable. They can be taken anytime, anywhere, without water. In difficult cases, multiple daily doses may be necessary for maximum response.

Precautions: Although the incidence of drowsiness and atropine-like side effects such as dry mouth and blurring of vision is low, the physician should alert the patient to the need for due precautions when engaging in activities where alertness is mandatory. *Use in women of childbearing age:* In weighing potential benefits vs. risk in women of childbearing age, consider the fact that a review of available animal data reveals that meclizine exerts a teratogenic response in the rat. In one study a dose of 50 mg./kg./day (50 times the maximum recommended human dose) produced cleft palate in 2 of 87 fetuses when administered to the rat at critical times during the first 15 days of gestation. At doses of 125 mg./kg./day, meclizine will produce 100% incidence of cleft palate in the rat. At doses of 25 mg./kg./day, decreased calcification of the vertebrae and relative shortening of the limbs were also produced in the rat, but experts disagree as to whether this is a teratogenic response. While available clinical data are inconclusive, scientific experts are of the opinion that this drug may possess a potential for adverse effects on the human fetus. Consequently, consideration should be given to initial use of a nonphenothiazine agent that is not suspected of having a teratogenic potential. In any case, the dosage and duration of treatment should be kept to a minimum.

Supply: 25 mg. scored tablets.

More detailed professional information available on request.

Pfizer **LABORATORIES DIVISION**
New York, N.Y. 10017

Robert S. Putnam, MD
Roger Williams, FRCP
Burton Combes, MD
Donald W. Seldin, MD
James P. Luby, MD
Rand Frederiksen, MD
Philip E. Duvall, MD
C. Gunnar Blomqvist, MD
Gregory Whelan, MD
Edwin H. Eigenbrodt, MD, Guest Editor

CLINICOPATHOLOGIC CONFERENCE

CASE PRESENTATION: *Dr. Frederiksen:* This 62-year-old white man, a farmer, had been well until two years prior to admission when he lost 25 lb in six months. He felt chronically weak, fatigued, and was unable to do his farm work. During the previous 12 months he had three episodes of jaundice with nausea, vomiting, and pruritus, with gray stools.

On the day before admission he complained of a headache, became confused and lethargic, and had slurred speech. He was taken to his personal physician who administered Cedilanid and Levoprome, but the patient's condition did not improve and he was transferred to Parkland Hospital.

On admission his blood pressure was 180/50 mm Hg, pulse 110/min with a bigeminal rhythm, temperature 102 F, and respirations 28/min. He was grossly icteric and reacted only to deep pain. His right pupil was 5 mm in diameter and reacted to light; the left pupil was 2 mm in diameter and was not reactive to light. His left eye was proptotic with injection and edema of the sclera. The optic fundi showed only arteriolar narrowing. There was a shaggy white exudate on the posterior pharynx, and the patient's teeth were in poor repair. Nuchal rigidity was present with positive Kernig's and Brudzinski's signs. Moist inspiratory rales were heard over the right anterior and posterior chest with percussion dullness at the right base. There was a 2+ left ventricular lift with a grade 2/6 holosystolic murmur at the left sternal border and apex. The liver edge was felt at the right costal margin and the spleen was palpable 8 cm below the left costal margin with a smooth firm edge. Shifting dullness and a fluid wave were present. His stool was yellow and a guaiac test for occult blood was negative. Neurologic examination revealed definite weakness of the left arm and leg with hypoactive deep tendon reflexes.

His spinal fluid had 5,650 white blood cells/cu mm with 99% polymorphonuclear leukocytes, glucose < 25 mg/100 ml, and protein 5.1 gm/100 ml. The spinal fluid Kolmer test was nonreactive. Rare gram-positive cocci were seen on gram stain of the spinal fluid and blood cultures grew pneumococci. Papanicolaou stains of the spinal fluid were negative for malignant cells. A bone marrow examination showed a leukemoid reaction.

The patient was treated with intravenous penicillin, 20 million units per day for 15 days, and 2.5 million units per day for an additional five days.

On the 20th hospital day, the patient had a shaking chill with a temperature of 101 F, tachypnea, and no obtainable blood pressure. Electrocardiogram (ECG) showed right axis deviation, and a chest roentgenogram showed an infiltrate in the right lower lobe of the lung, Kanamycin, tetracycline, heparin, and vasopressors were administered.

After the hypotensive episode, the patient's urine output decreased to 400 ml/day for two days, then increased to 3,000 ml/day. Blood cultures grew *Klebsiella.* A lung scan was normal, so antibiotics were continued and the heparin was stopped.

Three days after the hypotension, his serum creatinine level had reached 5.4 mg/100 ml, so antibiotics were discontinued.

The patient remained afebrile for nine days following the cessation of antibiotics; then his temperature spiked to 104 F and *Serratia* was grown from a blood culture. Gentamycin, 80 mg/day, was started. Intermittent hyperkalemia was treated with Kayexalate and Shohl's solution. His mental state varied from stupor to mild confusion.

The Gentamycin was discontinued after 12 days and the patient remained afebrile for five days when he developed a temperature of 101 F on two consecutive days. Multifocal premature ventricular contractions, alternating with a bigeminy cardiac rhythm, responded to Quini-

This 62-year-old white man entered the hospital with meningitis which was treated successfully. His subsequent hospital course was complicated by heart failure, recurrent gram-negative sepsis, and renal failure. At a time when all these factors were subsiding, he still had jaundice and a high serum alkaline phosphatase value.

	ADMISSION	PRE-TERMINAL	RANGE
White Blood Cells, cu mm	17,000	14,400	3,700-17,000
Hemoglobin, gm/100 ml	10.3	9.9	7.6-12.2
Hematocrit, %	33	29	22-39
SERUM			
Sodium, mEq/liter	141	137	122-142
Chloride, mEq/liter	97	104	84-104
Potassium, mEq/liter	3.8	6.3	3.8-6.3
Carbon Dioxide, mEq/liter	27	21	18-34
Bilirubin: Total/Direct, mg/100 ml	2.6/1.2	6.5/4.0	2.2-8.0/1.2-4.0
Thymol Turbidity, units	13.0	8.1	6.2-13.0
Glutamic Oxalacetic Transaminase, units	66	82	32-176
Prothrombin Time, sec: Patient/Control	13.0/12.5	12.5/10.5	10.0/10.5-20.0/11.5
Protein, gm/100 ml: Albumin/Globulin	3.3/4.0	—	2.9/3.9-2.9/5.0
Blood Urea Nitrogen, mg/100 ml	11.0	80.0	6.0-94.0
Creatinine, mg/100 ml	0.9	5.8	0.9-8.9
Alkaline Phosphatase, King-Armstrong units	60	50	50-240
Stool Guaiac	Negative	—	Negative - 4+
ASCITIC FLUID			
White Blood Cells, cu mm	430, with 80% polymorphonuclear leukocytes		
Protein, gm/100 ml	2.1		
Amylase, units	<320		

Table 1. Summary of selected chemical determinations.

dine therapy. Blood cultures grew *E coli,* so ampicillin, 2 gm/day, was started a week after the temperature spike. Liver biopsy done four days following institution of antibiotic therapy showed postnecrotic cirrhosis as well as chronic passive congestion. Ten days after the liver biopsy, the patient's temperature again spiked to 102 F and his blood pressure fell to 75/30 mm Hg, so he was given bicarbonate and Isuprel, and was transferred to the operating room. An emergency common duct exploration and T-tube drainage procedure were done; intermittently during the procedure, the blood pressure was unobtainable. The common duct was filled with frank pus and multiple impacted stones were found. The patient was afebrile and doing well postoperatively for 11 days, then he started vomiting after each bile feeding. A T-tube cholangiogram showed multiple retained stones. In spite of a potassium level of 6.3 mEq/liter, an attempt was made to remove the remaining common duct stones. The patient had a cardiac arrest during the procedure and died shortly thereafter, having been in the hospital almost 14 weeks.

Table 1 gives a summary of laboratory findings during the course of the patient's illness.

Radiological Findings: *Dr. Duvall:* Radiographic and isotopic examinations were obtained during this patient's three-month hospitalization.

Anterior and posterior simultaneous, rectilinear liver scans employing 2 mc of technetium 99m sulfur colloid as the agent were obtained during the eighth hospital week. The scans showed diffuse enlargement of the left lobe of the liver with no enlargement of the right lobe. There were numerous, somewhat indistinct areas of moderately diminished isotope uptake throughout the liver with a greater than normal uptake by the reticuloendothelial cells of the spleen. Generalized enlargement of the spleen was seen. There was minimal uptake of the isotope by the reticuloendothelial system of the spine. A film of the abdomen obtained the same date confirmed splenomegaly, and an examination of the upper gastrointestinal tract showed only a small diverticulum of the duodenal C-loop with no abnormality of contour nor enlargement of the C-loop. An excretory urogram obtained 2½ weeks later showed diminished excretion of contrast agent bilaterally, with poor concentration and no evidence of obstruction. The kidneys were similar in size and shape.

A T-tube cholangiogram obtained during the 11th hospital week showed a large, radiolucent defect in the distal aspect of the common bile duct. This had the appearance of a radiolucent biliary calculus impacted in the distal common bile duct, with no flow of contrast agent into the duodenum noted. A subsequent operative cholangiogram obtained on the last hospital day showed an impacted, radiolucent calculus in the distal common bile duct. Other radiolucent areas in the extrahepatic biliary tree and in the left common bile duct may have represented additional, smaller, radiolucent calculi.

Numerous chest films obtained throughout the hospital admission initially demonstrated moderate cardiomegaly with left ventricular predominance with associated pulmonary venous hypertension and interstitial pulmonary edema. Subsequently, the overall size of the cardiac silhouette regressed somewhat, but bilateral pleural effusions developed, and after three weeks the heart had again enlarged to moderate extent with reacquisition of interstitial pulmonary edema and abnormal dilatation of the azygos vein. By a month later, the heart was normal in size but again demonstrated a contour of left ventricular predominance. The patterns of both left and right ventricular decompensation had resolved completely. A chest film obtained on the final hospital day showed a poor inspiratory effort with compression of the lung bases and probably areas of subsegmental atelectasis in the left lung base. There was no evidence of cardiac decompensation at that time.

Other examinations included a normal brain scan at the time of admission, two normal lung scans after a month of hospitalization, a normal skull series with no displacement of the calcified pineal gland noted, a normal metastatic bone survey, and a barium enema examination.

In summary, radiographic findings included: (1) Abnormal enlargement of the left lobe of the liver with a diffusely diminished pattern of function and evidence of abnormal uptake of isotope within the reticuloendothelial system of the spleen and spine. (2) Generalized enlargement of the spleen. (3) An impacted, radiolucent calculus producing complete obstruction of the distal common bile duct. (4) An initially recurring pattern of left and right ventricular decompensation with the changes of left and right heart failure reflected on the chest films. (5) Normal brain and lung scans.

Electrocardiographic Findings: *Dr. Blomqvist:* The main features of this patient's ECG series were ectopic beats from various foci and signs of electrolyte disorders.

His ECG on admission demonstrated frequent ventricular and occasional atrial premature beats, left axis deviation, and nonspecific ST-T wave abnormalities. The U waves were in-

verted in the lateral precordial leads. This is a relatively common finding in hypertension and in coronary heart disease.

The ECG recorded three weeks later showed classical ECG signs of a moderate hyperkalemia: low P wave amplitude, slightly increased QRS duration without any change in wave form, and tall, peaked T waves. His ECG taken a week later showed changes suggestive of hypokalemia with some ST depression, lower T amplitude and prominent after-potentials and U waves. Quinidine medication may also have contributed to these abnormalities.

The ECGs recorded after nine weeks of hospitalization showed a variable atrial pacemaker; a run of supraventricular, probably nodal, tachycardia; and ST-T wave changes compatible with ischemia.

Clinical Discussion: *Dr. Williams:* This patient undoubtedly had gallstones. He was in the right age group; moreover, during 13 months he had three episodes of jaundice with nausea, vomiting, pruritus, and gray stools. The pruritus must mean that he had an obstructive type of jaundice which could have been either intrahepatic or extrahepatic. The fact that pruritus occurred in three episodes and that it was associated with nausea and vomiting would suggest extrahepatic obstructive jaundice caused by gallstones even though there was no definite complaint of abdominal pain. Thus there is a definite history of gallstones—with previous obstruction of the biliary tract in this patient—and this was present right at the beginning.

Then, the story switches to a neurological disturbance when the patient obviously had a severe headache, slurred speech, and signs of a left hemiparesis. Other important physical signs which are clues to the diagnosis of that neurological lesion are that the left eye was protruding, and there was injection and edema of the sclera. The relevant investigations of that neurological disease show that the patient had meningitis with cells. *Pneumococcus* was isolated from the blood and, with the proptosis of the left eye, I think one might reasonably make a diagnosis of cavernous sinus thrombosis on the left side with meningitis as well.

In addition to his gallstones, he had clinical evidence of cirrhosis and there was ascites present. He was jaundiced with a serum bilirubin of 2.6 mg/100 ml. He had gross splenomegaly, and the liver scan showed abnormal liver enlargement with some increased uptake in the left lobe, which again is seen in cirrhosis. In addition, there was increased uptake of colloid in the spleen.

Later we are told that liver biopsy (I think it was courageous to do a liver biopsy on this patient when he was so ill) showed postnecrotic cirrhosis with chronic passive congestion. I find it difficult to interpret that statement. "Chronic passive congestion" presumably meant that the sinusoids were distended, as in patients with heart failure, and there were radiological signs of heart failure as well. Liver biopsy is not an easy way to diagnose the type of cirrhosis. It merely shows fibrosis with regenerative nodules, and often it is difficult to be sure how it originated. In this patient, we can exclude alcohol as a cause of cirrhosis.

So, we have the neurological disturbance with some sort of infective basis. We have the gallstones; we have cirrhosis; and after the latter part of his illness, I thought it really came down to recurrent gram-negative septicemia secondary to the cholangitis and sepsis, which was present at operation. On a number of occasions hypotension was described. The patient had chills. Also, a variety of gram-negative organisms was isolated from the blood. He had the secondary renal failure that often goes with gram-negative septicemia, and he was treated with a wide variety of antibiotics effective against the gram-negative organisms. The leukemoid reaction and the bone marrow findings really just indicate severe infection. I think we would all agree that he had that.

Finally, in relation to the treatment by surgery, it was clear by this time he had become increasingly jaundiced. About this time his bilirubin had climbed to approximately 6.5 mg/100 ml. He was becoming increasingly jaundiced, and he clearly had biliary obstruction with sepsis at the time of the first operation. He also had continuing stones in the biliary tract, as demonstrated by cholangiography afterwards. It is difficult to know why he was fed bile, because it must have been infected bile. I think the only indication for feeding bile to patients with biliary fistulas is if you have noninfected bile, and the patient's prolonged biliary fistula is causing nutritional problems.

Radiologic evidence of heart failure also is suggested throughout the history. We have seen the ECG changes, and one wonders if heart failure is simply on the basis of mild hypertension with underlying ischemic disease or whether, in addition, there was toxic myocarditis related to the sepsis running through the whole illness.

What other information do we have in relation to the type of liver disease and the type of cirrhosis that was present in this patient? The first liver function tests showed in addition to the elevation of serum bilirubin, an alkaline phosphatase level of 60 King-Armstrong units. This is a high serum alkaline phosphatase level for that degree of jaundice in a patient with only postnecrotic cirrhosis and, subsequently, there was a rapidly climbing alkaline phosphatase level up to 180-240 King-Armstrong units. Again, there was disparity between the height of the alkaline phosphatase and the height of the serum bilirubin. This is a good sign of intermittent biliary obstruction, which certainly was present at the time of admission as judged from that high phosphatase value. The protein electrophoresis shows that he certainly had some evidence of chronic hepatocellular impairment. The serum albumin was 3.3 gm/100 ml. The serum globulins add up to 4 gm/100 ml. This, together with the splenomegaly and the ascites, would indicate that chronic liver disease, cirrhosis, had been present for some time. I would suggest that in addition to the histological diagnosis of postnecrotic cirrhosis, the other possibility that needs to be considered is whether he had secondary biliary cirrhosis from the start, which would fit in with his recurrent episodes of jaundice before admission. It would fit in with his biochemical disturbance of high phosphatase and low serum bilirubin values. Biliary obstruction and recurrent sepsis can develop in patients with true histological cirrhosis; portal hypertension also can develop.

One other pertinent finding was white cells in the ascitic fluid; one wonders whether the ascitic fluid was not also infected. Patients with cirrhosis of any type are liable to develop peritonitis. The *Pneumococcus* is not an infrequent organism and this may have been the primary infection in this patient.

There is a recent analysis by Bouchier of gallstones in patients with cirrhosis at necropsy. There has been a lot of interest over the years as to how frequently gallstones are found in patients with cirrhosis. I think the incidence of about 13% in the control group, with a higher incidence in females as compared to males, is really similar to all other published figures on the incidence of gallstones in control subjects at autopsy. In cirrhotic patients, and this included those with all varieties of cirrhosis, there is a higher overall incidence of 29.4% and the male/female difference was obliterated. I don't think there is any doubt that the incidence of gallstones in patients with all varieties of cirrhosis is increased.

The next question is why gallstones occur in patients with cirrhosis. The current view is that it may be related to some change in the biochemical composition of the bile in cirrhosis, and perhaps there is some evidence for this. In control subjects, mixed stones were predom-

inant, whereas in cirrhotic patients there is a much higher incidence of bilirubin stones. Bouchier was unable to show any clear correlation between the gallstones as demonstrated at autopsy and the previous clinical history of these patients. The cirrhotic subjects who had gallstones didn't appear to have had a great deal of trouble from them during their clinical course.

So, I would like to summarize this story. I suggest that the patient had gallstones with biliary tract obstruction, recurrent gram-negative septicemia, and secondary renal failure. I think that the most likely cause of the cirrhosis was a secondary biliary cirrhosis largely on the basis of the history of the liver function tests. Neurological disturbance was clearly an infective one with meningitis and possibly cavernous sinus thrombosis. In fact, the whole illness may have started from sepsis in the biliary tract with septicemic spread throughout the body.

Dr. Combes: Dr. Williams has covered the important features of this illness. There are a few things that I would like to comment on insofar as they indicate some of the problems facing the physicians who saw the patient in the hospital. The protocol, in a sense, simplifies the problems.

When they first saw the patient, they were hampered greatly by a lack of history of much of the previous illness. The striking early feature, as mentioned, was the overwhelming importance of pneumococcal meningitis and sepsis. When the patient improved from this he had an episode of hypotension. The features, in reading the protocol, strongly suggest that this was gram-negative sepsis rather than pulmonary embolus, which apparently was strongly considered at the time. In consultation for a liver biopsy, I saw the patient a couple of weeks after that hypotensive episode when he was confused, had evidence of heart failure, renal failure, and had infected cut-down sites in his arms. At that time, it was our impression that liver biopsy had little to offer the patient. Basically he was dreadfully ill and required a good deal of basic diagnostic studies and supportive therapy in order to get better. It was soon after this that *Serratia* was grown on his blood culture, probably introduced from the infected cut-down in his arm. This problem was taken care of. Increased attention was directed to his cardiovascular status and fluid balance. The patient actually began to improve thereafter.

When we first saw the patient, we were asked why he was jaundiced. Obviously we now know that he had biliary tract disease, but before this, in the absence of a history of prior episodes of jaundice and of abdominal pain, what are some of the factors that we considered as being potentially responsible for hyperbilirubinemia in a patient like this? It is important to recognize that pneumococcal disease alone may account for significant hyperbilirubinemia. This usually occurs with coexisting pneumococcal pneumonia. There are some who believe that this is caused by hypoxia associated with pneumonia, but there are clearly instances where this is not the only mechanism involved and hypoxic liver damage is not the cause. Actually, jaundice has been described in association with pneumococcal peritonitis in the absence of hypoxia. There is something associated with pneumococcal infection that can produce icterus.

The patient also had serious episodes of gram-negative infection and in this hospital, although not terribly commonly, we see instances of jaundice related to this type of infection. Liver biopsies don't show much, other than bile stasis and minor evidence of liver cell damage. Some hemolysis may contribute to the hyperbilirubinemia but interference with hepatocellular transport function is the major factor accounting for jaundice. How infection does this is not clear. I suppose we imply that

some type of bacterial product, perhaps a pyrogen, interferes with the integrity of hepatic function. I don't know how to define this more clearly. In some instances we have seen moderately high values for alkaline phosphatase with serum bilirubin elevated to as much as 15 mg/100 ml. I have seen jaundice persist for as long as three or four weeks on the basis of infection. Our most striking example of this type was a young woman who had a serious *Streptococcus D* infection in her pelvis. Thus, our present patient had several types of infection which could have accounted for hyperbilirubinemia.

This patient also had intermittent episodes of heart failure. I don't think that this ever was an overriding feature, but it may have contributed to hyperbilirubinemia. It was really sometime late in this patient's course, as the other manifestations of his illness began to wane (neurological disease was no longer a problem; his heart failure was well-controlled; he had an interval without infection), that it became apparent that jaundice was persisting and the alkaline phosphatase was continuing to rise. The history of previous episodes of jaundice was obtained. Oral and intravenous cholangiography were attempted and, not surprisingly, did not result in visualization of the biliary tract. A liver biopsy showed cirrhosis. We had a considerable discussion at our biopsy conference about the significance of the laboratory tests and the findings of cirrhosis. We all thought that the rising serum bilirubin and alkaline phosphatase levels could not be adequately explained on the basis of a cirrhotic process alone, particularly when factors that might contribute to impairment of liver function were improved. The existence of previous gram-negative sepsis seemed important to us. We strongly urged the physician who was then consulting on the ward to talk to the house staff and to consider exploratory laparotomy with biliary tract disease a prime consideration. At this stage the patient obliged by having another bout of fever. He was operated on and was found to have stones. The subsequent course is on the protocol. Diagnoses entertained by our staff were similar to those proposed by Dr. Williams.

I am not at all clear about why bile was fed to the patient. In fact, I am not quite clear why the second surgical exploration was carried out when it was. Apparently the patient's condition was stable but he had been vomiting. It seems to me that subsequent definitive surgery could have been delayed until a more opportune time, but I may be unaware of the factors that prompted surgical intervention since there is no information on the protocol.

Dr. Whelan: I would like to clear up one point. The second operation certainly was performed earlier than most physicians would have recommended. However, the first surgical procedure was an emergency one, and the surgical service was not satisfied that the suture line in the common duct around the T-tube was intact when they had to terminate the procedure. When the patient developed fever again and the cholangiogram showed that a stone was impacted in the lower end of the common bile duct, the physicians considered that infection due to a leak of bile into the peritoneal cavity was a strong possibility and decided to operate again. It was this operation that led to his demise.

Dr. Luby: The Infectious Disease Service followed this patient during his hospital course. We were assured by the family that the eye findings were old and had not changed recently. On this evidence, I think, we can exclude a cavernous sinus thrombosis, although this diagnosis certainly is suggested from the protocol. He did have pneumococcal meningitis on admission to the hospital and was treated appropriately.

The patient had three episodes of gram-negative rod bacteremia and sepsis during his hospitalization. The first organism isolated was *Klebsiella pneumoniae;* the episode probably resulted in acute tubular necrosis. The second organism isolated was a nonpigmented *Serratia marcescens. Serratia* is primarily associated with the hospital environment and it seems probable that the infection was hospital acquired. A likely source may have been an infected phle-

botomy site. The third episode was caused by *E coli* and most probably originated in the obstructed biliary tract.

At least one of these episodes of gram-negative sepsis might have been prevented by meticulous care of the phlebotomy site. Once an intravenous indwelling catheter is inserted, it is best to keep it in place for no longer than 72-96 hours. There is also evidence to suggest that the administration of an antibiotic ointment at the phlebotomy site will diminish the risk of bacteria gaining entrance into the blood stream.

What antibiotics should the clinician institute, on empirical grounds, after he has made the diagnosis of gram-negative rod sepsis? The chief factor of importance in this decision is that there will be a reasonable chance that the organism will be sensitive to the antibiotic(s) utilized.

Barnett and Sanford recently wrote an article on the therapy of gram-negative rod sepsis and shock.[2] They recommend kanamycin and colistimethate as empiric therapy in the patient with burns, hematologic disorders, and with a catheter inserted intravenously. Colistimethate is included because of the possibility of *Pseudomonas* septicemia in these clinical conditions. In hosts with other conditions, kanamycin and chloramphenicol can be given. After sensitivity studies have been performed, antibiotic therapy should be modified accordingly. These recommendations were written prior to the widespread use of gentamicin. This antibiotic is effective against a wide spectrum of gram-negative bacteria, including both *Pseudomonas* and *Proteus*. It can be used alone or in combination with other antibiotics.[3] It should be noted, however, that with general use of gentamicin, there have been a few reports of resistant *Pseudomonas* isolates.[4]

In cases of sepsis associated with biliary tract disease, the combination of kanamycin plus tetracycline or gentamicin plus tetracycline would seem most appropriate. Tetracycline is necessary in this circumstance because of its effectiveness against anaerobic bacteria residing in the colon, particularly bacteroides. Antibiotic dosage must be modified in accordance with the state of renal function. If the patient becomes azotemic, as in this patient when acute tubular necrosis developed, a major modification of antibiotic dosages (kanamycin, colistimethate, gentamicin, and tetracycline) would have to be instituted.

Among the final events in this case was the gradual development of renal failure. The etiology of this renal failure is not clear. Dr. Alfrey, the renal consultant, pointed out that the patient was receiving quinidine without dosage modification in the face of the progressive development of renal failure. Thus, quinidine toxicity may have been a factor in his demise.

Dr. Seldin: My first point is that early in his course this patient was not very jaundiced. His total bilirubin level was only 2.2 to 3.9 mg/100 ml at a time when his alkaline phosphatase value was very high. At the same time, the patient was becoming progressively anemic. The anemia might have been due, in part, to blood loss, since the stools were positive to guaiac some of the time. It has been emphasized by many people that anemia can mitigate the magnitude of jaundice because the principal precursors for bilirubin (red cells which are breaking down) are present in scanty amounts. The absolute amount of breakdown of hemoglobin is low under circumstances where the red cell mass is reduced, and especially where there is a predominance of young cells, so that the fractional decay of those red cells actually present in the circulation is low. In the presence of complete biliary obstruction, jaundice may be meager or even virtually absent when anemia is severe and when the peripheral blood is principally composed of young cells.

This may explain the rather modest jaundice at a time when biliary obstruction may have been fairly complete. Alternatively, the relatively mild jaundice might be attributed to incomplete obstruction which allowed elimination of some of the bilirubin through a partially obstructed biliary tree. It is interesting that impacted stones were found at surgery. This suggests that under free-flow circumstances, there

may not have been much bile getting through the common duct. This supports the thesis that the mild jaundice was caused by reduced hemoglobin breakdown associated with severe anemia.

My second comment concerns the possibility of cavernous sinus thrombosis. The protocol is exceedingly ambiguous concerning the physical findings, as Dr. Luby points out. I think it is important to remember that the organism involved in cavernous sinus thrombosis is *Staphylococcus* in about 95% of the cases. The presence of staphylococcal bacteremia is therefore strong supporting evidence, given an appropriate clinical picture for cavernous sinus thrombosis. It is treacherous to attribute cavernous sinus thrombosis to pneumococcal infection, especially when the clinical picture is so tenuous.

Finally, there are two processes which could be responsible for the impaired renal function. One is that the patient was in overt collapse from time to time, and at other times when he wasn't in obvious collapse, it is conceivable that there was a reduction in renal blood flow. The renal failure, therefore, might be prerenal in the sense that diminished renal blood flow resulted from circulatory failure. Second, overt episodes of collapse, particularly during surgery, might have produced pathologic lesions in the kidney; he might have had some degree of tubular necrosis. Everyone is aware by now that oliguria is not a necessary component of this disorder, although it is common.

Tubular damage may also result from the nephrotoxic effects of the antibiotics. Nephrotoxic antibiotics may initiate a vicious cycle. When a fixed dose is given and causes kidney injury, the blood level of the antibiotic will increase, aggravate the renal injury, and further delay the renal excretion of the nephrotoxic agent. If the circulation is impaired, the kidney is injured, or there is underlying renal disease, it is important to make appropriate adjustments in the dosage of nephrotoxic antibiotics.

The investigator who has studied this best, Kunin,[5] makes the following recommendation: It is best, in serious illnesses, to select the antibiotic from the point of view of its antibacterial properties without regard to renal failure. Of course, if one has a choice between equally effective antibiotics, the one without nephrotoxic properties should be selected. But, by and large, one selects the most effective antibacterial agent on the basis of sensitivity of the organism in question. Second, the initial dose is exactly the same as that which one would use if there were no renal failure whatsoever. In other words, one treats the infection initially with the same loading dose used in patients without renal failure. However, one modifies the frequency of the subsequent maintenance doses in accord with the nephrotoxic properties of the antibiotic, the degree to which its elimination is renal, and the magnitude of the renal failure. Kunin divides patients into three groups on the basis of serum creatinine concentration. When the serum creatinine is normal or near normal, the antibiotic program need not be greatly modified. Significant reduction in the frequency of administration is required when the serum creatinine is between 4 and 10 mg/100 ml. When the level is above 10 mg, the patient can be regarded as anuric, whether he actually is anuric or not.

I am not going to go through the modifications of antibiotic doses that are required; they are in appropriate tables in Kunin's article. Actually, our infectious disease service has upgraded those recommendations considerably in a much more up-to-date formulation of antibiotic doses. It is important to adjust maintenance doses carefully in patients who have renal damage and are given antibiotics with nephrotoxic properties. I think that some of the renal injury in this patient may have resulted from the administration of kanamycin and other nephrotoxic drugs, superimposed upon other factors producing renal damage, such as renal ischemia.

Pathological Findings: *Dr. Putnam:* It is difficult to decide where to begin the discussion, since there were 38 anatomic findings at the time of autopsy. However, the initial primary lesions were located in the biliary tract. The liver weighed 2,270 gm. In the right subphrenic space there was a thick layer of purulent exu-

date. On cut surface, the liver had a diffuse greenish coloration, and was separated by fibrous tissue bands into rather small lobules. Both grossly and microscopically the fibrous process was patchy. Some areas of the liver appeared relatively normal while other areas showed broad bands of scar tissue reminiscent of postnecrotic cirrhosis. Since the current classification and naming of the types of cirrhosis has reference only to the histologic pattern of the fibrous tissue, precise determination of the etiology of the cirrhosis often is difficult, and this is particularly true of needle biopsy specimens. A diagnosis of postnecrotic cirrhosis does not imply that there was a previous submassive hepatic necrosis, any more than a diagnosis of biliary cirrhosis always implies biliary obstruction—the diagnosis merely reflects what is seen on the microscopic slides. In this case, I believe that the entire damage to the liver was secondary to biliary tract obstruction, and was not caused by an obstructive component superimposed on a previously cirrhotic liver. Since the predominate microscopic features included monolobular periportal cirrhosis with bile duct proliferation, acute and chronic cholangitis and centrolobular bile stasis, we diagnosed a biliary cirrhosis, keeping in mind that this was not a uniform picture.

The gallbladder was a small shrunken structure embedded in a mass of dense fibrous tissue. Multiple loculated areas of pus surrounding the gallbladder were noted. There also was diffuse peritonitis which was particularly prominent over the hepatic flexure of the colon, in the retrovesical space, and in the right subphrenic space.

In the common bile duct at the ampulla of Vater, there was a large (9 mm in diameter), faceted, mixed gallstone obstructing the duct lumen. The walls of the common bile duct were thickened and fibrotic. There were multiple mucosal ulcerations along the entire lower segment of the common duct.

The kidneys were swollen and bile stained and weighed 250 gm each. The most striking feature was the bile nephrosis in which almost every tubule was plugged with bile. There was cloudy swelling of the proximal tubular cells. The glomeruli showed changes of arteriolar nephrosclerosis. Evidence for a terminal uremia was found in sterile fibrinous pericarditis and upper lobe interstitial pneumonia.

In addition to interstitial pneumonia, there was also a rather diffuse lower lobe bronchopneumonia with areas of necrotizing pneumonitis. Large numbers of bacteria were seen growing in the areas of necrosis.

No lesions were found in the myocardium. There was some left ventricular hypertrophy and dilation, as well as some degenerative change in the heart valves.

The brain showed a healing meningitis. In addition, there was acute cerebral edema sufficient to cause some compression of the base of the brain with uncal herniation and early necrosis of the cerebellar tonsils. This acute edema was undoubtedly secondary to anoxia following the operative cardiac arrest.

In summary, this was a patient who initially had biliary calculus disease, but whose actual diagnosis and course was obscured and complicated by meningitis, recurrent gram-negative septicemia, renal failure, pneumonia, cholecystitis, cholangitis, peritonitis, choledocholithiasis, and cirrhosis, with the terminal event being brain stem compression and cerebral edema secondary to cardiac arrest.

REFERENCES

1. Bouchier (1969) cited by Dr. Williams.
2. Barnett JA, Sanford JP: Bacterial shock. JAMA 209: 1514-1517, 1969.
3. Martin CM, Cuomo AJ, Geraghty, MJ, et al: Gram-negative rod bacteremia. J Inf Dis 119:506-517, 1969.
4. Shulman JA, Terry PM: An outbreak of gentamicin-resistant *Pseudomonas aeruginosa* infections of a single pyocine type on a burn unit (abstr). Clin Res 18:50, 1970.
5. Kunin CM: A guide to use of antibiotics in patients with renal disease. Ann Intern Med 67:151-158, 1967.

Drs. Eigenbrodt, Luby, Seldin, Whelan, Blomqvist, Putnam, and Combes, The University of Texas (Southwestern) Medical School, 5323 Harry Hines Boulevard, Dallas, Tex 75235.

Drs. Duvall and Frederiksen, Parkland Memorial Hospital, 5201 Harry Hines Boulevard, Dallas, Tex 75235.

Dr. Williams, Liver Unit, Department of Medicine, Kings College Hospital Medical School, Denmark Hill, London, SE 5, England.

THE HIGHEST OF STANDARDS!

FRANCIS HOSPITELS INCORPORATED

FRANCIS CONVALESCENT CENTERS
DIVISION OF FRANCIS HOSPITELS, INC.

FRANCIS HOSPITELS, INC., 7129 Highway 290 East, Austin, 512 454-2725

FRANCIS HOSPITELS—WACO: Francis Hospitel, 2501 Maple Avenue, Ph. 752-0311 **FRANCIS CONVALESCENT CENTERS**—AUSTIN: Retirement Inc., 6909 Burnet Road, Ph. 452-5719; FORT WORTH: Francis Convalescent Center, 1000 6th Avenue, Ph. 335-1903; CORPUS CHRISTI: Francis Convalescent Center, 3050 Sunnybrook, Ph. 853-9981; LONGVIEW: Highland Pines, 1100 N. 4th Street, Ph. 753-7661; SAN ANTONIO: San Pedro Manor, 616 West Russell, Ph. 732-5181 **FRANCIS MANAGEMENT**—PORT ARTHUR: The Golden Triangle Convalescent Center, 3900 Highway 365, Ph. 727-1651.

for the debilitated geriatric patient

Berocca®

TABLETS
high potency B-complex and C
for nutritional support

AVAILABLE ONLY ON Rx

contains water-soluble vitamins only

b.i.d. dosage

good patient acceptance

no odor, and virtually no aftertaste

Each Berocca Tablet contains:

Thiamine mononitrate	15 mg
Riboflavin	15 mg
Pyridoxine HCl	5 mg
Niacinamide	100 mg
Calcium pantothenate	20 mg
Cyanocobalamin	5 mcg
Folic acid	0.5 mg
Ascorbic acid	500 mg

Usual dosage is one tablet b.i.d.

Indications: Nutritional supplementation in conditions in which water-soluble vitamins are required prophylactically or therapeutically.

Warning: Not intended for treatment of pernicious anemia or other primary or secondary anemias. Neurologic involvement may develop or progress, despite temporary remission of anemia, in patients with pernicious anemia who receive more than 0.1 mg of folic acid per day and who are inadequately treated with vitamin B_{12}.

Dosage: 1 or 2 tablets daily, as indicated by clinical need.

Available: In bottles of 100.

ROCHE

Roche
LABORATORIES

Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

THE AUTOMOBILE THE GREATEST KILLER

EDWARD J. KOWALEWSKI, MD

OUT OF SHEER FRUSTRATION and confusion, and as a means of self-ventilation, I chose to write about the automobile as a killer.

Like most of you, I am a practicing physician who spends most of his time treating and preventing disease. We give careful prenatal care to all our obstetrical patients to prevent the occasional complications that can endanger the mother and newborn babe. We give thousands of immunizations to prevent rare diseases. We examine thousands of school children to assure that every child has an opportunity for normal development to maturity. We take much time to give counsel for the prevention of mental and emotional disease. We take thousands of x-rays, and make even greater numbers of tests, to detect early cases of cancer. We treat many garden-variety diseases to prevent the occasional complication. We provide long-range diet control to try to reduce cardiovascular renal disease. We set up elaborate hospital facilities for special care of patients with many disease entities. When a patient of ours dies, we give much thought and audit to what we might or should have done differently. We procure a detailed autopsy and, by reviewing the case with our colleagues at staff conferences, we expect to improve our diagnostic and treatment ability. We participate in varied postgraduate educational endeavors so that we may keep up with medicine's advances. We try to educate the public to recognize diseases early, to encourage them to have periodic examinations, and to teach them a healthy way of life. We do all of these things to preserve and prolong life and to make life more comfortable for as many people as we possibly can.

As a result of these efforts, by and large, we have reduced the mortality and morbidity rates in most categories of disease. I, like you, feel that in being a small part of the total effort, I am fulfilling my purpose as a physician and my responsibility as a guardian of the people I am privileged to serve.

Then I am called to the emergency room or to the scene of an automobile accident. After a preliminary survey of those injured and of the cause of the accident, I get that terrible feeling of despair and the sheer uselessness of all the time and effort I put into preventive medical care.

You know what I mean. Lying before you, in various degrees of injury and in death, might be the child you examined in school, for whom you wanted so much to assure maturity and a long life; the expectant mother to whom you gave such complete prenatal care; the diabetic man, to whom you have given such meticulous care; the youth with the perfectly normal body and everything to live for; the stranger away from his home environment, dazed and confused; and on and on.

The urgency of the immediate situation, coupled with complete concern for the needs of the victims, temporarily occupies all your attention. When you begin to take stock of the death and disability, that persistent feeling of frustration returns and you keep asking yourself, "Why? Why? What can we do to prevent or reduce this carnage, this murder, this suicide, this waste of precious life and limb?"

How Great Is the Problem? Much thought and effort is being given to this problem, and many of these efforts have produced some results. But we are dealing with a fulminating, rapidly advancing disease, and it is getting out of control. All present indications point to even greater mortality and disability.

Just imagine how concerned we would be if these were the results of poliomyelitis or rheumatic fever. We would have an all-out campaign, the likes of which we have never seen before. But we don't get excited or even very concerned about vehicular deaths. We and our society have become complacent, permissive. We look the other way. We hope the plague will go away.

What is the magnitude of these problems? Read on! In 1968, motor vehicles caused:

55,000 deaths, up 4% from 1967 and 28% since 1958.

2,000,000 disability injuries—disability beyond the day of the accident.

47,000 fatal accidents involving 70,000 drivers.

1,300,000 nonfatal accidents involving 2,400,000 drivers.

13,000,000 accidents involving property damage with 23,000,000 vehicles involved.

Motor vehicle mileage was 1,010,000,000,000; the death rate per 100,000,000 miles of travel was 5.47. The United States had 102,000,000 registered vehicles and 105,000,000 licensed drivers.

In 1968 there were 29 times as many deaths as in 1910, but nearly 220 times as many vehicles on the highways, traveling farther and faster.

Let's look at some figures that you and I can relate to easily as physicians. Here are the leading causes of death in the United States—the death parade, if you will of 1967:

1. Heart disease, 721,000.
2. Cancer, 310,000.
3. Stroke, 202,000.
4. Accidents: all, 113,000; motor vehicle, 53,000.
5. Pneumonia, 57,000.
6. General arteriosclerosis, 37,000.
7. Diabetes mellitus, 35,000.

Accidents are the leading cause of death among all persons age 1 to 37. Among persons of all ages, accidents are the fourth leading cause of death.

On an average day, year in and year out, the highway casualties in the United States total more than 10,000 injured; we have an average weekly death rate of more than 1,000.

Each year, *more than eight million* days of hospitalization are required merely for the care and treatment of the survivors. Yes, you read it correctly: We use up about eight million hospital bed days—or roughly 220 centuries, if you prefer—not to mention all the ancillary resources and scarce medical resources, each year. In fact, this is one of the heavy drains on our nationwide medical care system, particularly for the quadriplegics and the paraplegics that are common results of highway crashes.

We lose, just from the deaths alone, about two million man-years of future life as the result of highway crashes each year. These are just the lost years associated with the dead.

For more than half a century now, the head injuries sustained on the highway have been prominent causes of epilepsy; brain damage that produces results exactly analogous to mental retardation and cerebral palsy also is common.

Extreme facial disfigurement is commonplace, and we also are losing unknown numbers of unborn children as a result of crashes involving their mothers.

It is just generally a terrible mess, and it is a mess that is not generally appreciated in the terms that I have just related.

Why Get Involved? Some would say that physicians should be callous and ignore such goings-on, and perhaps they are correct. But can we as physicians, who hold every breath of life to be precious and every life sacred, ignore this continuous pandemic?

A few years ago I became involved in a highway issue dealing with median barriers and crossover accidents. I did not exactly receive a pleasant reception from the highway authorities during our hearings on the matter. I found that there are many ways one can be told, "Stick to medicine, Doctor, we know all about the highways." But in about five years the results of our efforts showed: The fatality rate from crossover accidents on the highways with which we were concerned dropped more than 60%; and on a national basis, highway fatalities from the same cause were reduced 30% to 90% on the nation's busiest express highways, after certain installations were made.

Was it worth the effort and abuse? Yes, in retrospect I am sure it was, because I was fulfilling the role of the physician that I am supposed to be; I made a contribution toward saving lives and preventing pain and suffering. In daily medical practice, what would be my chances of reducing mortality from any disease 30 to 90% in a three-to-five year period? Not much; perhaps my efforts in behalf of safer highways saved more lives than all the rest of my lifetime endeavors as a physician.

To say that I am involved as a crusader, an expert, or an evangelist to the cause of vehicle highway accidents would be a gross

inaccuracy. But like it or not, voluntarily or involuntarily, all of us as physicians are involved.

I don't pretend to have *the* solution or *the* answer. But I am a family and community oriented physician; I feel a sense of urgent responsibility to each of my patients, their families, and the community; and I realize that as a family physician I have the greatest opportunity to practice meaningful preventive medicine. And my cup of grief has spilled over too many times in sharing tragedies caused by the "four-wheeled killers." Thus, I began to seek the means by which I could attempt to make some contribution in this area.

Thorough Investigation: I decided that if it became my lot as physician or coroner to care for an automobile accident victim, I would first do the most complete investigation possible and, with the assistance of others, try to determine the causes of the accident and injuries and make these findings known to the proper authorities, to the family, and to the public if warranted. This, I hoped, would lead to eventual objective and statistical data which would aid in the resolution of the problem as a whole. In my state, drivers are required to have physical examinations periodically; I now perform these examinations with great care so that I may give a more responsible opinion as to the candidate's ability to drive a vehicle. These things I can and will do to further the cause of highway safety.

Counseling: As important as these attitudes are, the cornerstone of my practice always has been the use of counseling. Prenatal, premarital, pre-retirement, and other types of counseling are successful; why not pre-driving counseling? I tried it and, after some preliminary experiences, concluded that the most encouraging area of potential influence in reducing automobile accidents is among drivers of all ages, but especially the young driver.

The automobile, and the opportunity to drive one, has some sort of magnetic pull; in addition, it implies entrance into responsible adulthood, so that the young driver candidate begins to show some interest, a flicker of potential maturity, and some responsibility. Most high schools have driver training courses, and almost all young people react to them favorably. This course is elective, but because of its excellent results I believe it should be mandatory for all driver candidates.

Young driver candidates seem to listen with a grown-up attitude; I try to take advantage of that by talking with them in the same manner. After concluding the physical examination I tell the candidate that nothing more is required, but since he and his family are my friends as well as my patients, I feel they expect me always to advise them about measures for their overall health welfare. I explain that the preventive attitudes and measures he takes as a new driver likely will be one of the most important reasons for his attaining maturity without disability. If possible, I like to talk to the candidate alone, then conclude with a joint discussion with one or both parents.

I tell him that I think there are as many good young drivers as there are good adult drivers, and that there probably are as many bad young drivers as there are bad adult drivers. I point out that the driver's license is a privilege which is neither permanent nor automatic, that it can be revoked for many reasons, and that it is the most frequently checked single public record by employer, insurance man, banker, car salesman, you name it. If an unsatisfactory record is found here, the reviewer rarely goes further. To illustrate the economic importance of the driver's privilege, I quote the difference in cost of automobile insurance for a good risk and bad risk driver. I ask if he can think of one example in his present or foreseen future endeavors where the right to drive an automobile does not have a direct or indirect dependence.

By this time the young candidate begins to show increasing interest and attentiveness. I tell him that I make this extra effort because

I am interested in keeping him alive, and in keeping him free of disability. I point out that the automobile has more potential danger than a loaded gun. I say, "Let me tell you a fact of life, unjust, but a fact: When a young person is involved in an automobile accident, in the eyes of many public authorities and in the news media, his youth alone puts him behind the eight-ball. To avoid getting into such circumstances, he has to be extra careful to be even a better driver than most people are."

Having gained the candidate's confidence, it is time to make the most important point: If young people have good basic manners at home, at school, and with their friends, they usually make good drivers. People with good manners have consideration for others, which is the most important and desirable component of good driving. I stress the importance of methodically fulfilling the recommended driving procedures they were taught in school so that these rules become solidly ingrained as habit. It is just as easy to develop good habits as bad ones, and either kind may have something to do with whether or not the driver's own skin remains intact. Sometimes I find that when you talk generally about prevention to some of our youth, you are immediately categorized as a "square," but when you relate directly to him as an individual and to the welfare of his own skin, you are not so square.

I say that the best self-imposed rule to follow—before getting behind the wheel of any car—is to assure yourself that you will have complete control of all your faculties and that you are absolutely serious in your attitude. I immediately state that I am not only talking about alcohol, drugs, lack of sleep, and the like, but also about emotional control. Driving an automobile is no way to take out your emotions if you are depressed, angry, or worried. It is no way to show off or to prove that you have guts; such ventilation of feeling proves only that such emotions often cause many serious or fatal automobile accidents.

The logical corollary is that no matter where you sit in any car, its driver has your life in his hands. If he is a bad driver or if you suspect that he is in no condition to drive safely, be smart and refuse to go along. To be even smarter, select and sort out your driving companions as carefully as you can, because their actions may determine whether you stay in one piece or not.

Parents: It is more effective if a parent is present, but even if none is, I tell the young person that we as parents now, and he as a future parent, will have much apprehension before we come to the practical realization that it is proper for us to permit our children to become drivers. As a new driver, he can allay this apprehension—and thank his parents for making this privilege possible—by showing them that he is a good, responsible, reliable, careful, and safe driver. No other return could possibly be more meaningful or more reassuring to the parent.

Finally, with or without the parent, I suggest that this privilege of driving includes responsibility to self and to others. There is a need for self- and family-imposed discipline. There should be a firm understanding by the young person that at the moment he begins to see laxity and carelessness in his driving, he must stop driving and take corrective measures until he satisfies himself that he once again is a safe driver. "If you do not recognize your deficiency yourself, then your mother and father will remove the driving privilege immediately and not allow you to enjoy it again until the safe attitude and the proper driving habits are restored." At first this strictness is shocking to the candidate and his parents, but they soon realize the need for such a measure in this area of potential death where many times there is no second chance. I find that by this understanding, I have introduced a rule

that many parents would not have the courage to impose, even though they really would like to; but believe it or not, young people also are happy about this because in many cases they expect and want reasonable controls.

I use no scare tactics; I don't talk down to these young candidates; and I do not always succeed in reaching them. But after many such sessions I have really felt like a doctor again, and that I have effectively reached and helped a young person and his family. Only time will tell if this effort will give meaningful results. One thing is certain; with this measure I have reached and made more confidences with young people than by all my other efforts combined.

Drivers Are Not the Only Problem: Vehicular accidents are not one problem, they are a complex of problems. One is especially difficult because our whole national economy is so tied up in it. When I say national economy, I mean M-O-N-E-Y.

All levels of government are involved. I believe that before too long, the legal liability question will become an issue as it pertains to the vehicle and the highway—and to a much greater extent that it now applies to the driver.

Despite all of these difficulties, I can see no reason why all parties involved cannot reach a realistic compromise. Unless such a compromise is reached voluntarily, one may be reached involuntarily as a result of demands by an aroused public. I fear this latter approach because it would result in a crash program and produce no lasting, meaningful results.

Some day, when the public's preoccupation with our international involvement is lessened a bit, perhaps it will begin to focus on its tremendous losses on the highways. Then, maybe the power of public opinion will bring about the attention, concern, and action that the problem rightfully deserves.

Although the topic here is vehicular accidents, those in industry have many points in common, and experience there may offer hope and another approach to the problem. Despite increasing mechanization, death rates from work accidents in manufacturing have decreased greatly in the past 33 years. This reduction was largely the result of education, training, and surveillance of industrial workers; elimination of hazardous machinery; and the increased importance of compensation liability. Similar efforts could be directed toward drivers and vehicles.

I hope that the medical profession will be among the leaders who bring this disease of "death on the highways" under eventual control. None of us can afford to take our time; each week lost costs another 1,000 lives. I don't know of a service we could possibly provide that would have the potential for saving more lives or preventing more disabilities, to say nothing of grief and economic loss. The question is, will we?

Dr. Kowalewski, President, American Academy of General Practice, Volker Blvd at Brookside, Kansas City, Mo 64112.

Senior Consultants
Perry C. Talkington, M.D.
Charles L. Bloss, M.D.

Psychiatrist-in-Chief
Howard M. Burkett, M.D.

Medical Director
James K. Peden, M.D.

Associate Psychiatrists
Jerry M. Lewis, M.D.
Claude L. Jackson, M.D.
Dode Mae Hanke, M.D.
Thomas H. Allison, M.D.
Maurice S. Green, M.D.
Doyle I. Carson, M.D.
Stanley L. Seaton, M.D.
Keith H. Johansen, M.D.
Charles G. Markward, M.D.
Joe W. King, M.D.
Claude R. Nichols, M.D.
Larry E. Tripp, M.D.
Aretta J. Rathmell, M.D.
Donald N. Offutt, M.D.

Clinical Psychology
David H. Lipsher, Ph.D.
John T. Gossett, Ph.D.
Dale R. Turner, Ph.D.
Robert W. Hagebak, Ph.D.

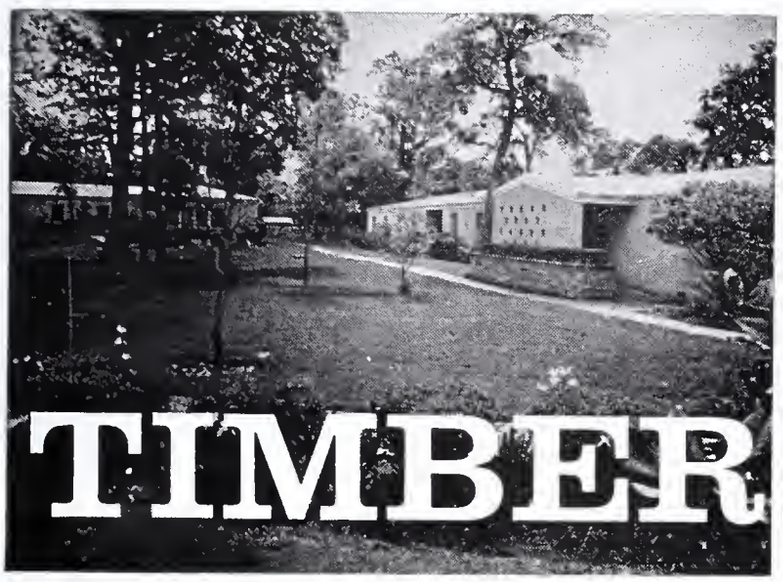
Social Work
Sally Stansfield, M.S.W.
Robert O'Connor, M.S.S.W.
Kathleen Wood, M.S.W.
Margie W. Buell, M.S.S.W.
Robert P. Stewart, M.S.S.W.
Cecilia Coffelt, M.S.S.W.

Occupational Therapy
Geraldine Skinner, B.S., O.T.R., Director

Recreational Therapy
Lois Timmins, Ed.D., Director

Director of Nurses
Mae Belle James, R.N.

Business Manager
Ralph M. Barnette, B.B.A.



PSYCHIATRIC HOSPITAL

DAY HOSPITAL

DEPARTMENT OF OUT PATIENT PSYCHIATRY

DEPARTMENT OF ADOLESCENT PSYCHIATRY

Narcotic Cases Not Admitted

TIMBERLAWN
PSYCHIATRIC HOSPITAL

381-7181 Dallas, Texas 75223 P. O. Box 11288

KELSEY-SEYBOLD CLINIC

6624 FANNIN STREET HOUSTON, TEXAS 77025

526-2671

INTERNAL MEDICINE

Endocrine and Metabolic Diseases
Mavis P. Kelsey, M.D., F.A.C.P.
Alfred E. Leiser, M.D., F.A.C.P.

Pulmonary Diseases
H. Irving Schweppe, Jr., M.D., F.A.C.P.
Stanton P. Fischer, M.D., F.A.C.P.

Gastrointestinal Diseases, Gastroscopy
John R. Kelsey, M.D., F.A.C.P.
Philip S. Bentlif, M.D., F.A.C.P.
Ralph D. Eichhorn, M.D., F.A.C.P.
F. Scott O'Neil, M.D. F.A.C.P.
James W. McBee, M.D., F.A.C.P.

Heart Disease and Cardiac Catheterization
Earl F. Beard, M.D., F.A.C.P.
Efrain Garcia, M.D., F.A.C.P.
Wayne E. Dear, M.D.

Arthritis and Rheumatic Diseases
James W. Kemper, M.D., F.A.C.P.

Hypertension and Peripheral Vascular Diseases
Gene E. Burke, M.D.

Cancer Chemotherapy
Carlos F. Taboada, M.D.

Nephrology
Francis X. Schloeder, M.D., F.A.C.P.

Hematology
Jerome B. Bart, M.D.

Infectious Diseases
Stuart Riggs, M.D., F.A.C.P.

Occupational Health Services
Paul E. Wright, M.D., M.P.H., F.A.C.P.
Maurice B. Johnston, M.D., F.A.C.Pr.M.
Richard M. Fenno, M.D., M.P.H., F.A.C.P.
Cannon A. Owen, M.D., F.A.C.S.
Edward A. Anderson, M.D., F.A.C.Pr.M.
William E. Froemming, M.D., F.A.C.Pr.M.

GENERAL & THORACIC SURGERY
William D. Seybold, M.D., F.A.C.S.
James D. McMurrey, M.D., F.A.C.S.
Jerry L. Doggett, M.D.

OBSTETRICS & GYNECOLOGY
Melville L. Cody, M.D., F.A.C.S.
William A. Johnson, III, M.D.

PSYCHIATRY
Chester G. Cochran, M.D.
*Ricardo Daichman, M.D.
William H. Boylston, M.D.

PEDIATRICS

Rheumatology
Earl J. Brewer, Jr., M.D., F.A.A.P.

Allergy
Charles W. Ewing, M.D., F.A.A.P.

OTO-LARYNGOLOGY
J. Charles Dickson, M.D., F.A.C.S.
James L. Smith, M.D., F.A.C.S.
Joseph S. Weycer, M.D.

NEUROLOGY
Robert R. Pierce, M.D.

DERMATOLOGY
Wilson M. Fraser, M.D., F.A.A.P.
Donald W. Owens, M.D.

UROLOGY
Don W. Pranke, M.D., F.A.C.S.
J. David Wright, M.D.

ORTHOPEDIC SURGERY
W. Malcolm Granberry, M.D.
Jesse H. Dickson, M.D.

OPHTHALMOLOGY
Henry E. Wahlen, M.D., D.A.B.O.

RADIOLOGY
David M. Rulfs, M.D.
John D. Brooks, M.D.

PATHOLOGY
Robert A. Jordan, M.D.

DENTISTRY
Eugene W. Gray, D.D.S.

PSYCHOLOGY
Mrs. Ruth Blackman, M.A.
Robert de von Flindt, Ph.D.
Cheryl McBride, M.A.

SPEECH PATHOLOGY AND AUDIOLOGY
Donna R. Fox, Ph.D.
Carolyn C. Garcia, M.S.

CONSULTANTS

Maxillo Facial Surgery
Edward C. Hinds, M.D., D.D.S., F.A.C.S.

Psychiatry
Albert Owers, M.D.

Nuclear Medicine
John A. Burdine, Jr., M.D.

Gastrointestinal Diseases, Gastroscopy
Theodore Hersh, M.D.

Occupational Medicine
Valliant C. Baird, M.D., F.A.C.Pr.M.

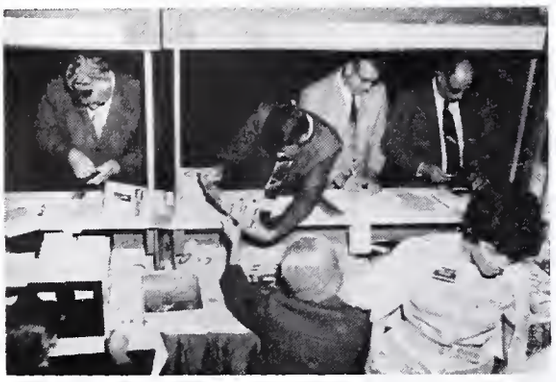
Podiatry
Levitt A. Peters, D.P.M.

SPECIAL FACILITIES
Radioisotope Laboratory
Registered Dietitian
Electroencephalography
Electrocardiography
Vectorcardiography
Registered Physiotherapist
Pulmonary Function Laboratory
Regional Immunization Center
FAA Examinations
Complete Endoscopy
Audiology Laboratory
Electrolysis

ADMINISTRATOR
James A. Bakken

*Military Service

NEW DECADE IN TEXAS MEDICINE LAUNCHED AT 103RD ANNUAL SESSION



Registration tables at the Fairmont Hotel remain a hub of activity throughout the 1970 Annual Session.

With the passing of the gavel and a firm handclasp from outgoing President Dr. Charles Max Cole of Dallas, Dr. Walter Walthall of San Antonio assumes the leadership of the Association for 1970-1971.

Preparing for the Seminar on Medical Writing are, from left to right, Miss Lois DeBakey of Houston; Frank Chappell of Chicago; Dr. E. Clinton Texter, Jr., of Temple, moderator; Miss Selma DeBakey of Houston; and Dr. Charles G. Roland of Rochester, Minn.

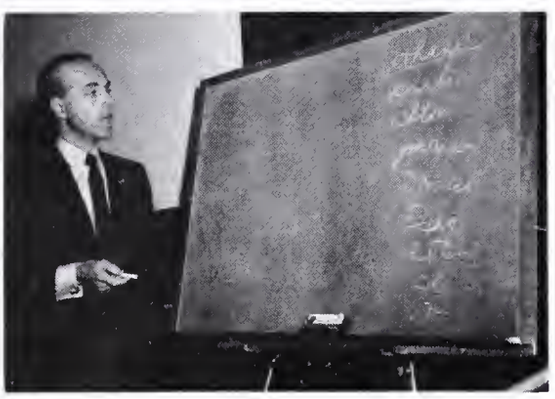
TMA members and their wives relax Saturday Night at the Fairmont while dancing to the music of the Ran Wilde Orchestra and the Mad Medics Plus Three.

Col. Frank Borman is an obvious favorite with physicians attending the Blue Cross-Blue Shield breakfast, as evidenced by the number of requests for the astronaut's autograph.

Getting together at the reunion of the 1950 graduates of The University of Texas Medical Branch at Galveston are, from left to right, Dr. Bernard Schnitzer of Dallas; Dr. and Mrs. Harold Joseph of St. Louis, Mo.; Mrs. Sam Nixon and Dr. Nixon of Floresville; and Mrs. Schnitzer.

Mrs. E. T. Crim and Mrs. Bruce Crim, both of Greenville, view with apparent appreciation the variety of art work displayed at the 1970 Physicians' and Wives' Art Exhibition.

Discussion seems intent during one of the popular Curostone Consultations. Led by Dr. G. Truett James of Dallas, participants consider the management of neck pain.



Distinguishing between alcoholism and sedativism during the Symposium on Alcoholism is Dr. Stanley E. Gitlow of New York.

Left. Posing with his portrait by Dallas artist Ronald Anderson, left, is Maj. Gen. J. Bruce Medaris, Friday's general meeting luncheon speaker.

Far left. Dr. Truman G. Blocker, Jr., of Galveston takes a closer look at the exhibit of Dallas Science Fair winner Kenneth Gretz.

DISABILITY MAY HALT YOUR INCOME BUT YOUR OFFICE EXPENSES STILL GO ON

- RENT
- EMPLOYEES' SALARIES
- PROPERTY TAXES
- UTILITIES
- MAINTENANCE SERVICES

These Are Some Of The Major Costs You Must Still Pay When Disabled.

Write The Texas Medical Association For Information On The Broad Coverage Available Through The Association's Group Office Overhead Plan.

The TMA Office Is Located At 1801 North Lamar Blvd., Austin, Texas 78701.

Underwritten By

THE PRUDENTIAL
SOUTHWESTERN HOME OFFICE

INSURANCE COMPANY OF AMERICA
HOUSTON, TEXAS

NEWS

Lubbock Tornado: Medical Care Report

BY ANY DEFINITION, the Lubbock tornado was a disaster.

At about 9:45 p.m. May 11, the exceptionally powerful tornado struck in the heart of the city. It left death, destruction, and many injured people who needed medical care. It also knocked out the power supply, telephones, and other communications; the county medical society's office in the Great Plains Building was destroyed.

Yet, even during the immediate aftermath when the casualties were brought in rapidly, the hospitals were never more than 15 minutes behind in providing emergency treatment. Dr. R. C. Douglas, Jr., district director of disaster medical care, said that the disaster plans worked smoothly and that despite the mad rush during the night in providing necessary immediate care, by mid-morning of the following day the Lubbock hospitals had 18 beds unfilled.

Almost immediately after the tornado struck, the hospitals activated their disaster plans. Beginning with physicians who were still making hospital rounds then, the emergency rooms were manned and the first casualties were seen by physicians. Unfortunately one of our major facilities, West Texas Hospital, in the downtown area, was struck by the tornado and received some damage. The staff rapidly modified the disaster plan and was able to provide effective emergency care for casualties that were brought there. A few of the hospital's patients were injured, but none seriously.

Rapidly, triage teams were set up at the entrance to the receiving rooms, and patients were tagged and directed to various areas according to the severity of their injuries. Within a short time there were physicians of all specialties working in the emergency room. The hospital personnel turned out in force to demonstrate the efficiency with which they could put their disaster plan and disaster training into effect.

Shortly after the tornado struck, a lady walked into the West Texas Hospital's emergency room and announced, "I am a registered nurse and want to work." She began immediately, working effectively and efficiently for many hours. When things began to settle down, everyone was aware of her contribution—no one had thought to ask her name. There were several such episodes on that hectic evening.

On arrival in the emergency room, each patient's injuries were evaluated and necessary immediate measures taken to stabilize his condition, and decisions were made regarding his further care. X-rays were done when indicated. Surgical teams were formed as needed; since physicians continued to arrive to help care for the victims, there was little delay in starting surgical treatment when it was needed. Within two hours of the time the tornado struck, there were at least four operating rooms in use in Methodist Hospital. By 3 a.m. most of the surgery had been completed; 35 surgical cases had been handled since 10 p.m.

A Lubbock internist, Dr. Monzer Attar, was among the early casualties brought to Methodist Hospital; he received serious injuries when flying debris struck his car. [At press time, the editors learned that Dr. Attar had been released from the hospital and was recovering.]

At Methodist Hospital, 185 storm casualties were seen on Monday evening and early Tuesday morning; another 15-20 people were treated for injuries received during rescue operations. During the period immediately following the tornado, approximately 300 casualties were treated in Lubbock hospitals. About two-thirds of the victims were released after treatment, but about 100 were hospitalized. After two weeks, only 10 of these remained in hospitals. There were 26 deaths directly related to tornado injuries.

During the early morning hours we noted that we were beginning to lose water pressure, and we learned that the power loss would mean curtailment of the entire city's water supply at least during the next day and possibly longer.

The tornado destroyed a large residential area, and the community immediately was faced with housing, feeding, and providing medical care for a great many people who had lost everything they possessed. They were cared for by various agencies and churches, but most were settled rapidly in two areas. One was the large auditorium-coliseum on the Texas Tech campus, and the other was the Guadalupe Community Center which escaped damage even though it is located in one of the areas of worst destruction.

Members of our medical society immediately began looking after these people, and at the coliseum the Red Cross disaster teams came in and helped organize all phases of their care and were especially helpful in organizing the medical clinic. Several physicians volunteered and rotated the duty to provide extensive coverage for these victims in the early period after the tornado. As the week went by and the need became less, the physicians were able to continue medical services adequately by having shorter clinics at different times of the day.

At the Guadalupe Center, the nucleus of the medical care service was the staff of the well baby clinic which had been conducted in that facility for many years. Frequent clinics were scheduled there in order to assure readily available medical care for those

A LOOK AT TEXAS MEDICINE TODAY

ONE OF A SERIES

Scientific Articles

Texas is rich in medical resources, and the quality of scientific articles in TEXAS MEDICINE is an immediate indicator of this. Each month TEXAS MEDICINE presents an important group of scientific articles which have been carefully evaluated by expert consultants and the Scientific Publication Committee. The wide variety of subject matter is useful to practicing family physicians, specialists, researchers, and medical faculty. High standards are maintained by the scientific editors, who continually encourage more well-done scientific articles from Texas physicians—unusual case reports, comprehensive review articles, clinical and investigative articles. To remain a fully balanced, worthwhile medical publication, TEXAS MEDICINE calls upon you to write for us. Send today for our Information for Authors (Mrs. Marilyn Baker, Managing Editor, TEXAS MEDICINE, 1801 N. Lamar Blvd., Austin, Tex. 78701).

who were working on the large-scale salvage operations around the ruins of the nearby homes. Work around the rubble resulted in some new injuries; other clinic patients received follow-up care for injuries that had been treated during the night of the tornado. Also, of course, there were the general illnesses that develop in such circumstances. These clinics were quite successful in lending support to the morale of those who lived and worked in the area, and unquestionably the attention to some of the problems prevented development of more serious complications if medical care had been delayed.

This clinic was much more effective and easier for the physicians to establish because of the help, cooperation, and know-how of a number of different groups. The nursing staff that manned the well baby clinic took the initiative of organizing it and helping us to get it started. The public school nurses volunteered to work, and their assistance was of great value in making this operation a success. The Junior League volunteers were readily available for various types of duties. Pharmacists and the drug detail men of Lubbock came to our assistance en masse and materially contributed to making these first-aid clinics function efficiently and effectively.

By the end of the first week after the storm, most of the people that had been sheltered in the civic auditorium had been relocated; since the need for this medical surveillance seemed to disappear, that clinic was discontinued. But the clinic in the Guadalupe area still was quite busy almost two weeks after the tornado. At that time, the streets were being cleared, transportation into and out of the area was becoming easier, and a number of volunteer medical clinics which had been functioning prior to the tornado were beginning to reopen. The medical society maintained the clinic until May 24, when it was no longer needed.

The overall aspect certainly was one of great distress for the victims of the tornado. However, we are proud that the medical profession and the hospitals of our city responded in a creditable manner. There are a few areas where our organization and planning need to be revamped and updated, but on the whole we think that the acute emergency on the night of the tornado was handled quite well, and that our responsibility to extend medical care and surveillance to the community as needed afterward was fulfilled.

The Lubbock-Crosby-Garza County Medical Society and the people of Lubbock deeply appreciate the efforts of all the many groups and individuals who immediately came to help. The Bexar County Medical Society sent a generous contribution to be used for the aid of the victims. Both the McLennan and Angelina County Medical Societies called to offer medicines and/or teams of physicians if we needed them, and many individual physicians throughout the state called their friends in Lubbock to say that if we needed help, they would come. The Flying Physicians Association offered to provide air ambulance service.

Although we were fortunate in having ample facilities and physicians to meet the need, it was good to know that so many of our colleagues were ready and willing to help us.

TRACY D. GAGE, M.D., President,
Lubbock-Crosby-Garza
County Medical Society

State Health Department Serves in Disaster

Odell Griffin of the Division of Disaster Health and Medical Services, Texas State Department of Health, checked into a Lamesa motel on May 11, planning to discuss emergency medical care with local officials the next morning. At 10:30 that night he was notified of the tornado in Lubbock; he called the Emergency Operating Center (EOC) in Lubbock and was told that there was considerable damage and that ambulances were needed. He immediately contacted Mr. C. A. Taylor, city manager of Lamesa, and asked that ambulances be dispatched to Lubbock. He then notified Charles E. King, director of the Division, advised him of the current situation, and left for Lubbock.

Arriving at the EOC in Lubbock about midnight, Mr. Griffin found Dr. Walter Mantooth, alternate district director of disaster medical care, coordinating the admission of the injured to the area hospitals. By this time, Austin personnel of the Division of Disaster Health and Medical Services, including Mr. King, were at the state EOC in Austin to coordinate Texas State Department of Health activities to provide any medical assistance needed in Lubbock; they remained around-the-clock until the EOC closed at 5 p.m. Wednesday, May 13.

The Lubbock police department had established communication with the hospitals to find available bed space. At 2:30 a.m. Mr. Griffin contacted Dr. R. C. Douglas, district director of disaster medical care, who was in the disaster area directing emergency opertions and receiving information. Shortly afterward, Dr. Douglas arrived at the Department of Public Safety headquarters and advised that all injured persons who required hospitalization had been placed in hospitals. At 3:30 a.m. Dr. Douglas sent a wire to Austin, advising that the medical situation had been stabilized.

The next morning a casualty check was made through the Department of Public Safety; available information was gathered and another field consultant from the Division of Disaster Health and Medical Services, Andrew Woodward, had arrived in Lubbock on the governor's airplane with Dr. J. E. Peavy, Commissioner of Health. A check was made of hospitals to ascertain any needs. Dr. Peavy requested that sutures be supplied, and they were flown into Lubbock from Ethicon in San Angelo by the State Health Department. The airplane also carried portable radio gear for the use of the Disaster Health and Medical Services Division personnel in Lubbock.

On Wednesday, May 13, Dr. Charles R. Queen, district director of disaster medical care for the Rio Grande Valley area and chairman of the Texas Medical Association's Committee on Disaster Medical Care, arrived to consult with Drs. Douglas and Mantooth and to survey the situation. On Thursday, May 14, Sen. Ralph Yarborough arrived to discuss emergency medical care during the disaster. He was assured that no one lacked medical attention during the emergency and was informed of the excellent job done by the hospitals and medical teams. Thursday evening Drs. Douglas and Mantooth held a meeting to discuss the medical situation.

A meeting also was scheduled for June 18 to discuss all aspects of the disaster medical care during the Lubbock emergency. Dr. Douglas arranged for members of his advisory committee to attend, and all others interested in emergency medical care.

On May 18, Dr. Douglas, Mr. Griffin, and Mr. Woodward attended a meeting at the Office of Emergency Preparedness to discuss post-disaster aid to the nine counties damaged by the tornados.

In summary, the State Plan worked well under the direction of Drs. Douglas and Mantooth who put the disaster

plan into operation, set up triage stations, worked on communications with the Department of Public Safety, and coordinated operations with local radio facilities for broadcasting news concerning medical care. Officials believe that the advance planning done under the dedicated leadership of Drs. Douglas, Mantooth, and others contributed greatly to the excellent medical care provided during the Lubbock disaster.

UT Pharmacy School Gets Grant for Training Center

A federal grant to be used in establishing a drug education training center has been awarded to the College of Pharmacy of The University of Texas at Austin.

One of four institutions chosen to serve specific areas of the country, it is the only pharmacy college to be selected. The three other centers will be administered by the colleges of education at San Francisco State University, the University of Wisconsin, and Adelphi University in New York.

Although the UT Austin College of Pharmacy will receive and administer the grant, the center will be located at the UT Medical School at San Antonio. Dr. Joseph B. Sprowls (PhD), dean of the UT Austin College of Pharmacy, will direct the center, with Dr. Arthur Briggs, professor of pharmacology at San Antonio, acting as associate director. Fred S. Brinkley, in his dual capacity as assistant to Dean Sprowls and director of public affairs of the Texas Pharmaceutical Association, will be project coordinator.

Dispensed through the Office of Education under the Educational Personnel Development Act, the grant became effective May 1, 1970, through April, 1971. It will utilize the four universities to serve as national centers in preparing a nucleus of teams from the states who will, in turn, return to their communities to train others. States will be able to send teams of teachers, counselors, school administrators, students, and community leaders to be trained in sessions that will last four to six weeks. Trainees will be selected by their state education agencies to attend the center programs, which are to be broadly interdisciplinary in nature. Experts in the areas of sociology, psychology, medicine, education, pharmacy, law, and rehabilitation will join in the attempt to offer a comprehensive approach to drug education.

Southwestern Student To Assist in Honduras

A third-year student at The University of Texas Southwestern Medical School at Dallas, Joe Kintz, has been awarded a $1,175 fellowship which will permit him to assist for 12 weeks this summer at a hospital in Honduras.

Kintz is one of 29 American medical students selected by a committee of six US medical educators to receive the fellowships from the Association of American Medical Colleges. The fellowships are made possible by a grant from Smith Kline & French Laboratories, Inc.

The students will spend at least ten weeks with their foreign sponsors. Kintz is assigned to the Hospital de Occident in Santa Rosa de Copan, near the northern border of Honduras, and is scheduled to leave on June 6. A graduate of Texas Tech University, he is the son of Mr. and Mrs. John Kintz of Lake Arthur, N. M.

AMA, Jaycees Promote Better Emergency Care

The American Medical Association and the US Junior Chamber of Commerce have recently launched a program to improve emergency services across the country.

Action by the two organizations was prompted in part by the fact that last year 20,000 people died and another 25,000 were permanently disabled as a result of inadequate or improper emergency care and by the realization that only 18 of 50 states regulate ambulance personnel training at all.

According to Dr. Irvin E. Hendryson, vice-chairman of the AMA Board of Trustees and chairman of the AMA Commission on Emergency Medical Services, the AMA and the Jaycees will work to bring to the attention of the public the need for standardized emergency vehicle equipment, properly trained medical attendants, and a better communications system between emergency vehicles and hospitals. The 6,500 Jaycee chapters and more than 2,000 county medical societies in the United States will meet to establish priorities, determine localized needs, and mobilize governing officials and the public to expedite emergency services.

The AMA headquarters staff has already distributed more than 9,000 "how to" kits to county medical societies and Jaycee chapters. The packet contains sample publicity materials; a directory of state and local emergency medical services; a first aid manual; guidelines for community councils; instructions for conducting emergency care courses for policemen, firemen, and ambulance personnel; and first aid techniques for the layman. It also offers suggestions for promoting and recognizing medical emergency identification symbols, both as highway markers and on the person; and it includes a model ordinance or statute regulating ambulance service.

A few kits are still available from the Commission on Emergency Medical Services, AMA, 535 N. Dearborn St., Chicago 60610; and the national Jaycee office, P. O. Box 7, Tulsa, Okla. 74102, will provide information on local chapter contacts.

Astronaut Lovell Honors Physician for Experiments

Dr. Philip O. B. Montgomery of Dallas recently received a "Silver Snoopy" and a letter from Apollo 13 astronaut James Lovell in recognition of experiments which may determine the ultimate condition of the human being in space.

Dr. Montgomery, special assistant to the deputy chancellor, The University of Texas System, and associate dean of the UT Southwestern Medical School, is principal investigator on a National Aeronautics and Space Administration-sponsored project to determine the effects of weightlessness on living human cells.

The Dallas physician was one of four scientists honored by NASA. Others were Dr. Francis Johnson (PhD), president, and Dr. John H. Hoffman (PhD), faculty member, of The University of Texas at Dallas; and Dr. Pauline Beery Mack (PhD) of Texas Woman's University in Denton.

Dr. Montgomery's group in Dallas is the only biological team building its own experimental package for a NASA flight, a "skylab," due to be completed by middle or late 1972. Originally, the project was scheduled for Biosatellite and Apollo Applications programs. Measuring 15 by 6½ by 8 inches and weighing 22 pounds, the package contains a total of 26 experiments, including moving pictures of living cells in zero gravity as well as a variety of chemical studies on them.

Schering

After only one year:

Administered to more people than live in Galveston, Waco, and Texas City.*

Injectable
Garamycin®
brand of
gentamicin sulfate injection

*An estimated 208,000 patients have received GARAMYCIN Injectable to date. The combined population of Galveston, Waco, and Texas City is 203,000. (Estimated 1969 figures from The New York Times Encyclopedic Almanac 1970.)

See Clinical Considerations section on last page...

Mounting acceptance in the hospital...

Proven clinical effectiveness

Respiratory Infections

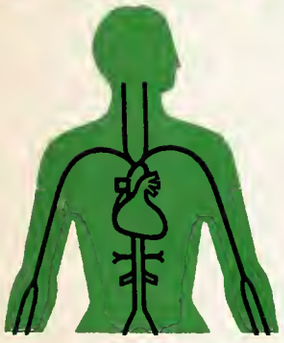
Outstanding results in serious gram-negative respiratory infections[1,2]

GARAMYCIN Injectable may prove successful where other antibiotics have failed.

Urinary Tract Infections

Strikingly effective in selected urinary tract infections[3]

With relatively low intramuscular doses, the promptly attained levels of GARAMYCIN achieved in the urine are considerably higher than the concentrations required for effectiveness against virtually all susceptible gram-negative pathogens. (Appropriate precautions are indicated in patients with impaired renal function; consult Package Insert for full details.)



Septicemia

May be lifesaving[4-6]

Numerous investigators have drawn attention to the value of GARAMYCIN Injectable in the treatment of gram-negative septicemias, often complicated by shock. Many hospital strains of *Serratia* are susceptible.[6]

Wounds and Burns

Response may be dramatic in wounds and burns complicated by sepsis[7]

The established efficacy of GARAMYCIN Injectable against *Pseudomonas*—as well as most other gram-negative pathogens—makes it an especially useful agent in the treatment of infected wounds and burns.

Important Precautionary Note Patients receiving treatment with GARAMYCIN Injectable (gentamicin sulfate injection) should be under close clinical observation because of the toxicity associated with the use of the drug. Ototoxicity, vestibular and auditory, can occur in patients, primarily those with preexisting renal damage, treated with GARAMYCIN Injectable for longer periods or with higher doses than recommended.

GARAMYCIN Injectable is potentially nephrotoxic, and this should be kept in mind when it is used in patients with preexisting renal damage.

This drug should be limited to the treatment of serious infections caused by susceptible gram-negative bacteria, with due regard for relative antibiotic toxicity. (See Clinical Considerations section.)

Mounting evidence in the laboratory...

Schering

Over 95% gram-negative pathogens sensitive.*

No other antibiotic performed comparably *in vitro* against gram-negative pathogens.
In a nationwide culture audit of antibiotic sensitivity patterns, sensitivity reports from 106 hospitals, geographically representative by census tract and of varying sizes, were analyzed. During the three-month period, ***every*** gram-negative culture slip from ***every*** hospital was surveyed. The total number of cultures involved in the audit was 97,091. The total number of sensitivity determinations was 643,503.

Pathogens	Percentage of sensitive strains / Number of strains tested — Antibiotics*							
	Garamycin	Kanamycin	Cephalothin	Cephaloridine	Ampicillin	Colistimethate	Chloramphenicol	Tetracycline
Klebsiella pneumoniae	99.5% 962	84.7% 992	86.2% 995	76.1% 67	32.7% 1,020	96.3% 640	82.9% 1,028	77.1% 1,026
Aerobacter aerogenes	95.9% 2,739	86.1% 2,818	53.5% 2,985	58.8% 1,514	22.7% 3,066	88.6% 2,603	85.8% 3,071	67.8% 2,981
Klebsiella aerobacter group	98.8% 566	83.9% 547	66.1% 522	60.5% 276	28.0% 553	89.5% 560	86.2% 587	62.8% 433
Klebsiella, all others	92.7% 2,944	83.3% 3,186	77.4% 2,976	67.5% 627	13.5% 2,883	95.0% 2,105	81.6% 3,212	70.6% 3,063
Pseudomonas aeruginosa	91.6% 4,528	29.8% 4,460	6.6% 4,418	6.6% 1,279	6.0% 4,360	91.3% 3,852	26.9% 4,608	26.4% 4,404
Proteus, indole-positive	91.8% 1,031	85.8% 1,062	39.9% 981	54.1% 364	40.2% 1,042	10.3% 758	76.1% 1,096	42.1% 1,051
Proteus mirabilis, indole-negative	94.9% 3,272	90.1% 3,378	83.1% 3,290	77.5% 975	78.0% 3,274	8.8% 2,634	85.9% 3,469	26.8% 3,278
Proteus, unspecified	96.2% 1,335	85.8% 1,371	71.7% 1,434	70.0% 647	64.7% 1,435	11.2% 1,233	76.0% 1,421	22.4% 1,298
Escherichia coli and all other Escherichias	96.4% 12,557	91.4% 12,818	87.8% 12,686	88.8% 4,251	74.6% 12,899	95.4% 10,623	94.1% 13,086	70.0% 12,559
Paracolobactrum, all	93.4% 303	88.9% 325	62.0% 305	74.2% 62	43.8% 340	80.9% 215	87.1% 350	72.6% 340
Coliform bacteria	99.0% 593	91.2% 649	81.5% 637	66.7% 21	52.7% 624	95.6% 607	91.6% 678	76.1% 637
Totals	95.1% 30,830	80.5% 31,606	65.3% 31,229	68.1% 10,083	50.3% 31,496	75.8% 25,829	79.7% 32,606	56.5% 31,070
Gram-positive (included for consistency with Package Insert, not an approved indication)								
Staph—*S. aureus, coagulase-positive*	97.4% 1,548	88.8% 1,458	97.7% 2,050	98.7% 636	61.1% 1,559	20.4% 628	94.4% 2,123	83.7% 1,966
Staph—*S. aureus, unspecified*	99.3% 993	92.8% 902	98.1% 1,289	95.3% 213	45.8% 1,153	29.3% 116	96.4% 1,427	82.3% 1,360

*Adapted from a three-month, nationwide hospital audit by R. A. Gosselin and Co., Inc., Dedham, Massachusetts (mid-May to mid-August, 1969).[8] Antibiotics with significant gram-negative spectra are included. Organisms are listed as reported by laboratory.

Sensitivity testing was done by the disc method, a generally reliable test in the hospital setting. It should be noted, however, that the results with GARAMYCIN were somewhat higher than the results reported where the tube dilution technique was used. (See Clinical Considerations section which follows.) The concentration of the GARAMYCIN disc was 10 mcg.

Whereas standard testing methods were used by all hospitals, it is acknowledged that in a survey of this kind considerations such as differences in methodology are possible sources of error. The comparative percentage-sensitivity results derived from a survey of this kind are, therefore, not absolute. One should keep in mind also that the proper selection of an antibiotic is based not only on susceptibility testing but on relative toxicity and other clinical considerations as well.

It is felt, nonetheless, that the broad scope of the survey and the extreme care in data collection and tabulation permit a conclusion that the results are *generally* representative of current nationwide antibiotic sensitivity patterns.

Injectable Garamycin®
brand of gentamicin sulfate injection

See Clinical Considerations section on last page...

Injectable Garamycin®

brand of gentamicin sulfate injection

Schering

ADULT DOSAGE GUIDELINES

See definitive prescribing information in Package Insert.

Patients with Normal Renal Function

Total Daily Dose (administered in two, three, or four divided doses)			
	Less Severe	**Resistant/ Moderately Severe**	**Serious/Life-Threatening**
Urinary Tract Infections (due to susceptible strains of gram-negative bacteria)†	0.8-1.2 mg./kg. for 7-10 days	Larger doses or additional antibacterial therapy should be considered in severe urinary tract infections or in resistant cases involving the renal parenchyma or anatomic anomaly.	up to 5 mg./kg.
Other Infections including bacteremia, infected surgical wounds, severe soft tissue infections, and respiratory tract infections (due to susceptible strains of gram-negative bacteria)	3 mg./kg. for 7-10 days		

†Alkalinization of the urine may be a useful therapeutic adjunct.

Patients with Impaired Renal Function

To minimize the risk of ototoxicity in patients with impaired kidney function, only the first dose should be that normally recommended. Each subsequent dose should be half or less of that recommended for patients with normal renal function, depending upon the degree of renal impairment.

In patients with renal failure who are undergoing 14-hour hemodialysis twice weekly, administration of 1 mg./kg. GARAMYCIN Injectable at the end of each dialysis period has been suggested.

Clinical Considerations

Indications: GARAMYCIN Injectable is clinically effective in infections due to susceptible strains of gram-negative bacteria, including *Pseudomonas aeruginosa,* and species of indole-positive and indole-negative *Proteus, Escherichia coli,* and *Klebsiella-Aerobacter.* Bacteriologic studies should be conducted to identify the causative organism and to determine its sensitivity to gentamicin sulfate. Sensitivity discs of the drug are available for this purpose. If the susceptibility tests indicate that the causative organism is resistant to gentamicin sulfate, other appropriate antibiotic therapy should be instituted.

IN VITRO INHIBITION OF CLINICALLY IMPORTANT BACTERIA BY GENTAMICIN SULFATE (TUBE DILUTION STUDIES)

BACTERIA	No. of Strains Tested	No. of Strains (%) Inhibited by: 4 mcg./cc. or less		8 mcg./cc. or less*		No. of *In Vitro* Studies
Staphylococcus aureus	1,210	1,200	(99%)	1,206	(99%)	11
Pseudomonas aeruginosa	885	771	(87%)	828	(93%)	16
Escherichia coli	836	736	(88%)	779	(93%)	11
Indole-positive and indole-negative *Proteus* species	477	210	(44%)	358	(75%)	12
Klebsiella-Aerobacter species	292	205	(70%)	231	(79%)	10

*Number of strains (%) of gram-negative bacteria inhibited by 10 mcg./cc. or less are as follows: *Pseudomonas aeruginosa,* 828 (93%); *Escherichia coli,* 792 (95%); *Proteus* species, 393 (82%); *Klebsiella-Aerobacter* species, 284 (97%). From same studies as above.
Source: Package Insert

This drug should be limited to the treatment of serious infections caused by gram-negative bacteria, particularly *Pseudomonas aeruginosa, Proteus* and other susceptible organisms, with due regard for relative antibiotic toxicity. Therefore, the drug should be considered for use against gram-negative: 1. Bacteremia; 2. Infected surgical wounds; 3. Severe soft tissue infections, including burns complicated by sepsis; 4. Respiratory tract infections; and 5. Selected cases of urinary tract infection.

Contraindications: GARAMYCIN Injectable is contraindicated in individuals with a history of hypersensitivity or toxic reactions to gentamicin.

Warnings: Patients receiving treatment with GARAMYCIN should be under close clinical observation because of the toxicity associated with the use of this drug. Ototoxicity, vestibular and auditory, can occur in patients, primarily those with pre-existing renal damage, treated with GARAMYCIN Injectable, usually for longer periods or with higher doses than recommended.

GARAMYCIN Injectable is potentially nephrotoxic, and this should be kept in mind when it is used in patients with pre-existing renal impairment. Kidney function diminished by infection of the upper urinary tract may, however, improve during effective treatment with GARAMYCIN Injectable.

Concurrent administration of potentially ototoxic drugs such as streptomycin and kanamycin or of potentially nephrotoxic drugs such as polymyxin, colistin, and kanamycin with gentamicin sulfate has not been shown to afford any clinical advantages and, moreover may result in additive toxicity. Monitoring of vestibular, cochlear, and renal function will provide guidance for therapy in such cases.

Precautions: In patients with impaired renal function in whom serious infection develops, serum concentrations of the drug may rise, with consequently increased risk of ototoxicity. In these patients or in those in whom recommended dosage or duration of therapy must be exceeded as a life-saving measure, routine studies of kidney function should be performed when possible. These may be supplemented by evaluation of the vestibular and auditory function and measurement of serum concentration of the drug when feasible. Serum concentrations of gentamicin should be maintained below the range of 10-12 mcg./ml. to reduce risk of ototoxicity.

Ordinarily, treatment should not be given for more than 7 to 10 days or be repeated unless required for serious infection not responsive to other agents.

As with other antibiotics, treatment with GARAMYCIN Injectable may occasionally result in overgrowth of nonsensitive organisms. If superinfection occurs, appropriate therapy is indicated.

Safety for use in pregnancy or the potential for fetal ototoxicity or nephrotoxicity have not been established. Studies in pregnant animals have not revealed teratogenic or ototoxic effects in the fetus. GARAMYCIN Injectable should not be used in pregnant patients or in women of childbearing age unless its use is deemed advisable by the physician.

Adverse Reactions: The overall incidence of ototoxicity considered related to treatment with GARAMYCIN Injectable was 2.8 per cent (16 of 565 patients). Contributory factors (two or more factors were relevant to most patients) were as follows: 10 had azotemia, 10 received a total of 1 gram or more of the drug, 7 had recently received other potentially ototoxic antibiotics (streptomycin or kanamycin), and 5 were over 60 years of age. Six also had decreased high-tone hearing acuity, which returned to or toward normal in the 4 patients retested.

Analysis of BUN data indicated that 4 (2%) of 172 patients showed increases in BUN that were probably related to treatment with GARAMYCIN Injectable. Of 20 increases probably or possibly related to treatment, 7 were reversible, 9 occurred in terminal patients, and 4 had no follow-up.

Other adverse reactions associated with treatment were one instance each of urticaria, decreased hematocrit, and reversible depression of granulocytes with normal bone marrow. Other rarely reported and possibly treatment-related adverse reactions were anemia, increased reticulocyte count, rash, purpura, drug fever, hypotension, convulsions, twitching, salivation, nausea, vomiting, increased transaminase activity (SGOT or SGPT), increased serum bilirubin, decreased serum calcium, and joint pain.

Packaging: GARAMYCIN Injectable, 40 mg./cc., 2-cc. multiple-dose vials, for intramuscular administration.

References: (1) Brayton, R. G., and Louria, D. B.: Gentamicin in gram-negative urinary and pulmonary infections, Arch. Int. Med. *114*:205, 1964.* (2) Louria, D. B.; Young, L.; Armstrong, D., and Smith, J. K.: Gentamicin in the treatment of pulmonary infections, J. Infect. Dis. *119*:483, 1969. (3) Cox, C. E.: Gentamicin, a new aminoglycoside antibiotic: Clinical and laboratory studies in urinary tract infections, J. Infect. Dis. *119*:486, 1969. (4) Groll, E.: Clinical experience with gentamicin, data from 12 German clinics, in Gentamicin: First International Symposium, Paris, January 1967, Lucerne, Essex Chemie AG, pp. 121-128.* (5) Jackson, G. G.: Laboratory and clinical investigation of gentamicin, *ibid.*, pp. 62-74. (6) Medeiros, A. E.: Discussion, J. Infect. Dis. *119*:533, 1969. (7) Polk, H.: Discussion, J. Infect. Dis. *119*:529, 1969. (8) Three-month, nationwide hospital audit by R. A. Gosselin and Co., Inc., Dedham, Massachusetts (mid-May to mid-August, 1969).

*Dosage in this investigational study was less than now recommended in Package Insert.

For more complete prescribing details, consult package insert or Physicians' Desk Reference. Schering literature is also available from your Schering Representative or Medical Services Department, Schering Corporation, Union, New Jersey 07083.

UT Public Health School Building Plans Approved

The University of Texas System Board of Regents has approved final plans and specifications for two building programs for the UT School of Public Health at Houston.

To be designed by a Houston architectural firm, the phase 1 building for the Public Health School will be a two-story brick and steel-frame structure of approximately 35,000 gross square feet of space, with a gross project cost of $1,200,000. The phase 2 building will be a structure of 10 stories and a basement and will encompass a total of 197,730 gross square feet of space. The project cost for that building has been set at $10 million, and another Houston firm has been named project architect. Both buildings will be located in the Texas Medical Center across from the university's M. D. Anderson Hospital and Tumor Institute.

The regents also authorized the UT System Office of Facilities Planning and Construction to advertise for bids on both phases of the building program when funding is complete.

UTSMS Component Names First Staff Appointments

Dr. Richard D. Burk, dean of the School of Allied Health Professions at The University of Texas Southwestern Medical School at Dallas, has appointed three department chairmen and 40 faculty members to the new school.

Department heads named were Dr. L. Ruth Guy (PhD), chairman of the school's department of medical technology; Dr. Donald A. Pool (PhD), chairman of the department of rehabilitation science; Marilyn B. Haschke, chairman of the department of nutrition and dietetics.

Officials also reported receipt of a $27,887 grant from the US Department of Health, Education, and Welfare to help initiate academic training in four categories of professional study.

Approximately 60 students are expected to begin classes this fall in the new school, authorized by the UT System board of regents to help meet the spiraling need for more trained technical assistants for physicians and health-care institutions. All students will study subjects in the school's basic or core curriculum as well as in their specialized fields. First classwork, in anatomy and physiology, began June 15 for some students. Specialized courses in physical therapy, nutrition and dietetics, medical technology, and rehabilitation science will begin Sept. 8 for all students.

Offices and classrooms for the new school are in the annex to Methodist Hospital of Dallas and in Methodist's Weiss Memorial Education Building. Course work and clinical training in the various specialties will be conducted there, at Parkland Memorial Hospital, and at other participating medical and health-care facilities.

Department Lists Certain Diseases To Be Reported

Physicians in Texas are responsible for reporting certain communicable diseases to the State Department of Health under rules and regulations recommended by Commissioner of Health Dr. James E. Peavy and approved by the State Board of Health as control measures for such diseases.

Diseases reportable by name, address, age, sex, and race include amebiasis; anthrax; aseptic meningitis; botulism; brucellosis; cholera; diphtheria; encephalitis, primary infectious, post-infectious; Hansen's disease; hepatitis, infectious; hepatitis, serum; leptospirosis; malaria; meningococcal infections; plague; poliomyelitis, paralytic; psittacosis; Q fever; rabies in man; relapsing fever (louse-borne); rheumatic fever, acute; Rocky Mountain spotted fever; rubella congenital syndrome; salmonellosis; shigellosis; smallpox; tetanus; trichinosis; tuberculosis, all forms; tularemia; typhoid fever; typhus fever, endemic, epidemic; and yellow fever.

In addition to the requirement of individual case reports for these diseases, any unusual or group expression of illness which may be of public concern should be reported to local health authorities by the most expeditious means.

Numerical totals only need to be reported for the following diseases: measles, whooping cough, streptococcal infections, influenza, mumps, rubella, and chicken pox.

International quarantinable diseases to be reported to the State Health Department by telephone or telegraph are cholera, plague, smallpox, relapsing fever (louse-borne), typhus fever (epidemic, louse-borne), and yellow fever.

Epidemiologic investigative assistance is available to all Texas physicians from the Communicable Disease Services of the Texas State Department of Health at the request of local health officers, either city or county.

Communications Network Links Medical Libraries

Medical libraries in five states are now linked by a communications network that has begun operations in Dallas.

The network connects 11 participating libraries with a central "switch-point" at the new South Central Regional Library Program headquarters at The University of Texas Southwestern Medical School at Dallas. The regional system is one component of a federally-funded nationwide biomedical communications network centering around the National Library of Medicine in Bethesda, Md.

Coordinator of the Dallas-based regional library program is Dr. Donald Hendricks (PhD), the former director of libraries at Sam Houston State University at Huntsville.

The system serves medical libraries in Arkansas, Louisiana, New Mexico, Oklahoma, and Texas. Through rapid teletype transmission, researchers can forward requests for needed technical data to the Dallas center, which will conduct a search and relay the request to the proper source library, Dr. Hendricks explained.

Libraries forming the regional consortium have on file a total of 974,100 volumes, plus issues of 21,842 journals, which are available for exchange through the regional program. The regional office also will provide medical researchers with teletype access to the National Library of Medicine's Medical Literature Analysis and Retrieval System (MEDLARS), through which computerized searches are made of the references stored there. The national library contains some 1,300,000 biomedical books, theses, journals, pamphlets, and microfilms.

Material provided through the regional library hookup will be either photocopies or the original item, with the library which provides the material deciding which is appropriate, Dr. Hendricks said. Photocopies will be provided free of charge and may be kept by the recipient.

Services offered initially through the regional office include an interlibrary loan program to improve access to biomedical literature through better coordinated and more liberal lending

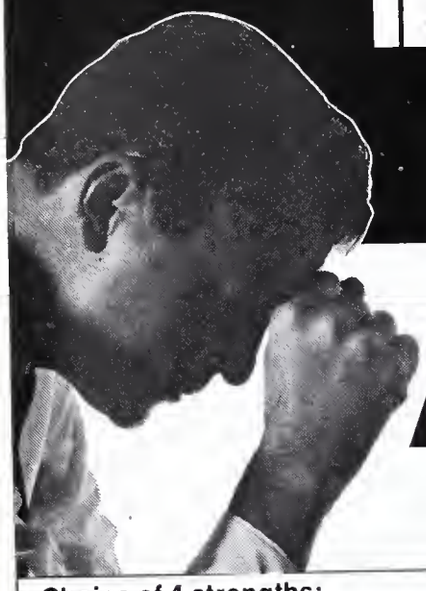
The treatment of

impotence

in the American male is complex. The concept of chemotherapy plus the physician's psychological support is confirmed as effective therapy.

NEW CLINICAL STUDY

The Treatment of Impotence with Methyltestosterone Thyroid (100 patients—Double Blind Study) T. Jakobovits Fertility and Sterility, January 1970 Official Journal of the American Fertility Society



Android®

(thyroid-androgen) tablets

Double-Blind Study and Type of Patient: 100 patients suffering from undifferentiated impotence. Examination revealed the patients were within the average range of 17-Ketosteroid excretion and protein bound iodine. Except for fatigue in some patients all were in good health. Study was for one month in duration. Each patient received one tablet 3 times daily.

Results: Of the patients receiving the active medication (Android) a favourable response was seen in 78%. This compares with 40% with those on placebo. 80% of the patients treated with the active ingredients showed relief in fatigue compared with 42% of those receiving the placebo. Although psychotherapy is indicated in patients suffering from functional impotence the concomitant role of chemotherapy (Android) cannot be disputed.

Contraindications—Methyltestosterone is not to be used in malignancy of reproductive organs in male, coronary heart disease. Thyroid is not to be used in heart disease, hypertension unless the metabolic rate is low.

References: 1. Montesano, P., and Evangelista, I. Methyltestosterone-thyroid treatment of sexual impotence. Clin Med 12:69, 1966. **2. Oublin, M. F.** Treatment of impotence with methyltestosterone-thyroid compound. West Med 5:67, 1964. **3. Tileff, A. S.** Methyltestosterone-thyroid in treating impotence. Gen Prac 25:6, 1962. **4. Heilman, L., Bradlow, H. L., Zumoff, B., Fukushima, D. K., and Gallagher, T. F.** Thyroid-androgen interrelations and the hypocholesteremic effect of androsterone. J Clin Endocr 19:936, 1959. **5. Farris, E. J., and Colton, S. W.** Effects of L-thyroxine and liothyronine on spermatogenesis. J Urol 79:863, 1958. **6. Osol, A., and Farrar, G. E.** United States Dispensatory (ed. 25). Lippincott, Philadelphia, 1955, p. 1432. **7. Wershub, L. P.** Sexual Impotence in the Male. Thomas, Springfield, Ill., 1959, pp. 79-99.

REFER TO PDR

Choice of 4 strengths:

Android

Each yellow tablet contains:
Methyl Testosterone ..2.5 mg.
Thyroid Ext. (1/6 gr.) ..10 mg.
Glutamic Acid .....50 mg.
Thiamine HCL .....10 mg.
Dose: 1 tablet 3 times daily.
Available:
Bottles of 100, 500, 1000.

Android-HP
HIGH POTENCY

Each red tablet contains:
Methyl Testosterone ..5.0 mg.
Thyroid Ext. (½ gr.) ...30 mg.
Glutamic Acid .....50 mg.
Thiamine HCL .....10 mg.
Dose: 1 tablet 3 times daily.
Available:
Bottles of 100, 500, 1000.

Android-X
EXTRA HIGH POTENCY

Each orange tablet contains:
Methyl Testosterone .12.5 mg.
Thyroid Ext. (1 gr.) ....64 mg.
Glutamic Acid .....50 mg.
Thiamine HCL .....10 mg.
Dose: 1 or 2 tablets daily.
Available:
Bottles of 60, 500.

Android-Plus
WITH HIGH POTENCY B-COMPLEX AND VITAMIN C

Each white tablet contains:
Methyl Testosterone ..2.5 mg.
Thyroid Ext. (¼ gr.) ...15 mg.
Ascorbic Acid (Vit. C) .250 mg.
Thiamine HCL .....25 mg.
Glutamic Acid .....100 mg.
Pyridoxine HCL .....5 mg.
Niacinamide .....75 mg.
Calcium Pantothenate .10 mg.
Vitamin B-12 .....2.5 mcg.
Riboflavin .....5 mg.
Dose: 2 tablets daily.
Available: Bottles of 60, 500.

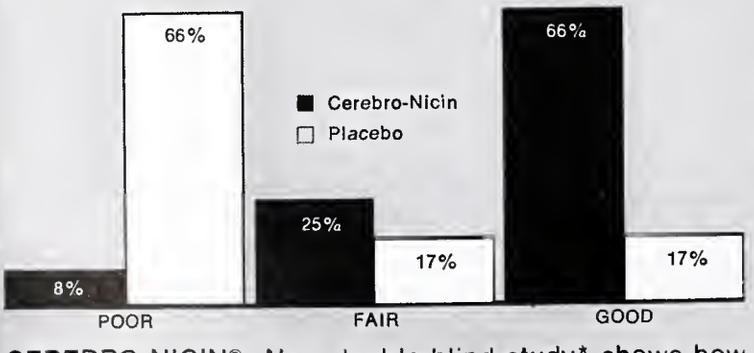
Write for literature and samples: BROWN THE BROWN PHARMACEUTICAL CO., INC. 2500 West 6th Street, Los Angeles, California 90057
A SUBSIDIARY OF ASSOCIATED CARE ENTERPRISES, INC.

For the treatment of the aging patient

Cerebro-Nicin®

capsules/elixir

A Gentle Cerebral Stimulant and Vasodilator



CEREBRO-NICIN® New double-blind study* shows how effectively senility can be forestalled. Four times as many aging patients showed striking improvement.

*A Double-Blind Study of Cerebro-Nicin, Therapy for the Geriatric Patient, R. Goldberg Jrnl,. of the Amer. Ger. Soc. June, 1964

Available in a tasty wine base elixir and capsules

Each Cerebro-Nicin capsule contains:

Pentylenetetrazole	100 mg.
Nicotinic Acid	100 mg.
Ascorbic Acid	100 mg.
Thiamine HCl	25 mg.
l-Glutamic Acid	50 mg.
Niacinamide	5 mg.
Riboflavin	2 mg.
Pyridoxine	3 mg.

DOSAGE: One capsule t.i.d. or as prescribed by physician.
AVAILABLE: Bottles of 100, 500, 1000 capsules.
Also elixir 8 oz. bottles.
CONTRAINDICATIONS: There are no known contraindications to Pentylenetetrazole although caution should be exercised when treating patients with a low convulsive threshold.
Most persons experience a flushing or tingling sensation after taking a higher potency niacin-containing compound. As a secondary reaction some will complain of nausea and other sensations of discomfort. This reaction is transient and is rarely a cause of discontinuance of the drug if the patient is forewarned to expect the reaction.

REFER TO PDR

Write for literature and samples...

BROWN THE BROWN PHARMACEUTICAL CO.
2500 W. 6th St., Los Angeles, Calif. 90057
Write for Product Catalog

among the region's libraries and by the national library; a computer-produced master of medical and scientific journal holdings of all member libraries; and a central card-file of recent and current catalogued books as they are acquired by member libraries. The regional library also will initiate a continuing education program of workshops and seminars assisting local medical librarians in developing their collections.

Member libraries of region 9, in addition to the UTSMS library in Dallas, are located at the University of Arkansas Medical Center, Little Rock; Louisiana State University Medical Center, New Orleans; LSU Medical Center, Shreveport; Tulane University, New Orleans; University of New Mexico School of Medicine, Albuquerque; University of Oklahoma Medical Center, Oklahoma City; Texas Medical Center, Houston; Texas Medical Association, Austin; the UT Medical Branch at Galveston; and the UT Medical School at San Antonio. The regional system also has access to the collection of the Los Alamos Scientific Library of the University of California located at Los Alamos, N.M.

House of Delegates Adopts Policy Statement in Dallas

During the 1970 Annual Session of the Texas Medical Association, the House of Delegates adopted the following position statement on compulsory insurance programs.

(1) The Medicare and Medicaid programs of health care were conceived and designed politically and have been continually manipulated as a consequence of federal directives, the control of which and formulation of which have not involved the expertise of those responsible for implementation.
   a. The State's authority in the design and carrying out of the welfare program as it relates to Medicaid has been usurped totally by a continued flow of federal directives. The State Department of Welfare lacks autonomous control that is necessary for effective planning and cooperative efforts in aiding the needy of Texas.
   b. The individual provider, who has the actual responsibility of delivering personal health care to all of us, has continually been ignored in the deliberations and in the consultations with reference to federally sponsored health programs. The basic fault of both Medicare and Medicaid has been the failure of government to involve those directly responsible for implementation in the basic planning and design of such prepayment mechanism.

(2) It has been impossible, despite repeated sincere attempts, for those providing the personal health care to achieve any reasonable means of communication with those officials who plan and program and design what is to be the future health care of the nation. Instead the federal government by a continued flow of press releases and directives continues to impugn the integrity of the medical profession as a whole. Repeated distortion of some abuses that have occurred has even seemed to be a planned affront to physicians and hospitals. Not once has the composition of innumerable task forces of HEW been designed to be representative of the actual individual providers of health care, or what most of us would consider our personal medical advisor.

(3) The government has promised more than it can deliver and continues to promise even more despite increasing deficits to programs involved. At the same time officials responsible for administering this act continue to ignore repeated consultative advice in the actual planning and directives related to Medicare and Medicaid.

(4) It is inappropriate and morally wrong for government to promise medical care and then expect the hospital and nursing home and the physician personally to subsidize the program.

(5) Government has failed to achieve an adequate state of consumer education with respect to federally oriented programs and thereby has failed to incorporate any sense of consumer responsibility, which is so vital in the efficient implementation of comprehensive, rather unlimited medical care. They have in turn placed an undue burden on the already limited resources of the physician by requiring that much of his efforts and time be devoted to informing individuals as to their current status under government-regulated medical programs that may or may not be the same next month. In addition the individual provider is now also burdened with the time and expense of trying to service effectively the "paper burden."

(6) The people of this country have not yet deliberated nor thoughtfully considered just how much they are willing to pay for promised total, unlimited, and comprehensive health care to all, regardless of need. Until government and the people of this nation face up to this task, there will be continued difficulty because of the disproportion that exists between demands and needs.

(7) Neither the individual provider nor hospital nor nursing home can be held solely responsible for cost and utilization of programs, the design and formulation of which and the continued implementation of which they have no consultative representation nor any individual recourse except non-participation.

(8) Fees paid by government under Part B Medicare and under Medicaid in Texas have changed insignificantly since 1967 and have been frozen for well over a year and therefore cannot be considered as a significant element in increased cost. The fee-for-service concept and the practice of medicine, as we know it today, probably in the long run depends on direct billing where possible more than any other one factor.

(9) The fact remains that increased utilization by the consumer of services promised is the primary factor in the increasing governmental contribution to the health care of the nation.
   Primary responsibility for overutilization lies directly in the basic design of prepayment and the faulty concepts therein involved, and to this end the provider has not been involved.

(10) The concept of totally removing the consumer from all fiscal responsibility is the bedfellow of consumer abuse, overutilization, and unrealistic demands out of proportion to needs.

MD CAMERA BUFFS USE DISNEY APPROACH

Editor's note: Our search for Texas physicians who attempt once in a while to escape from the hassles of everyday living through the pursuit of their hobbies has uncovered notable similarities in the interests of Dr. Mahon M. Ewing, Lubbock, and Dr. Owen C. Berg, APSA, Wichita Falls. Both MDs rely on the photography of nature to provide relaxation as well as unadulterated enjoyment; yet, each takes his hobby seriously enough to participate actively in a camera club, through which each has become involved in photography almost to a professional extent. And, furthermore, we admittedly felt that the experiences of these two enthusiasts might prompt some of our readers to load their own cameras and take them along for some exercise on this summer's vacation. (Who knows?—a few of you might even come home with a year-round pastime, and at least you'll preserve a few pleasant memories!)

Observing that some people are detached from reality too much of the time to be productive and that others remain tense because they cannot become at all aloof from their daily problems, Dr. M. M. Ewing has come to believe that controlled detachment can be a real asset. And photography is the vehicle he uses to relax and, at least momentarily, forget worldly concerns. Preferring to go out-of-doors for his photographic adventures, the general practitioner likes the "original Walt Disney approach" to filming. His credo dictates, "Do not include people—make it nature and wildlife whenever possible. People usually don't cooperate too well, but nature is oblivious to the work of the photographer. Besides, man should enjoy its beauty and mystery at every opportunity."

Dr. Ewing advises anyone truly interested in photography to join a club; he has belonged to the same one for 29 years. Membership in the Hub Cine Club, believed to be the second oldest motion picture camera club in Texas, is limited to 15 since the members feel that they get along together better as a small group than they would as a large one. Also, because primarily the same men have belonged to the organization through the years, the members know each other well and have become real friends. Thus, only people who will fit into the group amiably are selected to join if the club has a vacancy. Although anyone in the club can invite a guest to visit a meeting, he cannot talk to the visitor about membership. Later the prospective member is voted upon by secret ballot; and, if there is one dissenting vote, he is not invited to join. According to Dr. Ewing, this system has worked well for the group, and there has never been a fuss or disagreement of any importance. The physician adds that the members see no reason to have a club if they cannot be congenial and happy in the pursuit of their common interests.

Activities of the Hub Cine Club are varied and offer excitement, challenge, and incentive to the members. At intervals throughout the year the group studies a selected book on photography, then the members try to put into practice with their own cameras the things they have learned. Pictures are taken, shown at a club meeting, and criticized by others. Also, the club arranges field trips to certain predesignated areas and sponsors a contest afterward for showing of the movie film taken. Because members use 16mm, 8mm, or super 8mm cameras, competition is held for each film size; and a small trophy is awarded to the winner in each category. Members agree upon photographic objectives prior to the trips, which are made during vacation time and on special days such as Christmas. Some favorite destinations include rodeos, rattlesnake hunts, the mountains in the fall, and ranches during branding time. Other club activities include exchanging film with clubs in other parts of the nation and projecting commercial film to observe technique and format. As a civic contribution, the club produced a sound color movie of a local fair, which was used by the fair association to publicize the event in the Lubbock trade area.

Although members of the club represent several occupations, they do not use the club in their professions or businesses, and none of them do portrait work. In addition to his out-door and club-promoted photography, however, Dr. Ewing reports that his wife is an artist and that, after she draws a rough sketch of what she wants to paint, he makes a slide of it for her to view while completing her painting.

All members of the Hub Cine Club have accumulated a good variety of photographic equipment, and most make still pictures using 35mm or 2¼ by 2¼ inch color slides as well as movie film. Dr. Ewing's personal assortment of equipment includes a cine special 16mm movie camera with one-inch, two and a half-inch, and four-inch lenses; light meter; tripod; 16mm sound projector; screen; Mamiya C33 2¼ by 2¼ inch camera with six 65mm, 105mm, and 250mm lenses; and a slide projector.

Photography is a good hobby, according to Dr. Ewing, perhaps because he feels that "it is truly an art that must be developed over a period of time; it is creative; it is relaxing; and it requires a change of environment."

Agreeing wholeheartedly with Dr. Ewing regarding the fascination of photography as a hobby is his West Texas neighbor from Wichita Falls, Dr. Owen C. Berg, APSA. Dr. Berg feels that photography is a way of seeing, and that all of the world of human interest offers appropriate subject matter. Although Dr. Berg is primarily a photographer of nature history material, he believes that each person should define his own field of interest and adapt his photographic technique accordingly. In international salon exhibits, animals—including the human animal, particularly the young—usually are the most common subjects. People find the young of other species almost as in-

teresting as human babies, and pictures of baby mammals and birds hang regularly in the exhibitions. Dr. Berg comments, "Everyone should develop his own personal interest in making pictures, and no one should feel inferior just because he has not been at it for many years. It is a great hobby."

Dr. Berg's interest in photography dates back to his childhood, but he claims that only during the past 12 years has he pursued the hobby "with what must seem to some of my friends an unusual dedication." Accounting for some of his photographic zeal might be the fact that he has actually combined two interests, one in entomology and another in photography, in a single hobby. Accordingly, the urologist's primary interest while wielding a camera is in nature photography, although he has done some medical photography professionally and for some other Wichita Falls physicians. Most of the film he uses is exposed on either flowers or insects, the subjects he considers most fascinating.

Now active in photographic organizations on several levels, Dr. Berg first joined the Wichita Falls Camera Club in 1957 and has since served two terms as its president. He has also served as program chairman of the club and as its representative to both the Gulf States Camera Club Council and the Photographic Society of America, the world's largest, having more than 20,000 members; and he has found the latter organization, which he also joined in 1957, to be a source of fun and fellowship with amateur photographers over the entire world. In 1969 he was program director as well as first vice-chairman of the nature division of the society; and he is currently chairman of that division. In 1968 he served as president of the Gulf States Camera Club Council.

Having shown his work in international exhibitions in both nature slide and pictorial color slide categories, Dr. Berg is the only five-star exhibitor in the nature division of PSA in Texas; and he has also earned a four-star rating as an exhibitor in color slides. In addition he has lectured extensively, both locally and throughout the nation; last year, for example, he lectured at the Mile-High Photographic Roundup in Denver, Colo., and at the Los Angeles photographic assembly. In 1967 the Photographic Society of America awarded him an associateship in the society in recognition of his activities in behalf of other photographers and his success in exhibitions.

AMA Viet Nam Volunteer Plan Wins Top PR Award

The Public Relations Society of America has awarded its "Silver Anvil" trophy to the American Medical Association for its Volunteer Physicians for Viet Nam program. The AMA entry in the society's 26th annual competition won the top honor in the "International Public Relations" category.

Dr. Norman W. Hoover, director of the AMA Department of International Medicine, accepted the award at a PRSA banquet in New York City on May 14.

Since 1966 the AMA has recruited over 700 US physicians to serve 60-day tours in South Vietnamese civilian hospitals and clinics. Under an agreement with the US Agency for International Development the AMA meets a minimum quota of 32 volunteer physicians every two months. Volunteers receive round-trip transportation, housing, and $10 daily expenses while in Viet Nam.

Further information about the volunteer program may be obtained from the Department of Military Medicine, AMA, 535 N. Dearborn St., Chicago 60610.

UTSMS Dean Presents Awards to Top Students

Top medical students at The University of Texas Southwestern Medical School received awards recently in presentations made by Dean Charles C. Sprague.

David Lynn Luterman, a Dallas senior, was given $1,000 made available by Pfizer Laboratories in recognition of scholastic achievement. Another Dallas student, Charles Morton Gottlich, received the Senior Achievement Award of $150 and an engraved plaque provided by Upjohn Co. in recognition of leadership, scholarship, and service.

One junior student, Gregory Lee Jenkins, was recognized for outstanding scholarship and potential for a medical career. Jenkins, son of Dr. M. T. Jenkins, chairman of the UTSMS Department of Anesthesiology, is fiance of skating star Peggy Fleming. He was given a watch and scroll provided by Roche Laboratories.

The Dallas-Fort Worth Obstetric and Gynecologic Society provided an award of $100 in recognition of excellence in the field of obstetrics and gynecology. Senior John Burr Miller, III, was recipient.

A series of book awards were given to other seniors. David Gordon Beddow, Jesse David Bane, Mark David Dalton, Wesley Duane Putnam, and George Leonard Eastman received a choice of $30 in volumes from The C. V. Mosby Co. Merck & Company awarded manuals to Shelby Lynn Lewis, Richard John Cyrus, and Jay Ronald Walther; and Lange Medical Publications gave a choice of four books to Robert Earl Karper and John Frederick Lucas, Jr.

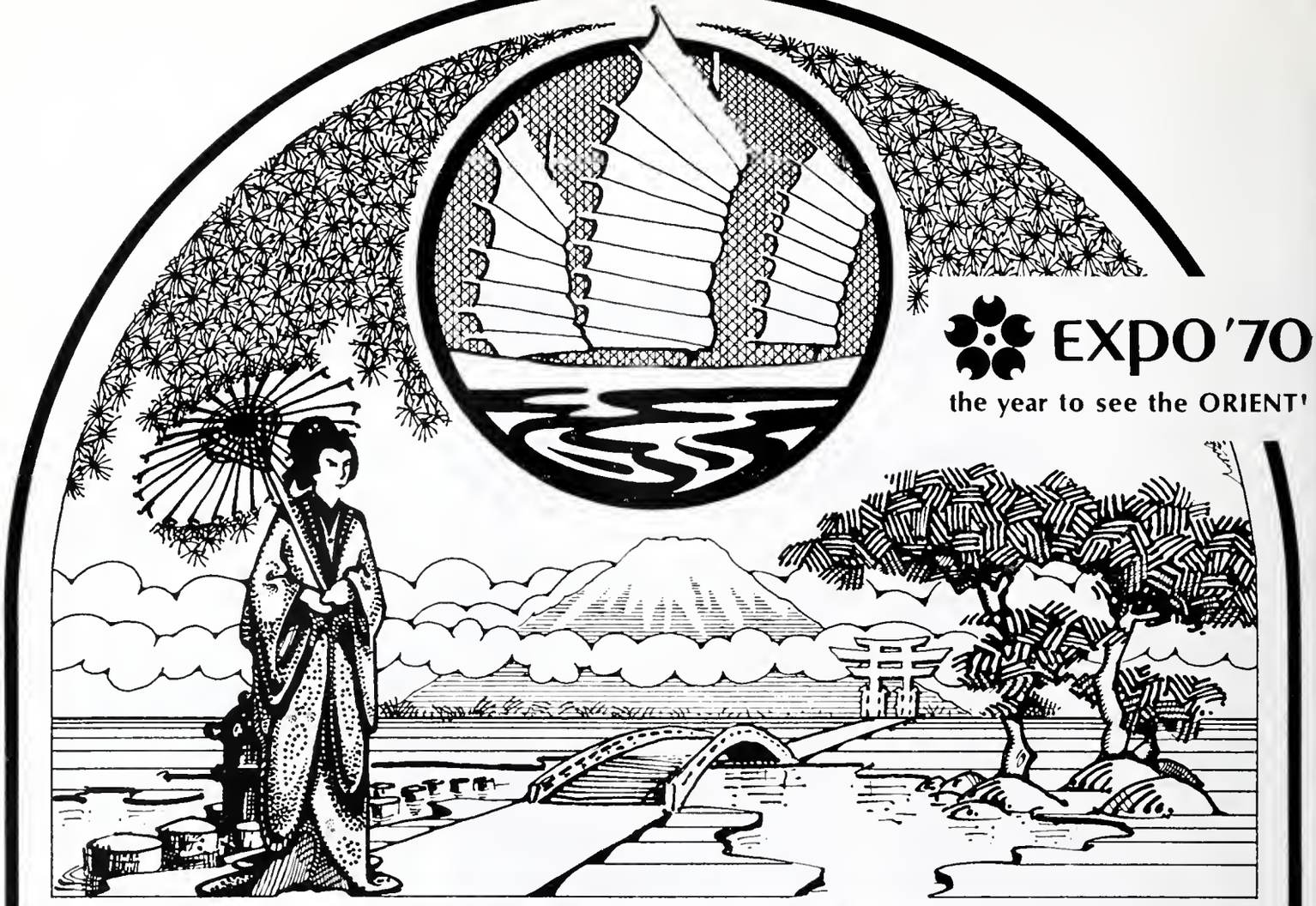
UTMB Representatives Receive SAMA Awards

Four representatives of The University of Texas Medical Branch at Galveston have recently won recognition in either medical art or original research competition sponsored by the Student American Medical Association.

Recipients of Mead Johnson Awards for research, presented during the 1970 SAMA-UTMB National Student Research Forum April 23-25 in Galveston, were Jerry C. Daniels and Dr. Robert E. Wolf. Daniels won second place in the graduate student category for his study of "Lymphocyte Alterations in Chronic Uremia." Dr. Wolf, UTMB intern, won third place in the intern and resident category for his "Preparation and In Vitro Testing of Antilymphocyte Globulin Subfractions." The winners were announced at an Awards Banquet held for the first time and sponsored by the American Medical Association.

Two UTMB staff members were winners in the 12th annual competition for the SAMA-Eaton Laboratories Medical Art Awards. Dr. John A. Craig, a resident in the department of ophthalmology, won first, second, and third place awards with his medical art, an achievement that is unprecedented in the 12-year history of the national competition. Staff neurologist at UTMB Dr. John Philip Patten won honorable mention for one of his illustrations.

Articles on the award winners have appeared in recent issues of *JAMA*, *Medical World News*, and *Medical Tribune;* and the winning art will be displayed at the AMA annual meeting June 21-25 in Chicago. Following that convention a traveling medical art salon, including the works of medical students, house staff, and professionals, will be available through SAMA for free showings at medical schools and hospitals throughout the nation.



TEXAS MEDICAL ASSOCIATION
ORIENT ADVENTURE

Two fun-filled weeks in exotic and colorful Japan and Hong Kong. Our complete Orient Adventure costs much less than round trip tourist air fare, yet includes direct 707 private jet flights, deluxe hotels, gourmet meals, all the freedom of individual travel, plus many other exclusive features. The Orient Adventure is departing from Dallas and Houston on August 24 and August 30, 1970.

Space is strictly limited on this exciting adventure. To confirm reservations a $100 deposit per person is required. Join us. Send your deposit now to

Texas Medical Association
1801 North Lamar Blvd.
Austin, Texas 78701

$898.00

RETURN THIS COUPON NOW!

SEND TO: Texas Medical Association
1801 North Lamar Blvd.
Austin, Texas 78701

Enclosed is my check for $_____ ($100 per person)

NAME _____

ADDRESS _____

CITY _____ STATE _____

ZIP _____ PHONE _____

State Health Department Implements Regional Plan

Region VII of the Texas State Department of Health was opened May 1 with headquarters in Tyler.

First of 10 planned by the State Health Department, the new region serves 36 counties stretching from the Red River to the lower Louisiana border above Orange. It includes the Governor's Planning Regions of Northeast Texas, East Texas, and Deep East Texas.

Medical director of Region VII is Dr. Jerry R. Bailes, who moved to his post after serving as director of the Bowie County Health Department since 1962. Deputy regional medical director is Dr. John P. Jones, Jr., who also supervises the Tuberculosis Control Program in the Tyler area.

Texas has 68 organized city and county health departments providing direct public health services to eight million residents in 76 counties which contain about 76% of the state's 10.6 million population. The state's remaining 178 counties, with about 24% of the state's population (or 2.6 million people) do not have local health units. The new region was established primarily in an attempt to provide assistance to those counties that do not have health departments, said Dr. James E. Peavy, state health commissioner.

According to Dr. Hampton C. Robinson, chairman of the State Board of Health, a more highly coordinated, economical method of providing public health services to all people is vital. The regional system has been designed specifically to meet the demands of the state's growing population, which by 1980 is expected to reach 14.9 million.

While maintaining the health units already organized, the regional offices will be staffed by personnel representing all the professional and technical disciplines required for complete health services. Health personnel will be coordinated through the regional office and made available throughout each region. Each region will have a regional engineer to supervise the environmental health program, a public health dentist, a veterinarian, a chief nurse, and a chief sanitarian.

Three additional regions, in the Rio Grande Valley, West Texas, and Dallas-Fort Worth area, will begin operation during the 1972-1973 biennium, according to Deputy Commissioner for Program Planning, Dr. Fratis L. Duff.

AMA Conducts Survey Of Rural Practitioners

The American Medical Association has completed a random sample survey of 2,468 physicians practicing in US nonmetropolitan areas, and the findings are published in *Public Health Reports*, Vol. 85.

Compiled by Dr. Bond L. Bible (PhD), secretary of the AMA Council on Rural Health, the responses of 1,853 physicians indicated:

—The majority of small town practitioners and their wives had small town backgrounds; similarly, physicians in communities of 25,000 or more generally were reared in comparably sized cities.

—Influence on choice of practice sites were "best opening," geographic preferences, family and friends, leads from colleagues or others, nearby place of internship, and assistance from AMA and medical society placement services.

—58% were engaged in solo or individual practice, 17% in group practice, and 25% in various combinations of group practice, partnership and salary arrangements.

—Rural physicians prefer the slower pace, closer social ties, and greater outdoor recreational opportunities.

—Rural physicians share concern over access of continuing education programs, opportunities for professional growth, hours of practice, available facilities and personnel, and emergency services, especially in isolated rural counties.

Copies of the survey are available from the AMA Department of Community Health, 535 N. Dearborn St., Chicago 60610.

Health Insurance Benefits Set Expenditure Record

A record $7.5 billion in health insurance benefits was received by the American public from insurance companies last year, according to a recent report from the Health Insurance Institute.

The benefit total represented a 12% increase over the $6.7 billion paid in 1968. Ten years ago benefits totalled less than $3 billion; and 20 years ago, less than $.75 billion.

According to estimates, a rise in benefits was experienced under every health insurance category during 1969. Hospital expense insurance, for example, jumped from $2.6 billion to $2.8 billion; and medical expense insurance increased from $296 million to $375 million. The biggest increases were in the major medical expense and disability income areas. Major medical rose $238 million to $1.9 billion, and disability income rose $217 million to $1.9 billion. Surgical and dental expense insurance recorded the smallest gain, $44 million, for an $800 million total.

Of all the benefits for health care expenses paid by insurance companies, $3.5 billion went for hospital bills, while physicians, surgeons, and dentists accounted for $2.4 billion.

Total benefit payments made to Americans in 1969 by insurance companies, Blue Cross and Blue Shield plans, and other private health programs came to an estimated $13.5 billion, the highest amount ever paid by private insurers in a single year.

PERSONALS

Dr. William K. Wright of Houston was recently installed as president of the American Academy of Facial Plastic and Reconstructive Surgery, Inc., for 1970.

New assistant regional director for health and scientific affairs for the US Department of Health, Education, and Welfare is **Dr. Floyd A. Norman** of Dallas.

Fellowship in the Industrial Medical Association was recently conferred on the following Texas physicians: **Drs. Rollie E. Allen,** Orange; **William U. Giessel,** Milby Clinic, Houston; **C. Hunter Montgomery,** Humble Oil and Refining Co., Houston; and **Charles F. Stringer,** Richardson.

The National Advisory Cancer Council of the National Institutes of Health has named **Dr. Janet S. Butel** (PhD), assistant professor of virology at Baylor College of Medicine in Houston, recipient of a Research Career Development Award. The award recognizes her work on the mechanisms by which viruses convert normal cells into cancer cells.

The girth control pill

Tepanil® Ten-tab®

(continuous release form)

(diethylpropion hydrochloride)

works on the appetite not on the 'nerves'

When girth gets out of control, TEPANIL can provide sound support for the weight control program you recommend. TEPANIL reduces the appetite—patients enjoy food but eat less. Weight loss is significant—gradual—yet there is a relatively low incidence of CNS stimulation.

Contraindications: Concurrently with MAO inhibitors, in patients hypersensitive to this drug; in emotionally unstable patients susceptible to drug abuse.

Warning: Although generally safer than the amphetamines, use with great caution in patients with severe hypertension or severe cardiovascular disease. Do not use during first trimester of pregnancy unless potential benefits outweigh potential risks.

Adverse Reactions: Rarely severe enough to require discontinuation of therapy, unpleasant symptoms with diethylpropion hydrochloride have been reported to occur in relatively low incidence. As is characteristic of sympathomimetic agents, it may occasionally cause CNS effects such as insomnia, nervousness, dizziness, anxiety, and jitteriness. In contrast, CNS depression has been reported. In a few epileptics an increase in convulsive episodes has been reported. Sympathomimetic cardiovascular effects reported include ones such as tachycardia, precordial pain, arrhythmia, palpitation, and increased blood pressure. One published report described T-wave changes in the ECG of a healthy young male after ingestion of diethylpropion hydrochloride; this was an isolated experience, which has not been reported by others. Allergic phenomena reported include such conditions as rash, urticaria, ecchymosis, and erythema. Gastrointestinal effects such as diarrhea, constipation, nausea, vomiting, and abdominal discomfort have been reported. Specific reports on the hematopoietic system include two each of bone marrow depression, agranulocytosis, and leukopenia. A variety of miscellaneous adverse reactions have been reported by physicians. These include complaints such as dry mouth, headache, dyspnea, menstrual upset, hair loss, muscle pain, decreased libido, dysuria, and polyuria.

Convenience of two dosage forms: TEPANIL Ten-tab tablets: One 75 mg. tablet daily, swallowed whole, in midmorning (10 a.m.); TEPANIL: One 25 mg. tablet three times daily, one hour before meals. If desired, an additional tablet may be given in midevening to overcome night hunger. Use in children under 12 years of age is not recommended.

T-006A / 1/70 / U.S. PATENT NO. 3,001,910

THE NATIONAL DRUG COMPANY
DIVISION OF RICHARDSON-MERRELL INC
PHILADELPHIA, PENNSYLVANIA 19144

Previously named recipients of the award at Baylor are **Dr. Saul Kit** (PhD), professor and head of the division of biochemical virology; **Dr. Del Rose Dubbs** (PhD), associate professor of biochemical virology; and **Dr. William E. Rawls, Dr. Robert M. McCombs** (PhD), and **Dr. Satvir S. Tevethia** (PhD), all associate professors of virology.

Dr. Joseph T. Painter of Houston was recently elected to the presidency of the American Society of Internal Medicine. Dr. Painter is assistant clinical professor of medicine at Baylor College of Medicine and specializes in internal medicine at Ledbetter Clinic in Houston.

Recently designated as one of the American Medical Association representatives to the 11th International Congress of Internal Medicine to be held in New Delhi, India, on Oct. 25-30, 1970, was **Dr. Irving Rapfogel** of Fort Worth.

Dr. Mario E. Ramirez of Roma, Tex., has recently been elected County Judge in Starr County.

The following professors at The University of Texas Southwestern Medical School at Dallas were to be featured participants on the program of the International Trauma Symposium held May 18-20 in Washington, D.C.: **Drs. G. Thomas Shires,** professor and chairman of surgery; **Charles R. Baxter,** associate professor of surgery and director of the burns treatment center at Parkland Memorial Hospital; and **Robert N. McClelland,** associate professor of surgery.

PAMPHLETS

A new Public Affairs Pamphlet, *Helping Your Child Speak Correctly,* by John E. Bryant, explains how speech develops, offers some ideas and games for helping children learn good speech patterns, and discusses the roots of speech disorders and how they can be corrected. Bryant cites a number of possible reasons for delayed or distorted speech as well as outlining the normal development of speech. He stresses that speech is learned and that it can and should be taught; and he gives specific examples of how parents help in vocabulary development and in teaching speech sounds. However, he cautions that, if parents become upset and emotional, the child will feel that there is something wrong with him; therefore, he advises parents to teach their children "in a friendly way, a little at a time."

The pamphlet is available for 25 cents from the Public Affairs Committee, 381 Park Ave. S, New York 10016.

The Arthritis Foundation has recently published a new pamphlet, *The Truth About Diet and Arthritis,* which emphasizes that no specific food has anything to do with causing the disease, and no specific food will cure it. The leaflet warns against becoming convinced by quacks, food fanatics, or well-intentioned friends who perpetuate myths about various "special" foods with alleged curative powers. The possibility that some dietary factor either causes or can help control arthritis has been thoroughly and scientifically investigated and disproved, the pamphlet states.

However, the publication advises that physicians do have medications and treatment procedures which can relieve pain and prevent crippling in most cases. The importance of good nutrition is stressed, but the pamphlet says that only one kind of arthritis—gout—requires dietary restrictions in addition to medication to control and prevent attacks. Special diets may also be prescribed by physicians for arthritics who have specific weight problems or other complications.

Copies of the diet pamphlets are available without charge from The Arthritis Foundation, Box 2525, New York 10001, or from local Foundation chapters.

A series of publications on child protection by The American Humane Association, Children's Division, is designed to inform readers on the nature, extent, and dimensions of problems of child neglect, child abuse, and exploitation of children; to promote understanding about causative factors contributing to these conditions; and to advise on ways to identify children in need of protection and on services for meeting their needs.

Membership in the Children's Division of The American Humane Association entitles members to receive all new publications, have a discount privilege, participate in the promotion of Child Protective Services, and share in the development of new skills and techniques for helping neglected and abused children. Individual (non-voting) memberships are $5 annually, and affiliate agency memberships are $10 and $15 annually. For further information write to The American Humane Association, Children's Division, P. O. Box 1266, Denver 80201.

Waging War on German Measles is the latest addition to the American Medical Association's continuing issues of "Timely Tips on Health and Safety." One of 45 different "Tip" topics now available to medical societies and physicians, it may be used in pamphlet reading racks, at health fairs, in physicians' reception rooms, as a statement enclosure, and at a variety of appropriate distribution points. Copies may be ordered from the AMA Order Department, 535 N. Dearborn St., Chicago 60610, at 20 cents per 100. Orders from medical societies receive a 50% discount.

Although only a physician is qualified to diagnose and prescribe care for a sick child, parents, usually mothers, are responsible for seeking medical help, for carrying out doctor's orders, and for providing physical and emotional comfort during illness and convalescence. *When Your Child is Sick* by Jacqueline Seaver is a new Public Affairs Pamphlet that offers parents guidance on symptoms and situations that call for a physician's advice or care. It is available for 25 cents from the Public Affairs Committee, 381 Park Ave. S, New York 10016.

The doctor's instructions may be relatively simple, and often there is no cause for alarm; but Miss Seaver urges that parents always consult the doctor for any of the following situations: persistent crying, despite no discernible cause; an elevated temperature; accidents, especially because some effects do not show up immediately; any difficulty in breathing; vomiting and diarrhea; symptoms that persist (any stomachache that lasts more than one hour is reason to call the doctor; frequent or long-lasting headaches should neither be ignored nor be treated with remedies out of the medicine cabinet; earaches also require prompt attention by a doctor; and aching muscles or joints or unexplained swellings anywhere should not be ignored); and failure to thrive (a child who is listless, without appetite, fatigues easily, seems not very interested in the world about him is not thriving).

★

Specialized Service

IN

PROFESSIONAL LIABILITY INSURANCE

is a high mark of distinction

THE

MEDICAL PROTECTIVE COMPANY

FORT WAYNE, INDIANA

Professional Protection Exclusively since 1899

AUSTIN OFFICE: Robert F. Reiman, Representative
3201 Clearview, Austin 78703 Telephone: 512-472-9603
DALLAS OFFICE: Gayle Nelson and Arthur F. Ennis, Jr., Representatives
816 Medical Arts Building, Dallas 75201 Telephone: 214-742-4980
HOUSTON OFFICE: Richard B. Ross and William A. Orsburn, Representatives
525 Hermann Professional Bldg., Houston 77025 Telephone: 713-523-1127

Turner's Clinical & X-Ray Laboratories

Medical Center

El Paso, Texas

Telephone 532-4689

☆

SURGICAL PATHOLOGY

CLINICAL PATHOLOGY

RADIOLOGY

☆

GEORGE TURNER, M.D.
JEANNE TURNER BOWMAN, M.D.
DAVID LIBMAN, M.D.

The Martin X-Ray and Radium Clinic

3501 Gaston Ave. Dallas, Texas

ADJOINING
GASTON EPISCOPAL HOSPITAL

For X-ray diagnosis and the X-ray and radium treatment of cancer and other conditions suitable for radiation therapy.

Chas. L. Martin, M.D. James A. Martin, M.D.

Comprehensive, Well Organized Reviews Provide Useful References

Synopsis of Surgery, Richard D. Liechty and Robert T. Soper, 1,091 pp., illus., St. Louis, The C. V. Mosby Co., 1968, $12.50.

STUDENTS SEARCHING for a quick source of knowledge will treasure this volume. The first ten chapters deal with those aspects of surgery which are common to all specialties. The remaining 32 chapters review the entire gamut of surgery by organ systems and by subspecialties. The authors utilize clever teaching aids to describe lucidly surgical pathophysiology. Excellent illustrations clarify complex problems.

The book is very readable and well organized and will be useful to teachers as well as students.

MEMORIAL LIBRARY STAFF.

Duncan's Diseases of Metabolism, vol. 1, **Genetics and Metabolism,** vol. 2, **Endocrinology and Nutrition,** ed. 6, Philip K. Bondy, ed., 1,334 pp., illus., Philadelphia, W. B. Saunders Co., 1969, $39.

REVIEWING THIS standard reference is somewhat like being asked to review the Bible or Shakespeare's works. This text has been a classic in its field since its introduction in 1942, and these volumes have consistently been an excellent exposition of the subject matter included. It is interesting to compare these two volumes with the 1959 edition. The present volume is approximately twice as long; and the scope of the work is also almost doubled, primarily because the book is now a fairly complete work on endocrinology and genetics and covers the field of metabolism as thoroughly as did the previous edition.

Indicative of the changes brought about during the ten-year span between editions, the list of contributing authors has undergone an almost complete metamorphosis; and the new edition was compiled by another editor. However, because leaders in each field have contributed chapters dealing with their special areas, the quality of the work remains the same. It is very gratifying to note that, in spite of the obvious logistics involved in compiling a book of this type, the book is quite up-to-date and includes references only two years old in some chapters. The only criticism that might be made of this book is from a clinical point of view, since there is much emphasis on matters that have little relation to clinical diagnoses and therapeutics. As a standard reference work, it includes quite a bit of clinical material which would not be of interest to a person in research.

However, the book represents an attempt to meet the requirements of both a standard reference volume and a clinical reference for busy practitioners; therefore, in spite of some compromises, it seems to accomplish such a purpose quite well.

JOHN M. TYLER, M.D.,
Austin.

Cardiac Arrest and Resuscitation, Hugh E. Stephenson, Jr., ed., 3,659 pp., illus., St. Louis, The C. V. Mosby Co., 1969, $29.50.

VALUABLE FOR its treatment of the history of resuscitation and for its extensive bibliography which lists over 500 references, the third edition of this text, which first was published in 1958, evidences the author's long standing interest in cardiac arrest and resuscitation. It points out the importance, yet general lack, of use of the electrocardiograph in the operating room and in other areas of the hospital where patients are undergoing anesthesia. Interesting is a chapter on "Reanimatology—The Science of Resuscitation" by a Russian author, Vladimir A. Negovskii, which is included as the first chapter and which is a somewhat different approach to the subject than Westerners usually encounter.

A more lengthy explanation of electrical precursors of cardiac arrest, a subject which is touched upon only briefly and which emphasizes resuscitation, might be desirable. Certainly, however, this extensive work is a must

for any physician who is compiling a comprehensive bibliography in the area of cardiac arrest.

THOMAS M. RUNGE, M.D.,
Austin.

Achalasia of the Esophagus, vol. 9, **Major Problems in Clinical** Surgery, F. Henry Ellis, Jr., and Arthur M. Olsen, 221 pp., illus., Philadelphia, W. B. Saunders Co., 1969, $9.

TWO AUTHORS from the Mayo Clinic have written a comprehensive monograph on a poorly understood subject, esophageal achalasia. They combine the knowledge gained from their experience at the Mayo Clinic with one of the world's largest series of cases, plus an extensive review of world literature, to produce a remarkably complete and readable book.

Presented in nine chapters ranging from history to surgical results, the subject is reviewed completely and logically. Written by Charles F. Code and Jerry F. Schlegel, chapter three covers physiologic studies and is comprehensive and as readable as physiology can be written. In chapter five Harley C. Carlson presents the radiologic manifestations of this confusing disease process. The chapter on pathogenesis of the disease is extremely stimulating, particularly its concluding section on attempts to produce the lesion experimentally by destruction of localized areas in the brains of cats and dogs; however, it leaves the reader somewhat confused concerning the etiology of this disease.

Chapter seven, the development of surgery for esophageal achalasia, should be very interesting to surgeons. It explains the difficulties and heartaches this particular area of anatomy has held for surgeons for many generations. The authors conclude with a review of experience with the modified Heller esophagomyotomy in 336 operations at the Mayo Clinic. Having had extensive experience with this procedure, the authors present a strong case for its efficiency; yet, the question of forceful dilation or surgical intervention cannot be answered at this time.

An excellent review of a most difficult subject, this book should be read by all physicians interested in esophageal diseases.

ROBERT W. CROSTHWAIT, JR., M.D.,
Waco.

NEW BOOKS IN TMA LIBRARY

Aita, J. A.: *Congenital Facial Anomalies with Neurologic Defects, A Clinical Atlas,* Springfield, Ill., Charles C Thomas, Publisher, 1969.

Brazelton, T. B.: *Infants and Mothers, Differences in Development,* New York, Delacorte Press, 1969.

Brewer, L. A., III, ed.: *Prosthetic Heart Valves,* Springfield, Ill., Charles C Thomas, Publisher, 1969.

Brunner, D., and Jokl, E., eds: *Physical Activity and Aging,* vol. 4, *Medicine and Sport,* Baltimore, Md., University Park Press, 1970.

Cox, E. A.: *Bottoms Up With A Rear Admiral,* Durham, N. C., Moore Publishing Co., 1969.

Critchley, M.: *The Dyslexic Child,* ed. 2, Springfield, Ill., Charles C Thomas, Publisher, 1970.

Fiorentino, M. R.: *Reflex Testing Methods for Evaluating C.N.S. Development,* Springfield, Ill., Charles C Thomas, Publisher, 1963.

Hood, R. M., ed.: *Management of Thoracic Injuries,* Springfield, Ill., Charles C Thomas, Publisher, 1969.

Kemp, L. G.: *Operative Neurosurgery,* vol. 1, New York, Springer-Verlag New York Inc., 1968.

Kübler-Ross, E.: *On Death and Dying,* New York, The Macmillan Co., 1969.

Riklan, M., and Levita, E.: *Subcortical Correlates of Human Behavior,* Baltimore, Md., The Williams & Wilkins Co., 1969.

Sardesai, V. M., ed.: *Biochemical and Clinical Aspects of Alcohol Metabolism,* Springfield, Ill., Charles C Thomas, Publisher, 1969.

Spratt, J. S., and Donegan, W. L.: *Cancer of the Breast,* vol. 5, *Major Problems in Clinical Surgery,* Philadelphia, W. B. Saunders Co., 1967.

Sunshine, I., ed.: *Handbook of Analytical Toxicology,* Cleveland, The Chemical Rubber Co., 1969.

Swaiman, K. F., and Wright, F. S.: *Neuromuscular Diseases of Infancy and Childhood,* Springfield, Ill., Charles C Thomas, Publisher, 1970.

Thomas, W. C.: *Nursing Homes and Public Policy, Drift and Decision in New York State,* Ithaca, N. Y., Cornell University Press, 1969.

Recent Deaths

Dr. F. S. Ewing

Dr. F. Stanley Ewing, 65, Sinton general practitioner and allergist since 1930, died May 6, 1970, in a Corpus Christi hospital following major surgery.

Born May 24, 1904, in Larned, Kan., Dr. Ewing was the son of Dr. C. H. and Mary Eichorn Ewing. He attended Kansas State Teachers College at Emporia and the University of Kansas at Lawrence and was graduated in 1929 with an MD degree from the University of Tennessee School of Medicine at Memphis. He interned at St. Joseph Hospital in Memphis and was an assistant physician at Larned State Hospital at Larned, Kan., in 1929-1930. He practiced medicine in Sinton from 1930 until he entered military service in 1941, and following World War II he resumed his practice in Sinton in 1946. In 1951 he built the Charles H. Ewing Memorial Hospital in Sinton and directed its operation until 1967, when the hospital was purchased by a nonprofit corporation.

A member of the Masonic Lodge and of Alzafar Temple Shrine in San Antonio, Dr. Ewing was a former trustee of the Sinton Independent School District. He was also a past president of the Sinton Rotary Club and a member of First United Methodist Church. He belonged to American College of Allergists, American Medical Association, and Texas Medical Association and was a former president and

DR. EWING

secretary of San Patricio-Aransas-Refugio Counties Medical Society.

Surviving Dr. Ewing are his wife, the former Virginia Hammett; one son, Dr. C. W. Ewing of Houston; one daughter, Mrs. Lewis Johnson of Dallas; two sisters, Mrs. Russell Hinchliff of Portland, Ore., and Mrs. Helen Fischer of Larned, Kan.; and four grandchildren.

Dr. G. N. Cunningham

Houston physician and surgeon since 1931 Dr. G. Norman Cunningham died May 2, 1970, in a Houston hospital. He was 67 and had retired from his practice in 1965 because of ill health.

The son of Will G. and Grace Rulong Cunningham, Dr. Cunningham was born Aug. 3, 1902, in Wheeling, W. Va. He received his bachelor of science degree in 1925 from West Virginia University at Morgantown, and he was graduated in 1927 with an MD degree from Jefferson Medical College of Philadelphia. He interned at St. Francis General Hospital in Pittsburgh, Pa., from 1927 to 1928; and he received his master of science degree in surgery from the University of Pennsylvania in 1932. During World War II he served as a captain in the US Air Force.

Dr. Cunningham was a member of Saint Anne's Catholic Church. He belonged to Harris County Medical Society, Texas Medical Association, and American Medical Association. He was former chief of staff at St. Joseph Hospital in Houston.

Survivors include Dr. Cunningham's wife, the former Sara E. Mallia; a son, Donald N. Cunningham; a daughter, Mrs. Marsha Hallmark, all of Houston; a sister, Mrs. L. A. Davidson, Jr., of Phoenix, Ariz.; and two grandchildren.

Dr. R. E. Stockdale

Jasper, Tex., general practitioner Dr. Rider E. Stockdale died April 25, 1970, at his home. He was 45.

Born Feb. 21, 1925, in Sabetha, Kan., Dr. Stockdale was the son of Rider and Alice Perkins Stockdale. He attended The University of Texas at Austin and was graduated from the UT Medical Branch at Galveston in 1948 with an MD degree. He interned at the University of Kansas from 1948 to 1949; and he was assistant house surgeon at Texas and Pacific Railroad Hospital in Marshall, Tex., from 1949 to 1951, when he moved to Jasper. He was associated with the Hardy Hancock Hospital in Jasper for 13 years, and for the past six years he had practiced medicine privately. At the time of his death he was a member of the staff of Jasper Memorial Hospital.

DR. STOCKDALE

Dr. Stockdale was a member of the Masonic Lodge, El Mina Temple Shrine, Jasper Chamber of Commerce, Jasper Youth Baseball Association, Trinity-Neches Council of Boy Scouts of America, and First United Methodist Church of Jasper. Also a member of American Medical Association, Southern Medical Association, Texas Medical Association, and American Academy of General Practice, he had formerly served as president, vice-president, secretary, and in all other offices of Jasper-Newton Counties Medical Society. He was also president of Jasper and Woodville Nursing Centers and was acting as Jasper City Health Officer.

Surviving Dr. Stockdale are his wife, the former Thelma Brown; a son, Richard Rider Stockdale; two daughters, Priscilla Jo Stockdale and Rebecca Ann Stockdale; and his mother, of Jasper; and two sisters, Mrs. Ridera Klapproth of Dallas and Mrs. Alice Holmes of Doylestown, Pa.

Dr. W. A. Reily

Dr. William A. Reily, 68, San Antonio ophthalmologist, died April 18, 1970, at his home. Cause of death was cerebral vascular accident following a long illness.

A member of Bexar County Medical Society, Texas Medical Association, American Medical Association, Pan-American Association of Ophthalmology, and the International Medical Assembly of Southwest Texas, Dr. Reily was a former president of the San Antonio Society of Ophthalmology and Otolaryngology and of the San Antonio alumni association of the Phi Beta Pi medical fraternity. He belonged to Central Christian Church and was a Scottish Rite Mason, a member of Alzafar Temple Shrine, and a member of the San Antonio Rotary Club. He was on the staff of the Santa Rosa Medical Center, Nix Memorial Hospital, and Southwest Texas Methodist Hospital.

DR. REILY

Born April 30, 1901, in Sabinal, Tex., Dr. Reily was the son of Henry William and Willie Lyell Reily. He attended The University of Texas at Austin and was graduated from the UT Medical Branch at Galveston in 1925 with an MD degree. He interned at Santa Rosa General Hospital in San Antonio from 1925 to 1926, and he practiced in San Antonio from 1926 until he retired in 1967 because of ill health.

Surviving Dr. Reily are his wife, the former Ann Miller; a son, William A. Reily, Jr., of San Antonio; and three sisters, Mrs. Creston Taylor of Luling, Tex., Mrs. Molly Lockhart of Richardson, Tex., and Mrs. T. M. Woodley of Sabinal.

Dr. C. F. Shaffer

Dr. Carl Francis Shaffer, 55, San Antonio specialist in internal medicine and cardiology, died March 9, 1970, in San Antonio. He had suffered from arteriosclerotic heart disease, and cause of death was acute myocardial infarction.

Born Feb. 21, 1915, in Beatrice, Neb., Dr. Shaffer was the son Carl F. and Hazel Fall Shaffer. He attended Dartmouth College in Hanover, N. H.; was graduated from Northwestern University in 1936 with a bachelor of science degree; and received his MD degree in 1940 from Northwestern University Medical School at Chicago. He interned at Henry Ford Hospital in Detroit, Mich., from 1939 to 1940; and he served a residency in internal medicine and was chief resident in cardiology at that hospital from 1940 to 1943. In 1942-1943 he was a member of the Selective Service Advisory Board in Detroit. He also did postgraduate work in cardiology at the University of Michigan at Ann Arbor in 1942. From 1943 to 1944 he practiced medicine in Omaha, Neb., and was instructor of medicine at the University of Nebraska

DR. SHAFFER

College of Medicine. In 1944 he moved to Houston, where he practiced until 1959. He served as consultant cardiologist for the Veterans Administration Hospital in Houston from 1950 to 1959; and he became assistant and later associate clinical professor of medicine at Baylor College of Medicine in Houston. He had practiced in San Antonio since 1961.

A former president, vice-president, and secretary of the San Antonio Heart Association, a charter member of its board of directors, and a member of the board of directors of the Texas Heart Association and of the Houston Heart Association, Dr. Shaffer was also a member of Bexar County Medical Society, Texas Medical Association, American Medical Association, San Antonio Society of Internal Medicine, Texas Society of Internal Medicine, American Society of Internal Medicine, and Texas Academy of Internal Medicine. He was a diplomate of the National Board of Medical Examiners and of the American Board of Internal Medicine, and he was a fellow of the American College of Physicians and an associate fellow of the American College of Cardiology. In 1966-1967 he was director of medical education at Santa Rosa Medical Center in San Antonio. A member of First Presbyterian Church and the author of *Correlative Cardiology* and of more than 30 medical articles, he served on the editorial board of the *International Journal of Anesthesiology*. He was listed in *Who's Who in the South and Southwest, Who's Important in Medicine, National Library of Medicine,* and *World Biography;* and he belonged to Phi Kappa Psi social fraternity and Nu Sigma Nu medical fraternity.

Dr. Shaffer is survived by his wife, the former Ruth Cowper; three daughters; Mrs. Perry Warner of Denver, Colo., Mrs. Richard Chamberlain of Omaha, Neb., and Mrs. Walter Bahr of Woonsocket, R.I.; two step-sons, Craig Shaffer of Houston and Randy Shaffer of New York City; his mother of Waco, Tex.; a sister, Mrs. Paul Young of Waco; and six grandchildren.

Dr. E. W. Grumbles

Atlanta, Tex., general practitioner since 1936, Dr. Ernest Willie Grumbles died March 19, 1970 of primary myocardiopathy in a Texarkana hospital. He was 65.

The son of the late J. R. and Edith Evalina Parker Grumbles, Dr. Grumbles was born June 26, 1904, in Palmyra, Ark. He was graduated in 1929 from the University of Arkansas at Fayetteville with a bachelor of science degree and he received his MD degree in 1932 from the University of Arkansas School of Medicine at Little Rock.

He interned at Gorgas Hospital in Balboa Heights, Canal Zone in 1932-1933 and served a residency at Colon Hospital in Cristobal, Canal Zone from 1933 to 1935. In 1936 he moved to Atlanta and was co-founder of Ellington Memorial Hospital, the first hospital in Cass County. He opened his own clinic in 1949 and practiced medicine there until he retired Oct. 1, 1969, because of ill health.

A member and past president of Cass-Marion Counties Medical Society, Dr. Grumbles was also a former president of Northeast Texas Chapter of Texas Academy of General Practice, a charter member of American Academy of General Practice, and a diplomate of the National Board of Medical Examiners. He belonged to Texas Medical Association, American Medical Association, and Phi Chi medical fraternity; was city health officer in Atlanta from 1937 until his death; and was local surgeon for Texas and Pacific Railroad in Atlanta. A registered pharmacist as well, he was a member of the Atlanta school board for 23 years and had served as its president for 14 years. A member and past president of the Atlanta Rotary Club, he was a member of the Atlanta Chamber of Commerce, director of the First National Bank of Atlanta, and chairman of the board of Atlanta Federal Savings & Loan Association. He was a deacon in the First Baptist Church and was a 32nd degree Mason and a member of Hella Temple Shrine in Dallas. He had served the Caddo Area Council of Boy Scouts of America in various offices since 1947, and he was a member of the organization's national board. He received the Silver Beaver Award in 1962.

Dr. Grumbles is survived by his wife, the former Sarah Ella Pattee, of Atlanta; a son, Ernest W. Grumbles, Jr., of Dallas; two daughters, Mrs. Richard L. Haller of Fort Worth and Mrs. Richard

DR. GRUMBLES

S. Rogers of Houston; his step-mother, Mrs. J. R. Grumbles of Alba, Tex.; two sisters, Mrs. Joe Matthews of Pine Bluff, Ark., and Mrs. John Moore of Rusk, Tex.; two brothers, Eli Grumbles of Star City, Ark., and James Grumbles of Little Rock; a half-sister, Mrs. Joe McKenzie of Quitman, Tex.; and four half-brothers, Hugh Grumbles of Pine Bluff, William Grumbles of San Antonio, Dr. Leland Grumbles of College Station, and Dr. Lloyd Grumbles of Philadelphia, Pa.

Dr. R. L. Callison

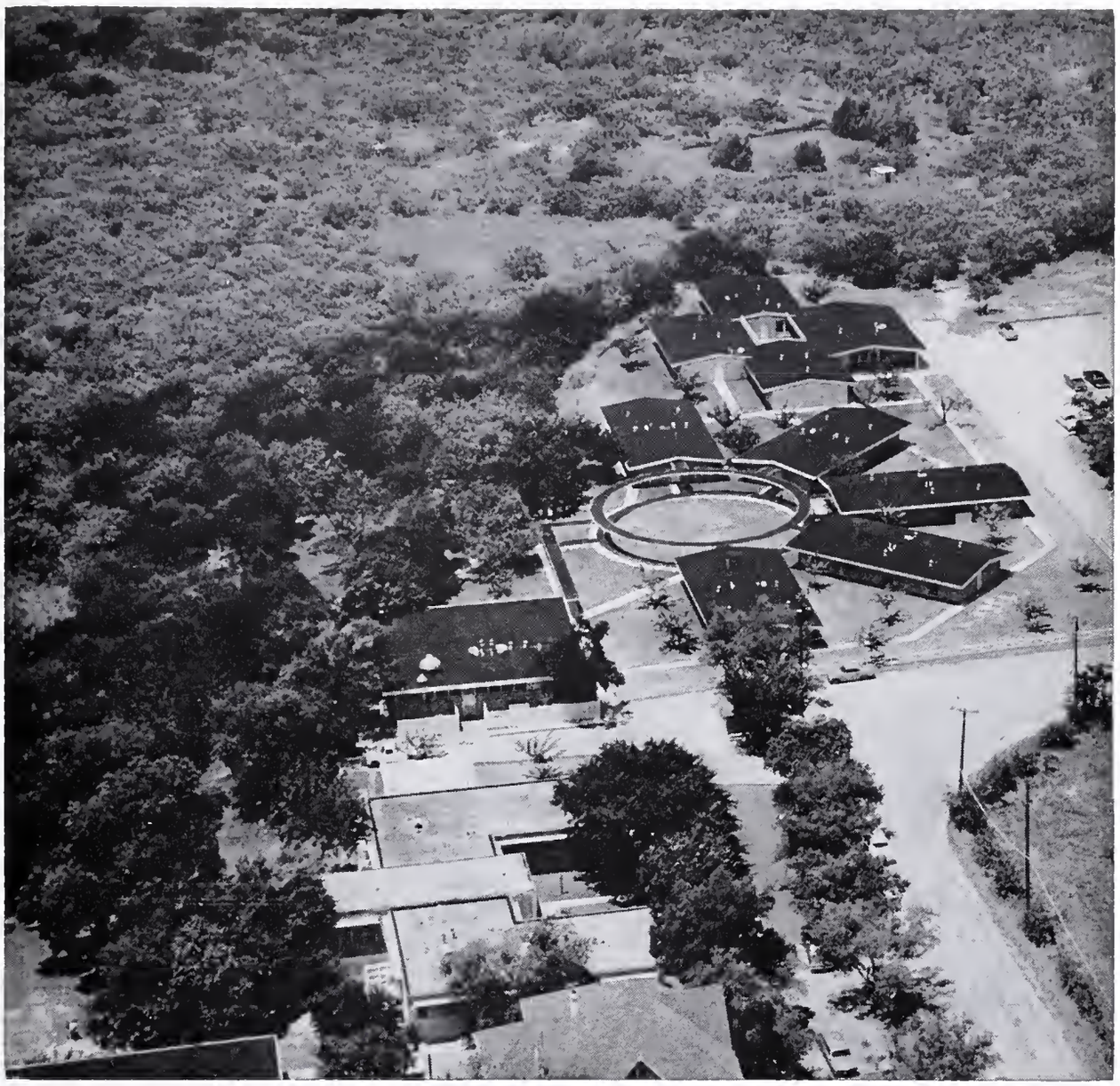
Retired Galveston city health chief, Dr. Robert LaShore Callison, died Oct. 7, 1969, after a lengthy illness. He was 61.

Dr. Callison, born in Stella, Neb., on May 8, 1908, was the son of Isaac LaShore and Daisy Priscilla Low Callison. He received an AB degree in 1929 from the University of Nebraska at Lincoln and his MD degree in 1932 from the University of Nebraska College of Medicine at Omaha. From 1932-1933, Dr. Callison served an internship at University of Nebraska Hospital in Omaha and from 1946-1947 did postgraduate work at Harvard University School of Public Health in Boston, Mass.

In 1934 Dr. Callison entered the US Army and served in various public health divisions, including positions as chief of preventive medicine, Office of the Surgeon General, and as chairman of the US Army Physical Review Council. Dr. Callison, who retired from the Army in 1964 after serving 30 years, attained the rank of colonel and was awarded the Legion of Merit and the Bronze Star. In 1964 he became Galveston city health chief until his retirement in 1969.

A member of Galveston County Medical Society, Dr. Callison was also a member of Texas Medical Association and American Medical Association.

Surviving Dr. Callison is his wife, the former Vyeka Blazekovic of Heidelberg, Germany.



BEVERLY HILLS HOSPITAL
BEVERLY HILLS CLINIC

PSYCHIATRY
INPATIENT – OUTPATIENT

Multiple-approach treatment of thinking disorders. Established diagnostic procedures available. Secluded in-town location convenient to the medical community.

Psychiatry

Joseph L. Knapp, M.D. — Fred H. Jordan, M.D.
Jackson H. Speegle, M.D. — Joseph H. Lindsay, M.D.
Jack R. Tomlinson, M.D.

Psychology

Traudl E. Jordan-Diener, Ph.D. — R. A. Mitchell, M.S. — David K. Fooshee, M.S.

1353 North Westmoreland Avenue — Dallas, Texas 75211 — 214 331-8331

HIGHLAND HOSPITAL

ASHEVILLE, NORTH CAROLINA

Founded 1904

A DIVISION OF THE DEPARTMENT OF PSYCHIATRY OF DUKE UNIVERSITY

Accredited by the Joint Commission on Accreditation and Certified for Medicare

Complete facilities for evaluation and intensive treatment of psychiatric patients, including individual psychotherapy, group therapy, psychodrama, electro-convulsive therapy, Indoklon convulsive therapy, drugs, social service work with families, family therapy, and an extensive and well organized activities program, including occupational therapy, art therapy, music therapy, athletic activities and games, recreational activities and outings. The treatment program of each patient is carefully supervised in order that the therapeutic needs of each patient may be realized.

High school facilities for a limited number of appropriate patients are now available on grounds. The School Program is fully integrated into the hospital treatment program and is accredited through the Asheville School System.

Complete modern facilities with 85 acres of landscaped and wooded grounds in the City of Asheville.

Brochures and information on financial arrangements available

Contact: (1) Mrs. Elizabeth Harkins, ACSW, Coordinator of Admissions

or

(2) Samuel N. Workman, M.D.
Chief of Clinical Services

(3) Charles W. Neville, Jr., M.D.
Assistant Professor of Psychiatry and Medical Director

Area Code 704 - 254-3201

What she really needs, Doctor, is a shot of penicillin."

Maybe. Maybe not. In any case she needs something to control her sneezing, watery eyes and runny nose. And for most children over six, Novahistine® LP can be depended on to provide fast relief from summer colds and allergy. These continuous-release tablets have a vasoconstrictor-antihistamine formulation that begins working in minutes, then continues to provide relief for hours. A single Novahistine LP tablet, morning and evening, can keep most young patients free of symptoms all day and all night. Use with caution in individuals with severe hypertension, diabetes mellitus, hyperthyroidism or urinary retention. Caution ambulatory patients that drowsiness may result.

Novahistine® LP decongestant

(Each tablet contains 25 mg. of phenylephrine hydrochloride and 4 mg. of chlorpheniramine maleate.)

DOW THE DOW CHEMICAL COMPANY Rx Pharmaceuticals Indianapolis

Clinical Extension of a pure Smooth Muscle Relaxant

TROCINATE®

Brand THIPHENAMIL HCl

400 mg./100 mg. S/C tablets

Trocinate relaxes all smooth muscles. Its direct action (musculotropic) does not involve the autonomic nervous system and it is not mydriatic. It is metabolized by the body and eliminated in the urine as harmless degradation products. Trocinate has a remarkable history of freedom from side-effects.

When a pure direct-acting smooth muscle relaxant is indicated, Trocinate is the drug of choice.

DIARRHEA (functional) . . . *the first 400 mg. tablet usually relieves the discomfort of diarrhea so promptly that it ceases to be a bother.*

DIVERTICULITIS—MUCOUS COLITIS . . . *the accompanying discomforts can be relieved by this direct smooth muscle relaxant.*

BLADDER SPASM . . . *relaxation is immediate. One or two tablets condition the bladder for cystoscopy in one hour.*

SPASTIC URETER . . . *the specific relaxing effect of Trocinate on the spastic ureter has been proven by animal studies and affirmed clinically. (J. Urol. 73:487-93)*

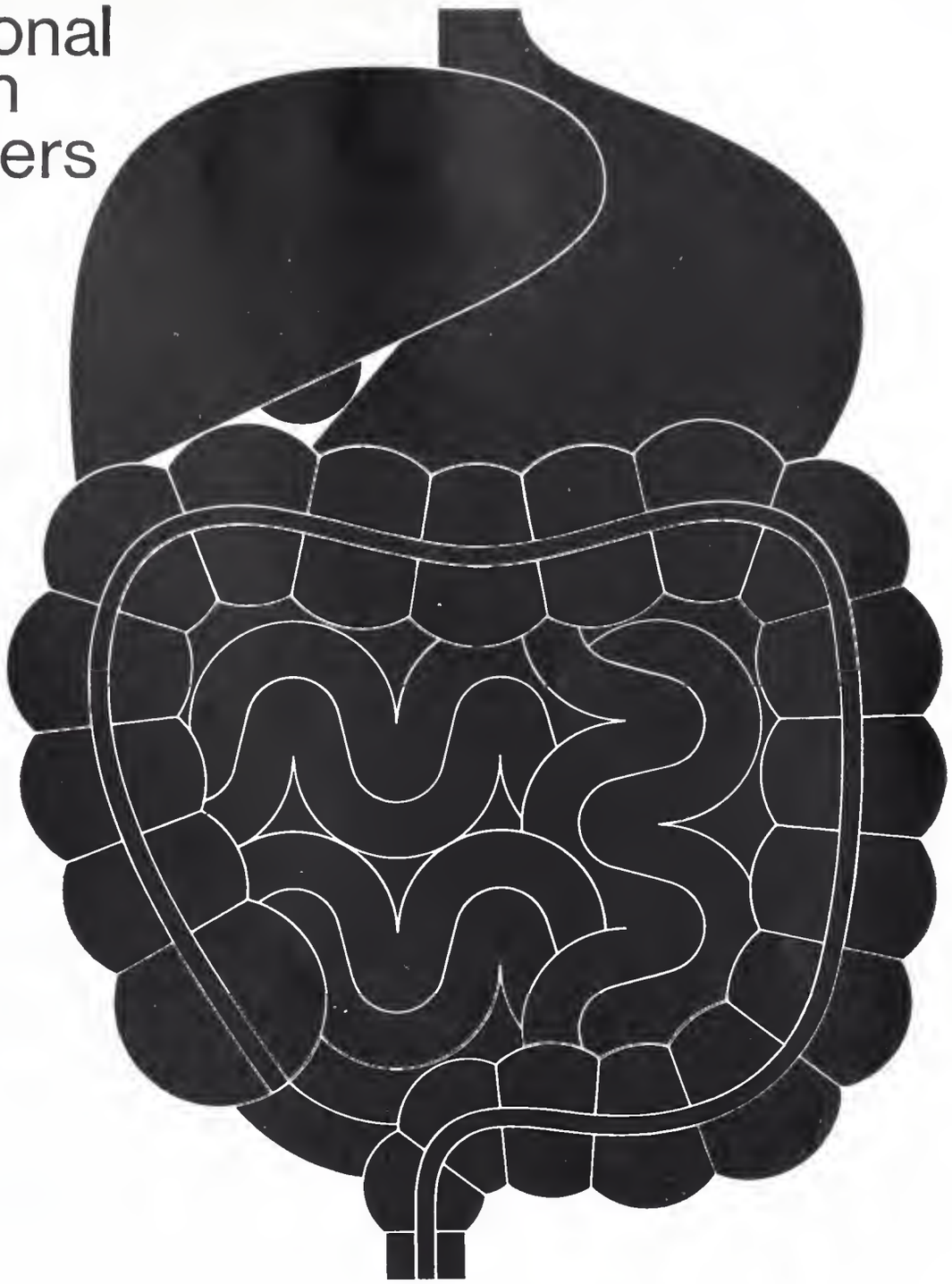
PRESCRIBING INFORMATION

WARNING: Do not give in advanced kidney or liver disease. PRECAUTIONS: Trocinate relaxes all smooth muscles. Large dosage or prolonged usage may cause feeling of weakness or can theoretically precipitate gall-bladder colic, due to relaxing the vascular and duct systems. Caution should be observed in patients with urinary bladder obstruction. DOSAGE: 400 mg. May be repeated in 4 hours. After relief, lengthen the dose frequency. (see side note)

NOTE: *The high therapeutic index of Trocinate permits its administration in dosage sufficient to relieve smooth muscle spasm promptly. 400 mg. dosage usually creates a therapeutic blood level. In reducing dosage after relief, lengthening the time between dosage rather than lessening the recommended dose is preferable. The prompt direct action allows a consciousness of the first suggestion of return of symptom . . . a guide to dose spacing and to determining when treatment is complete. A prescription for twelve or sixteen 400 mg. tablets will usually correct spasm and leave a few tablets for a reserve.*

WILLIAM P. POYTHRESS & CO., INC.
RICHMOND, VIRGINIA 23217
Manufacturers of Ethical Pharmaceuticals

for nutritional support in G.I.disorders



Berocca®

TABLETS
high potency B-complex and C
for nutritional support

AVAILABLE ONLY ON Rx

contains water-soluble vitamins only

b.i.d. dosage provides full therapeutic amounts

good patient acceptance

no odor, and virtually no aftertaste

Each Berocca Tablet contains:

Thiamine mononitrate	15 mg
Riboflavin	15 mg
Pyridoxine HCl	5 mg
Niacinamide	100 mg
Calcium pantothenate	20 mg
Cyanocobalamin	5 mcg
Folic acid	0.5 mg
Ascorbic acid	500 mg

Usual dosage is one tablet b.i.d.

Indications: Nutritional supplementation in conditions in which water-soluble vitamins are required prophylactically or therapeutically.

Warning: Not intended for treatment of pernicious anemia or other primary or secondary anemias. Neurologic involvement may develop or progress, despite temporary remission of anemia, in patients with pernicious anemia who receive more than 0.1 mg of folic acid per day and who are inadequately treated with vitamin B_{12}.

Dosage: 1 or 2 tablets daily, as indicated by clinical need.

Available: In bottles of 100.

ROCHE

Roche
LABORATORIES

Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

Starlite Village Clinic

Center Point, Texas

Ph.: ME 4-2426

- - - A specialized clinic dedicated to the physical, mental, and spiritual treatment of men and women suffering from alcoholic and similar disturbances.

F. E. Seale, M.D.
Medical Director

Bland Seale
Administrator

RADIOLOGY ASSOCIATES OF FORT WORTH

John S. Alexander, M.D., M.A.C.R.
Robert J. Atcheson, M.D., M.A.C.R.
Douglas E. Bibby, M.D., F.A.C.R.
James W. Buice, M.D., F.A.C.R.
Richard C. Gasser, M.D., M.A.C.R.
James A. Holland, M.D., M.A.C.R.
Paul W. Mathews, Jr., M.D., M.A.C.R.
Preston W. Nash, M.D., M.A.C.R.
Rolland F. Oakes, M.D., M.A.C.R.
Norman L. Presley, M.D., M.A.C.R.
Sanford Reitman, M.D., M.A.C.R.
Gomer W. Roberts, M.D., M.A.C.R.
Herman C. Sehested, M.D., F.A.C.R.
Glenn A. Stokdyk, M.D., M.A.C.R.
C. H. Tseng, M.D., M.A.C.R.
Claude Williams, M.D., M.A.C.R.

DIPLOMATES OF THE AMERICAN BOARD OF RADIOLOGY

Offices:

100 Medical Tower Bldg. — 336-8681
1217 West Cannon — 336-8627
900 W. Randol Mill Rd., Arlington, Texas 76010 — 277-7681

TRAVIS CLINIC ASSOCIATION AND THE NAN TRAVIS MEMORIAL HOSPITAL

JACKSONVILLE, TEXAS

STAFF

General Surgery:
L. L. Travis, M.D.
J. S. O'Hare, M.D.
R. K. Willms, M.D.

Orthopedic Surgery:
E. L. Mahon, Jr., M.D.

Urology:
H. F. Rives, M.D.

Pathology:
Harbert Davenport, Jr., M.D.

Internal Medicine:
J. T. Boyd, M.D.
F. H. Verheyden, M.D.
J. T. Scogin, M.D.
J. H. Pesnell, M.D.
Mary A. Bone, M.D.

Obstetrics and Gynecology:
J. C. Rucker, M.D.
J. D. Crawford, M.D.

Ophthalmology:
Fred Haberle, M.D.

Pediatrics:
M. L. Gray, M.D.

Radiology and Radioactive Isotopes:
L. W. Ralston, M.D.

William J. Fowler
Administrator of Nan Travis Memorial Hospital

J. G. Casey
Business Manager of Travis Clinic

MEDICAL ARTS CLINIC

Box 841
Corsicana, Texas

PEDIATRICS
JOHN W. GRIFFIN, M.D., F.A.A.P.*
JAMES E. SPEIER, M.D.

INTERNAL MEDICINE
ROBERT D. BONE, M.D., F.A.C.P.*
JAMES F. WITTEN, M.D., F.A.C.P.*
CHARLES I. BILTZ., M.D.*

OBSTETRICS & GYNECOLOGY
KELLY PAUL BURKHART, M.D., F.A.C.O.G.*

DERMATOLOGY
JOSEPH M. GLICKSMAN, M.D.

BUSINESS MANAGER
OWEN G. ELLIOTT, M.G.M.A.

SURGERY
LOUIS E. GIBSON, M.D., F.A.C.S.*
E. SCOTT MIDDLETON, M.D.

OPHTHALMOLOGY
ROBERT D. MERTZ, M.D., F.A.A.O.O.*

EAR, NOSE, THROAT
PHILLIP M. AWTREY, M.D.,* F.A.A.O.O.

DENTISTRY
ROBERT A. LANG, D.D.S.

*Diplomate of the American Board

PHYSICIANS' DIRECTORY

Allergy

DRS. FEIN AND KAMIN
Allergy and Immunology

Bernard T. Fein, M.D., F.A.C.A.
Fellow
American Academy of Allergy
216 Medical Prof. Bldg.
CA 6-7671

Peter B. Kamin, M.D., F.A.A.P.
Diplomate
Sub-Board Pediatric Allergy
San Antonio, Texas
CA 7-6331

HOUSTON ALLERGY CLINIC
CLINICAL ALLERGY AND IMMUNOLOGY
RICHARD L. ETTER, M.D., F.A.C.A., F.A.A.A.
RICHARD H. JACKSON, M.D., F.A.C.A.
WARREN J. RAYMER, M.D., F.A.C.A.
RAMON GARRIDO, M.D.
(Certified American Board of Pediatrics)
Suite 156, Hermann Professional Building
6410 Fannin St., Houston, Texas 77025
JA 6-3281

V. E. FRIEDEWALD, M.D., F.A.C.P.
Diplomate American Boards of Internal Medicine and Allergy
ALLERGY

2203 West Tennessee Midland, Texas 79701
MU 2-5385

McGOVERN ALLERGY CLINIC
Diagnosis and Treatment of Allergic Diseases
John P. McGovern, M.D. Theodore J. Haywood, M.D.
Orville C. Thomas, M.D. Joseph T. Queng, M.D.
Charles D. Haunschild, M.D. James A. Murray, M.D.
*Hermann Gregory, M.D.
Certified American Boards of Pediatrics and Allergy
6655 Travis Street Houston, Texas 77025 JA 8-5591
*Military Leave of Absence

HARRIS HOSEN, M.D., F.A.A.Pd.
Clinical Allergy and Immunology

2649 Procter Street Port Arthur, Texas

ALLERGY CLINIC
Saul Grossman, M.D., F.A.C.A.
Allergy-Dermatology
W. A. Crozier, M.D., F.A.C.A.
Allergy-Immunology
TU 2-3487

2530 Morgan Corpus Christi, Texas

STUART A. MASON, M.D.
Allergic Diseases

921 Eighth Avenue Fort Worth, Texas 76104
Phone: 336-1574 If no answer: 924-4231

Cardiovascular Disease

GUS SCHREIBER, M.D., F.A.C.P.
Fellow American College of Cardiology

Elective cardioversions for the tachycardias and for auricular fibrillation performed at your hospital with my personal synchronized defibrillator.

For the heart blocks temporary placement at your hospital of my bipolar electrode cardiac catheter and external pacemaker.

Reception and consultative interpretation of telephoned electrocardiographs from any system 24 hours per day.

Rental-maintenance of matching FM Transmitter-Tape Recording equipment which permits the taping of tracings from any bed, compression of the coded data, and later transmission of the tracing when desired.

Office ECG Telephone and Relay Station: 214-748-4118
Home ECG Telephone and Relay Station: 214-352-5504

1430 Medical Arts Building Dallas, Texas 75201

DIRECTORY RATES & DATA: Space is available to TMA members at $8.00 per column inch and must run six months. New listings are limited to those specialties recognized by the American Medical Association. A discount of 5% is allowed for six month's advance payment. Mail copy to Advertising Assistant, TEXAS MEDICINE, 1801 North Lamar Blvd., Austin, Texas 78701. Deadline is 20th of the month preceding publication month.

Clinics

THE CLINIC-HOSPITAL OF SAN ANGELO
224-234 West Beauregard Avenue
SAN ANGELO, TEXAS

R. M. Finks, M.D., Pediatrics
M. D. Knight, M.D., Surgery
W. H. Brauns, M.D., Internal Medicine
Roy E. Moon, M.D., Obstetrics and Gynecology
Chas. F. Engelking, M.D., Ear, Nose and Throat
R. A. Morse, M.D., Internal Medicine
Ralph R. Chase, M.D., Pediatrics
Tom R. Hunter, M.D., Surgery
Dale W. Hayter, M.D., Ophthalmology
O. Sterling Gillis III, M.D., Obstetrics and Gynecology
Consultant in Pathology—Lloyd R. Hershberger, M.D.
Consultants in Radiology—John E. Ballard, M.D. John G. Bolen, M.D. William T. Gordon, M.D.
Robert P. Gordon, C.P.A., Administrator

THE FORT WORTH CLINIC
1221 West Lancaster Avenue
Fort Worth, Texas

John M. Church, M.D.
T. J. Coleman, M.D.
O. M. Phillips, M.D.
Robert L. Sewell, M.D.
John H. Sewell, M.D.
C. K. Holsapple, M.D.
Wm. L. Asper, Bus. Mgr.

FIFTH AVENUE CLINIC
650 Fifth Avenue
Fort Worth, Texas

MEDICINE
Sidney E. Stout, M.D.
Frank L. Bynum, M.D.
Ed Etier, Jr., M.D.

GENERAL PRACTICE
Donald S. Gibbs, M.D.

RADIOLOGY
Otto H. Grunow, M.D.

THOMAS-SPANN CLINIC AND HOSPITAL
1546 South Brownlee Corpus Christi, Texas 78404
Telephone 884-3861

SURGERY
R. Gayle Spann, M.D., F.A.C.S. (Deceased)
S. T. Coleman, M.D., F.A.C.S. (Consultant)
Donald E. Jackson, M.D., F.A.C.S. (Consultant)

OPHTHALMOLOGY
L. David Wright, M.D., F.A.C.S.

GENERAL PRACTICE
Travis B. Phelps, M.D.
T. D. Harvey, M.D.
H. R. Rose, M.D.
C. L. Vernor, M.D.

ORTHOPEDICS
Carlos M. Yanez, M.D., F.A.C.S.

GYNECOLOGY
J. H. Thomas, M.D.

INTERNAL MEDICINE
William E. Morris, M.D.
Gerald A. Reeves, M.D.
Pruett Moore, Jr., M.D.

RADIOLOGY
Crysup Sory, M.D.

ADMINISTRATOR
B. J. Clark

DIRECTOR OF NURSES
Clinic - Pat Parker
Hospital - Mrs. Joyce Pettit

RUGELEY AND BLASINGAME CLINIC
Wharton, Texas

2100 North Fulton Street — 713 LE 2-1700

INTERNAL MEDICINE
R. D. Little, M.D.
D. W. Samuelson, M.D.

GENERAL PRACTICE
C. E. Woodson, M.D.

PEDIATRICS
F. W. Kolle, M.D.

NEUROPSYCHIATRY
R. R. Gleason, Jr., M.D.

DERMATOLOGY & SKIN CANCER
J. S. Stell, M.D.

GENERAL & THORACIC SURGERY
R. E. Goelzer, M.D.

GENERAL SURGERY
R. B. Caraway, Jr., M.D.

UROLOGY
H. Z. Fretz, M.D.
C. M. Collins, M.D.

OBSTETRICS & GYNECOLOGY
D. M. Voulgaris, M.D.
H. E. Secor, M.D.

OPHTHALMOLOGY
V.A. Black, M.D.

OTOLARYNGOLOGY
J. L. Holcomb, M.D.

DENTISTRY
C. J. Shumbera, D.D.S.
J. R. Kieler, Jr., D.D.S.

PATHOLOGY—CONSULTANT
H. M. Perches, M.D.

ANESTHESIOLOGY—CONSULTANT
C. G. Spears, M.D.

RADIOLOGY—CONSULTANT
L. D. O'Gorman, M.D.

ADMINISTRATION
C. H. "Ham" Rugeley
Malcolm D. Rugeley

THE CHESTER CLINIC & THE JOHN BUIST CHESTER HOSPITAL
3330 S. Lancaster Rd., Dallas, Texas
376-5411

John B. Chester, M.D., F.A.C.S., Orthopedic Surgery
Gene W. Rogers, M.D., General Surgery
Douglas M. Hardy, M.D., Obstetrics & Gynecology
Ervin R. Miller, M.D., Cardiovascular Diseases
Ralph C. Disch, M.D., F.A.C.S., D.A.B.S., General Surgery
Catherine P. Chester, M.D., Infants and Children
Doyle L. Sharp, M.D., General Surgery
R. M. Flasdick, M.D., Diagnosis and Internal Medicine
Ben E. Moore, B.S., M.D., Pediatrics
A. P. Larson, B.S., M.S., M.D., F.A.C.S., A.A.O.S.
Garrett, W. Maxwell, M.D., General Practice
Amado E. Dominquez, M.D., Diagnosis & Internal Medicine
H. A. Mueller, M.D., Consultant in Radiology
Gerard Noteboom, M.D., Consultant in Pathology
Geneva Bratton, R.N., Superintendent of Nurses
E. B. Morgan, Administrator

LANCASTER OFFICE – LANCASTER, TEXAS
Phone 227-2151

David E. Krebs, M.D., Pediatrics & Medicine
Charles W. Waldrop, M.D., General Practice
Miles W. Davis, M.D., General Practice

COUNTRY CLUB CORNERS OFFICE
7140 Baytree 224-1181

R. B. Curry, M.D., General Practice
Herbert M. Hinckley, M.D., General Practice

BEELER-MANSKE CLINIC
9th Avenue N. at 5th Street N.
Texas City, Texas 77590
AC 713, WI 8-8521

Obstetrics & Gynecology
G. W. Beeler, M.D.

Internal Medicine
W. T. Matlage, M.D.
C. M. Maruri, M.D.

General Surgery
B. W. Hink, M.D., F.A.C.S.

General Practice
J. H. Cochrane, M.D.
J. W. O'Bryant, M.D.
O. O. Smith, M.D.

Clinic Manager
Stan M. Sheppard

Complete X-ray, Physical Therapy and Laboratory Facilities

MALONE and HOGAN CLINIC
901 Main Street — Phone 267-6361
Big Spring, Texas 79720

Ophthalmology and Otolaryngology
P. W. Malone, M.D., F.A.C.S.
J. W. Tipton, M.D.

General Surgery
J. E. Hogan, M.D., F.A.C.S.
C. B. Marcum, Jr., M.D., F.A.C.S.

Orthopedic Surgery
P. H. Rhymes, M.D.

Internal Medicine
J. H. Burnett, Jr., M.D.
W. A. Riley, M.D.
R. S. Griffin, M.D.
R. T. Torp, M.D.

Obstetrics and Gynecology
M. A. Porter, M.D.

Pediatrics
J. M. Woodall, M.D.
M. W. Talbot, Jr., M.D., F.A.A.P

Radiology
W. R. Cashion, M.D.

Urology
G. F. Dillon, M.D.

Consultants in Pathology
Jarrett E. Williams, M.D.
B. B. Trotter, M.D.

Business Manager
R. L. Heith

DIAGNOSTIC CLINIC OF HOUSTON
6448 Fannin, Houston, Texas 77025 (713) 526-2051

Internal Medicine and Diagnosis

Cardiovascular Disease
Thomas J. Fatherree
Hugh F. Arnold, M.D.
Hugh H. Hanson, M.D.
Michael B. Raine, M.D.
Michael A. Modelski, M.D.
Sigmund W. Friedland, M.D.

Endocrinology and Metabolic Diseases
H. Leland Kaplan, M.D.
Thomas G. Vandivier, M.D.
Charles H. Gregory, M.D.
R. Frederick Gregory, M.D.

Endocrinology, Metabolic Diseases and Director of Clinical Research
Raymond L. Gregory, M.D.

Geriatrics
Frederick G. Dorsey, M.D.

Gastroenterology
Dolph L. Curb, M.D.
W. Tom Arnold, M.D.
Belton G. Griffin, M.D.
Frederick R. Lummis, Jr., M.D.
Dean C. Solcher, M.D.

Hematology
Edmund N. Gouldin, M.D.
George W. Conrad, Jr., M.D.

Hypertension and Renal Diseases
K. Ronald Bingman, M.D.
R. Robert Durrett, M.D.

Infectious Diseases
Lewie L. Travis, Jr., M.D.
Jack L. Reddin, M.D.

Internal Medicine
Jeffrey Zatorski, M.D.

Neurology
Donald J. Russell, M.D.

Oncology
Lester L. Hoaglin, Jr., M.D.
Peter Sullivan, M.D.

Pathology
Jack P. Abbott, M.D.
Paul B. Radelat, M.D.

Pulmonary Disease
William M. Donohue, M.D.
Joel E. Reed, M.D.
Gene R. Lindley, M.D.

Radiology and Nuclear Medicine
William L. Hinds, M.D.
Charles P. Eldridge, Jr., M.D.
David D. Lawrence, M.D.
Charles A. Spain, M.D.

Rheumatology
John E. Norris, M.D.

Administration
C. G. Mercy, Administrator
Robert B. Hall, Assistant Administrator

Laboratory:
Clinical Pathology
Cytology

Nuclear Medicine
Isotope uptake, Gammagram and Therapy

Roentgenology

PROCEDURES:

Bronchoscopy:
Pulmonary Functions

Cardiac Catheterization

Electrocardiography-Phonocardiography

Esophagoscopy

Gastroscopy

Proctosigmoidoscopy

CONSULTATION BY APPOINTMENT

THE LORIMER CLINIC
901 West Leuda Street
Fort Worth, Texas 76104
335-4333

SURGERY
W. S. Lorimer, Jr., M.D., F.A.C.S.
R. J. Turner, III, M.D., F.A.C.S.

INTERNAL MEDICINE
W. W. Moorman, M.D., F.A.C.P.
D. W. Johnston, M.D. F.A.C.P.
Stephen Eppstein, M.D.
A. R. Daniell, M.D.

Mrs. Evelyn Farr, Business Manager

CLINIC OF THE SOUTHWEST
6437 High Star at Hillcroft
Houston, Texas 77036 PR 4-7671

INTERNAL MEDICINE
William C. Franklin, M.D.
Arthur B. Conde, M.D.

OBSTETRICS & GYNECOLOGY
Joy L. Deere, M.D.
Loren B. Goss, M.D.

PEDIATRICS
John R. Dunn, Jr., M.D.
Blanca S. Azios, M.D.

PHYSICAL THERAPY
Richard D. Tinsley, R.P.T.

GENERAL SURGERY
Harvey B. Koch, M.D.

UROLOGY
Glen E. Lewis, M.D.

DENTISTRY
Burley G. Ingram, D.D.S.

RADIOLOGY
Neil B. Longley, M.D.
Richard E. Schuette, M.D.

BUSINESS MANAGER
C. C. Walker

AS NEAR AS YOUR MAILBOX OR TELEPHONE!

TMA MEMORIAL LIBRARY

1801 North Lamar Blvd.
Austin, Texas 78701
512 477-6704

Colon and Rectal Surgery

MALCOLM McNATT, M.D., F.A.C.S.
Diplomate of the American Board of Colon and Rectal Surgery
Proctology
Colon and Rectal Surgery
710 Medical Arts Bldg. RIverside 2-2858
Dallas, Texas

ALVIN BALDWIN, JR., M.D., F.A.C.S.
Practice Limited to
Diseases and Surgery of the Colon and Rectum
714 Doctors Building 3707 Gaston Avenue
Dallas, Texas
Off. Tel. 824-2573 Res. Tel. 361-4500

HUGH C. WELSH, M.D.
Proctology and Abdominal Surgery
2715 Fannin Street Houston, Texas

J. WADE HARRIS, M.D., F.A.C.S.
JOHN E. COGAN, M.D., F.A.C.S.
Surgery of the Rectum and Colon
406 Hermann Professional Bldg.
Houston, Texas

C. D. L. CROMAR, M.D.
Surgery of the Rectum and Colon
617 South Tatar Street
Pasadena, Texas 77502

Dermatology

ROGER W. MANAR, M.D.
DERMATOLOGY
SUPERFICIAL X-RAY THERAPY
1400 Eighth Street Wichita Falls, Texas

BEDFORD SHELMIRE, M.D.
BEDFORD SHELMIRE, JR., M.D.
DAVID S. SHELMIRE, M.D.
Dermatology
1410 Medical Arts Bldg. Dallas, Texas

DRS. PIPKIN, RESSMANN & RICHARDSON
J. LEWIS PIPKIN, M.D.
ARTHUR C. RESSMANN, M.D.
A. W. RICHARDSON, M.D.
DERMATOLOGY
X-Ray and Radium in The Treatment of Skin Malignancies
714 Medical Arts Bldg. San Antonio, Texas

EVERETT R. SEALE, M.D.
Dermatology
Treatment of Skin Malignancies
1217 Hermann Professional Bldg. Houston, Texas

J. GILMORE BRAU, M.D.
DERMATOLOGY—SYPHILOLOGY
X-RAY and RADIUM THERAPY
Hours 9 to 1 — 3 to 5
3817 Brown Street Dallas, Texas

J. FRANKLIN CAMPBELL, M.D.
EDMUND N. WALSH, M.D.
Dermatology and Syphilology, and Treatment of Skin Cancer
Radium and X-Ray Therapy
1410 Pruitt Street Fort Worth, Texas

Leslie M. Smith, M.D. H. D. Garrett, M.D.
John C. Wilkinson, M.D.
DRS. SMITH, GARRETT & WILKINSON
Dermatology and Syphilology
X-Ray and Radium in the Treatment of Skin Malignancies
Medical Center, 1501 Arizona El Paso, Texas

WALTER B. MANTOOTH, JR., M.D.
JOE M. LEHMAN, M.D.
ROBERT LEHMAN, M.D.
Dermatology, Syphilology, and Cancer of the Skin
3801 19th St., Suite 500 Lubbock, Texas

MARVIN E. CHERNOSKY, M.D.
DERMATOLOGY AND SYPHILOLOGY
703 Hermann Professional Building
Phone JA 6-3733 Houston, Texas

THOMAS L. SHIELDS, M.D.
Dermatology and Syphilology
X-Ray Therapy in the
Treatment of Skin Malignancies
Hours 9 to 1 — 3 to 5
800 Fifth Ave. Fort Worth, Texas

DAVID R. WEAKLEY, M.D., F.A.C.P.
Dermatology
Treatment of Skin Malignancies
8548 Northwest Plaza Drive Dallas, Texas
315 North Shiloh Road Garland, Texas

M. A. (Mac) HAIRSTON, JR., M.D.
DERMATOLOGY
HAIR TRANSPLANTATION & DERMOPLANING
Memorial City Professional Bldg., 902 Frostwood, Suite 184
(Between Memorial & Katy Fwy.)
Phone: 464-6369 Houston, Texas 77024

JOHN B. McMASTER, JR., M.D.
Dermatology
222-2147
Dermabrasion & Chemosurgery
416 M & S Tower San Antonio, Texas 78205

Eye, Ear, Nose, Throat

M. Ray Harrington, M.D. Lloyd F. Ritchey, M.D.
Jack Blum, M.D.
Ophthalmology and Otolaryngology
8215 Westchester
Suite 135
Dallas, Texas

Drs. Canon, Watkins, Anderson, Nalle and Ellsasser
Eye, Ear, Nose and Throat, Broncho-Esophagology and Allergy
R. T. Canon, M.D., F.A.C.S. — M. D. Watkins, M.D., F.A.C.S., A.I.C.S.
Wm. F. Anderson, M.D., DAB Oph., F.A.C.S. — Ernest Nalle, Jr., M.D. DAB Oto., F.A.C.S., F.I.C.S.
M. G. Ellsasser, M.D., DAB Oph.
West Texas Clinic 1312 Main Lubbock, Texas

W. HUBERT SEALE, M.D.
Eye, Ear, Nose & Throat
HUBERT JAMES SEALE, M.D.
Disease & Surgery of the Eye
OR 3-3751
1321 Hickory St. Abilene, Texas

Gastroenterology

JAMES J. GORMAN, M.D., F.A.C.P.
Gastroenterology
Diagnosis Gastroscopy
1111 El Paso National Bank Bldg.
El Paso, Texas 79901

MILFORD O. ROUSE, M.D.
announces limitation of practice to consultation in hospitals. His office is now at Dallas Chamber of Commerce in Community Health Focus program. Records of his patients are with Cecil O. Patterson, M.D., and Daniel Polter, M.D., 1414 Medical Arts Building, Dallas, 742-6144.

CECIL O. PATTERSON, M.D.
GASTROENTEROLOGY, GASTROSCOPY
ESOPHAGOSCOPY
1414 Medical Arts Building
Dallas, Texas
742-6141

DRS. BAILEY, DOUGLAS AND FISHER ASSOCIATION
3434 Swiss Avenue, Suite 303, Dallas, Texas
Diseases of the Digestive System
Herbert A. Bailey, M.D. F. Clark Douglas, M.D.
John W. Fisher, M.D.

W. CROCKETT CHEARS, JR., M.D.
GASTROENTEROLOGY
GASTROSCOPY & ESOPHAGOSCOPY
1027 Medical Arts Building
Telephone 748-4975 Dallas, Texas

General Surgery

J. PEYTON BARNES, M.D., F.A.C.S.
Surgery
1000 St. Joseph Professional Bldg.
Houston, Texas 77002

L. GONZALEZ CIGARROA, M.D., F.A.C.S.
Diplomate American Board of Surgery
Practice limited to
SURGERY
1502 Logan Ave. Laredo, Texas

BURT B. SMITH, M.D.
SURGERY
Emphasizing Breast, Thyroid and Gastro-Intestinal Surgery
728 Hermann Professional Building
Phone 523-8323 Houston, Texas 77025

ADOLPH F. KAUFFMANN, M.D., F.A.C.S.
Diplomate American Board of Surgery
GENERAL SURGERY
707 Fifth Ave. Fort Worth, Texas
Phone 332-7597

BRYAN V. WILLIAMS, M.D., F.A.C.S.
Diplomate American Board of Surgery
GENERAL SURGERY
1506 St. Joseph Professional Bldg.
Houston, Texas 77002
227-5505

PAUL CARRILLO-RIVERA, M.D., F.A.C.S.
General, Pulmonary, Cardiovascular Surgery
105 University Towers
915-533-2508
1900 N. Oregon St. El Paso, Texas 79902

Internal Medicine

JOHN A. WIGGINS, JR., M.D.
Diseases of the Chest
Bronchoscopy
1105 Pennsylvania Ave. Fort Worth, Texas

HENRY N. GEMOETS, M.D., F.A.C.P., F.C.C.P.
Internal Medicine and Diseases of the Chest and Heart
THOMAS H. GEMOETS, M.D.
Internal Medicine and Diagnosis
1003 Memorial Professional Building
1010 Louisiana Houston, Texas 77002 222-7224

Neurology/Psychiatry

HAUSER CLINIC

Psychiatry, Neurology, and Electroencephalography

Section of Psychiatry
*Abe Hauser, M.D.
*Robert I. Hauser, M.D.
Barry M. Brown, M.D.
*Harris M. Hauser, M.D.

Section of Neurology
*Harris M. Hauser, M.D.
*Gerald Ratinov, M.D.
Robert M. Gordon, M.D.
*Abe Hauser, M.D.

Section of Social Work
Ethel Feinsilver, M.S.

Section of Psychology
Robert Langston, Ph.D.
Consultant
Joanne Borba, M.A.

Administrator
Gordon D. Keller

808 Memorial Professional Building
Houston, Texas 77002
224-5041

*Diplomate, American Board of Psychiatry and Neurology

Perry C. Talkington, M.D.
Charles L. Bloss, M.D.
Howard M. Burkett, M.D.
Jerry M. Lewis, M.D.
James K. Peden, M.D.
Claude L. Jackson, M.D.
Dode M. Hanke, M.D.
Doyle I. Carson, M.D.
Thomas H. Allison, M.D.
Stanley L. Seaton, M.D.
Maurice S. Green, M.D.
Joe W. King, M.D.
Keith H. Johansen, M.D.
Charles G. Markward, M.D.
Aretta J. Rathmell, M.D.
Donald N. Offutt, M.D.

practice limited to
PSYCHIATRY

4645 Samuell Blvd., Dallas, Texas
Timberlawn Psychiatric Hospital
4600 Samuell Blvd., Dallas, Texas
381-7181

STEPHEN WEISZ, M.D.
Practice Limited to
NEUROLOGY and PSYCHIATRY
1637 Medical Arts Bldg. Dallas, Texas
747-5183

ALEX K. MUNSON, M.D.
Child Psychiatry
KERBEY LANE EVALUATION
AND TREATMENT CENTER
3400 Kerbey Lane Austin, Texas 78703
Office Hours by Appointment
AC 512-454-8718

THE FORT WORTH
NEUROPSYCHIATRIC CENTER
*Bernard J. Dolenz, M.D. *Herbert G. Rush, M.D.
1066 W. Magnolia Avenue 336-5469
Fort Worth, Texas 76104
*Diplomates American Board of Psychiatry and Neurology

HOUSTON ASSOCIATES
IN
PSYCHIATRY AND NEUROLOGY
Houston, Texas

C. A. Iannucci, M.D.
Joe C. A. Eckhardt, Jr., M.D.
Alfred H. Vogt, M.D.
George M. Stevens, M.D.
Jules Bohnn, M.D.
Leroy Androes, M.D.
A. R. Martinez, Ph.D.
Ruth Searls, M.S.W.
Diana Sheer, M.S.W.
Dan DeShazo, M.S.W.
Beth Bowman, M.A.

Comprehensive Neuropsychiatric
Evaluation and Treatment
Electroencephalography

1021 Hermann Prof. Bldg. 529-5721
6812 Staffordshire 748-3780

CHAPMAN ISHAM, M.D.
Diplomate American Board of Psychiatry
Child Psychiatry and Marriage Counseling
Hypnotherapy for Smoking and Obesity
3701 21st Street Lubbock, Texas 79410
795-4023

MEDICAL NEUROLOGY AND
ELECTROENCEPHALOGRAPHY
205 Swiss Avenue Medical Building
3434 Swiss

Dallas, Texas 75204 827-3610
Sheff D. Olinger, M.D. Joseph S. Jenike, M.D.
Charles W. Barrier, M.D.
Hours by Appointment Only

Pasadena Neuropsychiatric Clinic Association
Robert E. Hazlewood, M.D. Richard M. Orr, M.D.
Practice Limited
to
Neurology and Psychiatry
Office Hours by Appointment
First Pasadena State Bank Building
1001 E. Southmore, Suite 1103
Pasadena, Texas 77502 Telephone 473-7646

LABORATORY OF ELECTROENCEPHALOGRAPHY
Jean M. B. Moure, M.D.
Diplomate American Board of Electroencephalography
522-1037
275 Hermann Prof. Bldg. Houston, Tex. 77025

Neurological Surgery

JAMES GREENWOOD, JR., M.D.
Neurosurgery
718 Hermann Professional Bldg., Houston, Texas 77025
Office: 528-5373 Residence: 528-4038

Morris Sanders, M.D. Jack I. Woolf, M.D.
DRS. WOOLF AND SANDERS
Diplomate American Board of Neurological Surgery
Locke Medical Building, 6011 Harry Hines Blvd.
Dallas, Texas 631-1500

JACK STERN, M.D.
GARY C. HUTCHISON, M.D.
Neurological Surgery
8226 Douglas, Suite 609
Dallas, Texas 75225
363-8524

Casey E. Patterson, M.D. Tom M. Nash, M.D.
Charles W. Simpson, M.D. James E. Bland, M.D.
DRS. NASH, PATTERSON & SIMPSON, ASSN.
Neurological Surgery
637-0420
Suite 557 - Locke Medical Building, 6011 Harry Hines Blvd.
Dallas, Texas 75235

ALBERT D'ERRICO, M.D.
Neurological Surgery
3707 Gaston Avenue Dallas, Texas 75246
Telephone 824-2543

RONALD SMITH, M.D.
Neurological Surgery
901 South Lake Fort Worth, Texas
Telephone 336-0551

GLENN R. CHERRY, M.D., F.A.C.S.
R. GORDON LONG, M.D.
Diplomate American Board of Neurological Surgery
712 North Washington
826-7060 Dallas, Texas

ROBT. C. L. ROBERTSON, M.D., F.A.C.S.
JOSEPH W. ROBERTSON, M.D.
Neurological Surgery
2210 Maroneal Houston, Texas 77025
523-3684

WILLIAM J. NELSON, M.D.
Certified by the American Board of Neurological Surgery
Suite 300
University Towers
915-542-0643
1900 N. Oregon St. El Paso, Texas 79902

CHARLES A. BORNE, JR., M.D.
Neurological Surgery
Suite 834, Sealy-Smith Professional Building
Galveston, Texas 77550
200 University Boulevard 713-763-1688

Nuclear Medicine

HERBERT C. ALLEN, JR., M.D.
Practice Limited to
NUCLEAR MEDICINE
526-1501
100 Hermann Professional Bldg.
Houston, Texas 77025

Ophthalmology

HOUSTON EYE ASSOCIATES
1121 Hermann Professional Building
Houston, Texas 77025
Phone 526-7261
(AC 713)
Richard S. Ruiz, M.D., F.A.C.S.
Charles E. Russo, M.D. Robert H. Stewart, M.D.
Malcolm L. Mazow, M.D. Robert B. Wilkins, M.D.

DRS. MURPHY, ALPAR, TAYLOR & HOWELL
OPHTHALMOLOGY
Weldon O. Murphy, M.D.
John J. Alpar, M.D.
Coleman Taylor, M.D.
J. Franklin Howell, Jr., M.D.
Diplomates of the American Board of Ophthalmology
2300 West 7th Avenue Amarillo, Texas

ALBERT VAISER, M.D.
WILLIAM B. SNYDER, M.D.
Diseases and Surgery of the Retina
318 Medical Arts Building
Dallas, Texas 748-0958

LIEVEN J. VAN RIET, M.D.
OPHTHALMOLOGY
Medical Surgical
224-0654
Saint Joseph Professional Building
Houston, Texas 77002

BERT C. BRYAN, M.D.
Surgery and Diseases of the Eye
1314 Medical Arts Building
747-7474 Dallas, Texas 747-2481

W. REX HAWKINS, M.D.
Detachment of the Retina
Diabetic Retinopathy
250 Hermann Professional Building
Houston, Texas 529-6727

OPHTHALMOLOGY ASSOCIATES
Harold E. Caplan, M.D. Jed Lee Howard, M.D.
R. Larry Brenner, M.D.
Special interest in corneal, ophthalmic plastic & retinal surgery
3320 Plainview, Pasadena, Texas 77504, 713-944-5700
2622 NASA Road 1, Seabrook, Texas 77586, 713-877-2571

DAVID R. STAGER, M.D.
PEDIATRIC OPHTHALMOLOGY
8226 Douglas Ave.
Dallas, Texas 75225

ARTHUR M. CLEMENTS, M.D.
Surgery and Diseases of the Eye
(214) 341-3407
Northlake Professional Building
8535 Ferndale Road Dallas, Texas 75238

Orthopedic Surgery

H. H. Beckering, M.D. George Truett James, M.D.
L. Ray Lawson, M.D. Robert D. Vandermeer, M.D.
W. B. CARRELL MEMORIAL CLINIC
2828 Lemmon Ave. Dallas, Texas

FORT WORTH BONE & JOINT CLINIC
918 8th Avenue — Fort Worth, Texas
Louis J. Levy, M.D. Cuvier P. Lipscomb, M.D.
Henry C. McDonald, Jr., M.D. Fred W. Sanders, M.D.

Ralph E. Donnell, M.D. F. Carlton Hodges, M.D.
ORTHOPEDIC ASSOCIATES
Diplomates American Board of Orthopedic Surgery
1133 N. 19th St. Abilene, Texas 79601

HOUSTON ORTHOPEDIC CLINIC
Joseph Barnhart, M.D. Donald T. Lazarz, M.D.
1817 Dryden Road Phone: 529-4389
Houston, Texas

LUBBOCK ORTHOPEDIC SURGERY CLINIC
ROYCE C. LEWIS, JR., M.D.
KENNETH C. SCHOLZ, D.D.S., M.D.
RAY E. SANTOS, M.D.
3702 21st St., Suite 9 806-763-8281
Lubbock, Texas 79410

THE EL PASO
ORTHOPEDIC SURGERY GROUP
Louis W. Breck, M.D. Oren H. Ellis, M.D.
W. Compere Basom, M.D. Wellington J. Pindar, M.D.
Morton H. Leonard, M.D.* Donald A. Shearer, Admstr.
Special attention to surgery of the hand
1220 N. Stanton St. Tel. 533-7465 El Paso, Texas 79902

B. C. HALLEY, JR., M.D.
DAVID R. WEBB, JR., M.D.
Orthopaedic Surgery
3909 Worth at Washington 821-1417
Dallas, Texas 75246

RUSS B. GRAHAM, M.D., F.A.C.S.
ORTHOPEDIC SURGERY
306 Presbyterian Professional Building
8210 Walnut Hill Lane, Dallas, Texas 75231
Telephone
824-7883

THE ORTHOPEDIC GROUP OF RICHARDSON
Charles E. Graham, M.D.
M. Gayle Glidewell, M.D.
812 S. Central Expressway
Richardson, Texas 75080
ORTHOPEDIC SURGERY
231-6396

L. LEE LANKFORD, M.D.
Diplomate American Board of Orthopedic Surgery
HAND SURGERY AND
UPPER EXTREMITY RECONSTRUCTIVE SURGERY
3707 Gaston Ave. Area Code 214
Dallas, Texas 75246 823-5351

THE ARLINGTON ORTHOPEDIC GROUP
H. W. Bendel, Jr., M.D. E. E. Rising, Jr., M.D.
C. Poindexter, M.D.
Diplomates American Board of Orthopaedic Surgery
801 West Randol Mill Road 817 - 261-8284
Arlington, Texas 76010

THE BOSWELL-EVANS ORTHOPAEDIC CLINIC
George M. Boswell, Jr., M.D., F.A.C.S. James P. Evans, M.D.
Lewis R. Thompson, M.D.
Gerald W. Schofield, M.D.
4849 W. Lawther Dr. 348-8300 Dallas, Texas 75218

Otolaryngology

TOM BARR, M.D.
Ear, Nose, and Throat,
Diseases of Larynx, and
Laryngeal Surgery
Medical Arts Building Dallas, Texas

HERBERT H. HARRIS, M.D., F.A.C.S., F.I.C.S.
Oto-Laryngology Broncho-Esophagology
and Laryngeal Surgery
907 Hermann Professional Bldg. Houston, Texas

MARVIN G. SHEPARD, M.D., F.A.C.S.
Practice limited to Otology and Otological Surgery
Medical Tower Building
712 N. Washington
Suite 514
Dallas, Texas Hours By Appt.

W. P. ANTHONY, M.D.
Otology
662 So. Henderson Fort Worth, Texas 76104

DONALD N. MATHESON, M.D., F.A.C.S.
Diplomate American Board of Otolaryngology
800 Fifth Avenue, Phone 336-7133
Fort Worth, Texas

Pathology

MARVIN D. BELL, A.B., M.D.
Clinical Pathology
1109 Medical Arts Bldg. Dallas, Texas

A. B. CAIRNS, M.D.
GERARD NOTEBOOM, M.D.
MARC GARZA, M.D.
RONALD E. BUCHANAN, M.D.
WADE M. BRANNAN, M.D.
Diplomates American Board of Pathology
1105 N. Bishop Methodist Hospital
Dallas, Texas Dallas, Texas

FORT WORTH MEDICAL LABORATORIES
John J. Andujar, M.D.
Dorothy Patras, M.D.
1404 Pennsylvania Ave. (817) 336-7137
P. O. Box 1118 Fort Worth, Texas 76101

BROWN & ASSOCIATES MEDICAL LABORATORY
Tissue Pathology, Exfoliative Cytology, Hematology, Serology, Clinical Chemistry, Bacteriology, Parasitology, Serum Protein Electrophoresis and Hemoglobin Electrophoresis
Wilson G. Brown, M.D. George V. Miller, M.D.
Walter G. Olin, M.D. John R. Thomas, M.D.
S. J. Skinner, M.D. Joe B. Haden, M.D.
Diplomates American Board of Pathology
165 Hermann Professional Bldg., 526-4031
Houston, Texas
"Mailing Containers on Request"
"Office Pickup Service in Houston"

DR. PREUSS PATHOLOGY LABORATORY
Exfoliative Cytology
and Surgical Pathology
FRED S. PREUSS, M.D., F.C.A.P.
3607 Gaston Avenue, Room 305
Dallas, Texas 75226
Telephone: 823-6912
Specimen containers on request

NUCLEAR MEDICINE LABORATORIES
OF TEXAS
6411 South Main Street
Texas Medical Center
Houston, Texas 77025
Completely equipped radioisotope laboratory for diagnostic radioactive tests in:
Hematology, Thyroidology, Endocrinology, Gastroenterology, Cardiology, Neurology, Neuro-Surgery, Urology, Ophthalmology and Obstetrics-Gynecology
Herbert C. Allen, Jr., M.D., Director
526-1501

John H. Childers, M.D. E. H. Valentine, M.D.
R. R. Rember, M.D. W. L. Crofford, M.D.
E. P. Jenevein, M.D.
MEDICAL LABORATORY SERVICE OF DALLAS
Clinical Pathology Surgical Pathology
Diagnostic Radioisotopes Exfoliative Cytology
6011 Harry Hines Boulevard Dallas, Texas 75235
637-0210
(Mailing containers available upon request)

PRUITT MEDICAL LABORATORIES
Jack Pruitt, M.D.
Diplomate, American Board of Pathology
Tissue Pathology, Exfoliative Cytology, Clinical Pathology, Medicolegal Consultation.
P. O. Box 160 Lufkin, Texas 75901
Phone 634-4453

WACO CLINICAL PATHOLOGY LABORATORY
K. P. Wittstruck, M.D., F.C.A.P.
Walter Krohn, M.D., F.C.A.P.
Clinical Pathology Exfoliative Cytology
Surgical Pathology Medicolegal Consultation
Mailing containers on request
2112 Washington Avenue 756-7226
P.O. Box 3160 Waco, Texas 76707

GEORGE J. RACE, M.D. AND ASSOCIATES
PATHOLOGISTS
421 Medical Tower Building
712 North Washington, Dallas, Texas 75246
Telephone AC 214, 824-1258

Physical Medicine and Rehabilitation

TEXAS REHABILITATION HOSPITAL
OF GONZALES
WARM SPRINGS FOUNDATION, INC.
P.O. BOX 58, GONZALES, TEXAS 78629
Facilities for physical restoration.
Physical Therapy, Occupational Therapy, Speech Therapy, Recreational Therapy, School from first grade through twelfth grade.
ROBERT M. IZARD, JR., M.D. Medical Director
LYNN SMITH, SR. Administrator

Plastic Surgery

THOMAS D. CRONIN, M.D., F.A.C.S.
RAYMOND O. BRAUER, M.D.
THOMAS M. BIGGS, M.D.
Diplomates American Board of Plastic Surgery
PLASTIC SURGERY
5419 Caroline Street 523-8131 Houston, Texas 77004

WILLARD C. SELLMAN, JR., M.D.
Plastic, Maxillo-Facial and Hand Surgery
530 Locke Medical Building
6011 Harry Hines Blvd.
Dallas, Texas 75235 637-4770

BROMLEY SMITH FREEMAN, M.D., F.A.C.S.
Diplomate American Boards of Surgery and Plastic Surgery
PLASTIC AND RECONSTRUCTIVE SURGERY
Tumors of the Head and Neck
1810 The Medical Towers — Tel. 529-3579
Houston, Texas 77025 — Res. 782-1628

JOHN B. PATTERSON, M.D., F.A.C.S.
Diplomate American Board
PLASTIC SURGERY
612 Doctors Building — Fort Worth, Texas
336-0356

SIMON FREDRICKS, M.D., F.A.C.S.
Diplomate American Board of Plastic Surgery

Houston Office	*Pasadena Office*
1103 Medical Towers	904½ E. Southmore
Houston, Texas 77025	Pasadena, Texas 77502
523-5575	473-5488

DAVID A. GRANT, M.D., F.A.C.S.
Diplomate American Boards of Surgery and Plastic Surgery
PLASTIC & RECONSTRUCTIVE SURGERY
COSMETIC SURGERY
800 Fifth Avenue
Fort Worth, Texas 76104
335-4751

CARL R. COERS, III, M.D.
Diplomate American Board of Plastic Surgery
PLASTIC, RECONSTRUCTIVE & HAND SURGERY
800 Fifth Avenue
Fort Worth, Texas 76104
335-4751

MARCUS L. FINLEY, M.D., F.A.C.S.
Diplomate American Board of Plastic Surgery
PLASTIC, RECONSTRUCTIVE AND HAND SURGERY
1115A Pennsylvania Avenue
Fort Worth, Texas 76104
Telephone 335-6439

VALENTIN GRACIA, M.D.
F.A.C.S., F.I.C.S., D.A.B.
AESTHETIC SURGERY—BURNS
1001 W. Rosedale — Phone
Fort Worth, Texas 76104 — 336-0446

FRANCIS A. MORRIS, JR., M.D.
WILLIAM E. BARNES, M.D.
Diplomates American Board of Plastic Surgery
Plastic, Reconstructive and Hand Surgery
3100 Red River — 476-9149 — Austin, Texas

Plastic Surgery
JOHN R. HILL, M.D., F.A.C.S.
Diplomate, American Board of Plastic Surgery
Practice limited to Plastic, Reconstructive and Hand Surgery
Medical Center Office: 272 Hermann Prof. Bldg. Houston, Texas 77025 528-2481
Spring Branch Office: 9320 Westview Houston, Texas 77055 528-2481

E. FRANK DUNTON, M.D., F.A.C.S.
Plastic & Reconstructive Surgery and Surgery of the Hand
Telephone 824-7290 — Suite 104, 3434 Swiss Avenue, Dallas, Texas

W. W. SCHUESSLER, M.D., F.A.C.S.
Diplomate of American Board of Plastic Surgery
Plastic, Reconstructive & Maxillo-Facial Surgery
Telephone 533-6362 — Suite 4-C Medical Center, 1501 Arizona Avenue, El Paso, Texas 79902

Radiology

AMARILLO RADIOLOGICAL GROUP
Practice Limited to Radiology
ROYAL WERTZ, M.D., F.A.C.R.
WILBUR Q. BUDD, M.D., D.A.B.R.
800 Rusk Street
Amarillo, Texas 79106 — 373-8324

J. R. MAXFIELD, JR., M.D., M.A.C.R.
JACK G. S. MAXFIELD, M.D., M.A.C.R.
Radiological Center
Including Radioisotopes
2711 Oak Lawn, Dallas — 526-6661

MAURICE C. ARCHER, M.D., M.A.C.R.
MARY L. KILLINGSWORTH, M.D., M.A.C.R.
Diplomates of the American Board of Radiology
800 Fifth Avenue — Doctors Building
Fort Worth, Texas — 332-3401

DRS. CARLSON AND BAREKMAN
Glenn D. Carlson, M.D., F.A.C.R.
William H. Barekman, M.D., D.A.B.R.
Agnes M. Guthrie, M.D., D.A.B.R.
X-RAY DIAGNOSIS
X-RAY AND RADIUM THERAPY
RADIOISOTOPES
1221 Medical Arts Bldg.....741-3621
6011 Harry Hines Blvd.....631-7070
3607 Gaston Ave.....823-9961
DALLAS, TEXAS

Harvey M. Lowry, M.D., F.A.C.R.
James R. Gish, M.D., D.A.B.R.
Edward A. Sheldon, M.D., D.A.B.R.
James P. Wills, M.D.
RADIOLOGY

109 Doctors Bldg.	838-4543
502 Goodhue Bldg.	838-2224
Baptist Hospital	833-6421

Beaumont, Texas

JAMES L. CLIFFORD, M.D., D.A.B.R.
Cobalt 60 Rotational Therapy
X-Ray and Radium Therapy
X-Ray Diagnosis
Radioisotopes
845 Clarksville St. — 784-4624 — Paris, Texas

DOCTORS McCONNELL, RIDINGS AND FULLER
208 Locke Medical Building — Telephone 637-0774
6011 Harry Hines Boulevard
Dallas, Texas 75235
R. W. McConnell, M.D.
Practice Limited to Nuclear Medicine
G. Ray Ridings, M.D.
D. E. Fuller, M.D.
Practice Limited to Radiation Therapy

Thoracic Surgery

Donald L. Paulson, M.D. Harold C. Urschel, Jr., M.D.
DRS. PAULSON AND URSCHEL
Thoracic and Cardiovascular Surgery
3810 Swiss Ave. 824-2503
Dallas, Texas

THORACIC AND CARDIOVASCULAR SURGERY
James O. McBride, M.D., F.A.C.S.
662 South Henderson, Suite A
P. O. Box 1407
Fort Worth, Texas 76102
332-7454 738-4594

Charles T. Meadows, M.D.
Diplomate, American Board of Thoracic Surgery
Thoracic and Cardiovascular Surgery
Broncho-esophagology
The Professional Building
673-8184
1101 North 19th Abilene, Texas

LeROY J. KLEINSASSER, M.D., F.A.C.S.
Diplomate American Board of Surgery &
The Board of Thoracic Surgery
CARDIOVASCULAR and
PERIPHERAL VASCULAR SURGERY
The Doctors Bldg., 3707 Gaston Ave.
Dallas 10, Texas

Robert R. Shaw, M.D. John L. Kee, Jr., M.D.
DRS. SHAW AND KEE
THORACIC SURGERY
The Doctors Building 3707 Gaston Avenue
Dallas, Texas 75246
826-5184

WILLIAM W. TAYLOR, M.D.
Diplomate Board of Thoracic Surgery
Thoracic, Cardiac, and Vascular Surgery
804 Locke Med. Bldg. 6011 Harry Hines Blvd.
Dallas, Texas 75235 637-4833

ALLAN L. GRAHAM, M.D.
Diplomate American Board of Surgery and
Board of Thoracic Surgery
Cardiovascular and Peripheral Vascular Surgery
502 Doctors Building 800 Fifth Avenue
Fort Worth, Texas 332-7879

Use your
Texas Medical Association
Memorial Library
45,000 Bound Volumes 400 Films
1,100 New Journals Each Month
Extensive Reprint Collection
Audio Digest Foundation Tapes
Call or write today!
1801 North Lamar Blvd.
Austin, Texas 78701
AC 512 477-6704

Urology

CECIL M. CRIGLER, M.D., F.A.C.S.
Practice limited to
UROLOGY
1519 Hermann Professional Bldg., Houston, Texas

JO C. ALEXANDER, M.D.
KARL B. KING, M.D. FOSTER FUQUA, M.D.
ELGIN W. WARE, JR., M.D.
GEORGE E. HURT, JR., M.D.
EUGENE R. TODD, M.D.
DONALD E. JOHNSON, M.D.
Urology
3707 Gaston Avenue Dallas, Texas

THE UROLOGY CLINIC
1415 Pennsylvania Ave., Fort Worth, Texas 76104
Dolphus E. Compere, M.D., M.S., F.A.C.S.
Diplomate of American Board of Urology
Grant F. Begley, A.B., M.D.
Diplomate of American Board of Urology
Hugh Lamensdorf, M.D.

H. M. GIBSON, JR., M.D., F.A.C.S.
(Certified by American Board of Urology)
Practice limited to
UROLOGY
512 University Towers Bldg. 1900 North Oregon St.
El Paso, Texas Ph. 532-8130 & 533-4765

MARVIN GREER RAPE, M.D.
Diplomate of American Board of Urology
NEWTON F. McDONALD, M.D.
Diplomate of American Board of Urology
Practice Limited to
UROLOGY
1703 St. Joseph Professional Bldg., 2000 Crawford
Houston, Texas 77002

JOHN B. TRIBLE, M.D.
Practice Limited to
UROLOGY
1209-10 Medical Arts Bldg.
222-7521 Houston, Texas 77002

ERWIN C. WINKEL, M.D.
practice limited to
UROLOGY
Northwest Professional Center 681-0343
2925 West T.C. Jester Blvd. Houston, Texas

THE UROLOGY CLINIC
1010 Louisiana, Houston, Texas 77002
227-1414
JAMES S. BOREN, M.D.
ROBERT I. COX, M.D.
Diplomates American Board of Urology

JOHN F. COLLINS, JR., M.D.
Urology
Doctor's Park 1400 Crescent
Denton, Texas 76201 (817) 387-3828

CLASSIFIED ADS

Physicians Wanted

WANTED—M.D.'s to do general practice with surgery, Houston area. Present doctors netting $4,000 to $8,000 monthly after six months practice. No investment required. Send resume to Ad-179, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

ORTHOPEDIC SURGEON AND TWO GP's needed by 19 doctor group. 100-bed fully accredited hospital. Salary open. Full partnership in one year. For additional details, write John B. Chester, M.D., 8330 South Lancaster Road, Dallas, Texas 75216.

GENERAL PRACTITIONER NEEDED to assume well-established practice in Milford, Texas. The community's only doctor recently suffered a heart attack and has moved. An eight room small clinic owned by the City is available rent free. Income limited only by interest and ability. Good school and churches. Twelve and 17 miles from two first-class hospitals, 48 miles south of Dallas, 48 miles north of Waco. Contact C. O. Miller, P.O. Box 546, Milford, Texas 76670, area code 214, 493-2511.

DERMATOLOGIST, EENT AND GENERAL PRACTITIONER WANTED to associate with clinic with five physicians, two dentists, one orthodontist. Also complete laboratory and x-ray facilities. Write John G. Compton, Jr., M.D., Medical Center Clinic, Waxahachie, Texas 76165.

INTERNIST, board certified or eligible to join four internists in 16-doctor, multi-specialty clinic in West Texas city of 36,000. Life and malpractice insurance, disability and retirement programs provided. Modern clinic building adjacent to accredited hospital. Starting salary $26,000. Contact Jack H. Burnett, Jr., M.D., Malone and Hogan Clinic, 901 Main Street, Big Spring, Texas 79720.

EXCELLENT OPPORTUNITY FOR PHYSICIANS in Carrizo Springs, Texas. Office space available in new professional building adjacent to hospital and nursing home. Excellent schools and housing in city. One general practitioner needed. For information write or call C. W. Vandervoort, 600 North 1st Street, Carrizo Springs, Texas 78834. Phone 876-2660.

UROLOGIST, board certified or eligible, to associate with a progressive and expanding multispecialty group in West Texas. Many fringe benefits including retirement program. No investment required. Adjoining accredited hospital. City population 36,000. Contact Ad-236, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

RADIOLOGIST, board certified or eligible, to associate with a progressive and expanding multispecialty group in West Texas. Many fringe benefits including retirement program. No investment required. Adjoining accredited hospital. City population 36,000. Contact Ad-236, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

PEDIATRICIAN, board certified or eligible, to associate with a progressive and expanding multispecialty group in West Texas. Many fringe benefits including retirement program. No investment required. Adjoining accredited hospital. City population 35,000. Contact Ad-236, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

ORTHOPEDIC SURGEON, PEDIATRICIAN, OBSTETRICIAN AND TWO GENERAL PRACTITIONERS needed by 19 doctor-group. Salary open. Full partnership in one year. 100-bed fully accredited hospital. Many fringe benefits including tax-sheltered retirement plan. For additional details write Chester Clinic and Hospital Association, 3330 South Lancaster Road, Dallas, Texas 75216, Attn: John B. Chester, M.D.

PHYSICIANS NEEDED: Staff physicians, general practitioners and/or board certified specialists, for staff of Travis State School. Fringe benefits include 40 hour work week, vacation and sick leave. Present and projected salary increases make positions attractive. Contact Medical Director, Travis State School, P.O. Box 430, Austin, Texas 78767.

GENERAL PRACTITIONER OR GP-SURGEON WANTED in East Texas community of Crockett (Houston County). Office space available for solo practice or association with other physicians in area—106-bed new hospital. Center for industry, farming, livestock, and forestry operations. Excellent schools, churches, and recreational facilities available. For additional information contact Houston County Development Foundation, P.O. Box 807, Crockett, Texas 76836, area code 713, 544-2359.

PATHOLOGY RESIDENCIES AND INTERNSHIPS available in 600-bed general hospital. Fully approved four year program in anatomical and clinical pathology. Average annual specimens and tests—348,687. Interns—$6300; residents—$8100 up. Board and laundry. Charles B. Mitchell, M.D., Director of Laboratories, Harris Hospital, 1300 West Cannon, Fort Worth, Texas 76104.

GENERAL PRACTITIONER WANTED to join five man clinic in growing town of Clifton, 30 miles northwest of Waco near Lake Whitney. 41-bed fully accredited hospital with plans to expand by 30 beds. Salary to start, commensurate with present requirements; partnership later. Good schools, churches and hunting and fishing facilities. Contact V. D. Goodall, M.D., Goodall & Witcher Clinic, Clifton, Texas 76634.

WANTED: GENERAL PRACTITIONER WITH INTEREST IN SURGERY; GENERAL PRACTITIONER WITH INTEREST IN INTERNAL MEDICINE OR INTERNIST WITH INTEREST IN CARDIOLOGY to associate with a general practitioner with training in surgery. No other active general practitioner in area of about 8,000 people. Modern clinic building for three or four doctors next to 40-bed open staff hospital. Located on Interstate 10, 60 miles from Houston. Area primarily industrial. Fine schools. Excellent hunting and fishing. Salary or partnership negotiable. Contact C. I. Shult, M.D., 1220 Bowie Street, Columbus, Texas 78934. Phone AC 713, 732-2318 or 732-2373.

PSYCHIATRIC RESIDENCY in approved three year program. Effective connections with universities, medical schools, private clinics, and community centers. Outstanding faculty, and programs. Stipends with Texas license, $13,000, $14,000 and $16,000 per year. NIMH grants available. For full information write: Anthony P. Rousos, M.D., Director of Training, Austin State Hospital, Austin, Texas 78761.

INDUSTRIAL MEDICAL CLINIC LOCATED IN DALLAS NEEDS A GENERAL PRACTITIONER. First year salary guaranteed and is based upon experience with future percentage partnership. Please reply to Charles E. Cook, M.D., 426 Medical Arts Building, 1719 Pacific Avenue, telephone 747-3712, or 650 Locke Medical Building, 6011 Harry Hines Blvd., telephone 638-2730.

GENERAL PRACTITIONER to take over large, solo practice in GP and surgery. Present MD to move in June due to progressive family allergies. Recently built office, 3-bedroom, 2½ bath home, and mobile home on lake lot for sale, lease, or rent with option to buy part or all. Town of 9,000 in Lower Rio Grande Valley of Texas. 26-bed hospital, 60-bed nursing home, good schools, churches, hunting, fishing, boating, golf, near Mexico and Gulf of Mexico. Excellent opportunity for young, energetic MD. Should gross in excess of $60,000 first or second year. Offer not open to limited practitioner or semi-retired. Gene E. Bennack, M.D., 605 South 10th Street, Raymondville, Texas 78580. Phone 689-2188.

STAFF PHYSICIANS—Texas State Mentally Retarded School. Excellent working conditions and location. Salary $20,000, plus, according to qualifications. Foreign graduates with ECFMG certificate acceptable. All holidays, compensatory time and sick leaves. Write Superintendent, Box 1132, Mexia, Texas.

BOARD ELIGIBLE INTERNIST WANTED for 7-man medical department with well established multispecialty group in Dallas, Texas. $26,000 beginning annual salary, early partnership; liberal vacation and meeting time; life insurance, group hospitalization, retirement benefits and teaching opportunities. New facilities. Interviewing expenses paid. Please reply to Arthur L. Cook, Business Manager, Dallas Medical & Surgical Clinic, P. O. Box 28, Dallas, Texas 75221.

GENERAL SURGEON WANTED FOR ASSOCIATE. Established large practice in Central Texas located between Dallas-Fort Worth metropolitan area. Excellent opportunity for general surgeon interested in suburban practice. Must be board certified or eligible. Send complete resume or contact Jack Utt Hudson, M.D., 909 Dalworth Avenue, Grand Prairie, Texas. AC 214-262-5466.

OPPORTUNITIES IN YOAKUM COUNTY, TEXAS. DENVER CITY, TEXAS. Actual need for four general practitioners. Three overworked general practitioners for the past six years until January 15, 1970. One man left at that time to enter industrial medicine, leaving two. His modern well equipped clinic available, rent free for six months, low rent for following six months, with option to buy, records available. This clinic on same block with hospital. Hospital is 60 beds, well equipped, has radiology, clinical and tissue pathology consultation on regular basis. Present two physicians will welcome one or two other physicians, will help introduce. Amicable working arrangement for time off, patient coverage and consultation. PLAINS, TEXAS. County seat of Yoakum County, 16 miles north of Denver City, excellent highway. Completely equipped modern clinic available for one dollar ($1.00) a month. Utilities furnished by city. Large enough for two physicians. Physicians in Denver will make same arrangements for coverage, etc. as outlined above. Yoakum County has excellent schools, good churches, Yoakum County Park between the two towns with very good grass, green nine hole golf course. Lubbock with Texas Tech University, one hour, twenty minutes away. Midland-Odessa area one hour, thirty minutes away. Contact administrator Yoakum County Hospital, Denver City, Texas, area code 806, 592-2121 or County Judge Gene Bennett, Plains, Texas, area code 806, 456-8606.

PRIVATE INDIVIDUAL AND GROUP PRACTICE. $30,000 guaranteed first year with little or no practice expense. Maximum leisure time with family. Both small town and city locations. Not an employment agency. Sanford Smith, P. O. Box 9836, Houston, Texas 77016. 713-453-5454.

ESTABLISHED GENERAL PRACTICE, office, all equipment rent free for two years while I take leave of absence with Peace Corps. Associates for alternating calls. Available in four to eight months. If you want to stay, full partnership of all facilities would be offered at my return. Good area in North Texas with full hospital facilities. Furnished home included for cost of payments. Write P. O. Box 4109, Wichita Falls, Texas 76308.

WANTED: GENERAL PRACTITIONER, PEDIATRICIAN, INTERNIST on staff of Denton State School. Base annual salary $20,000, extra $1,000 to $3,500 if board certified. 40-hour work week with ample vacation time, other fringe benefits. Excellent community to live. Near Dallas, Fort Worth. Contact Medical Director, Denton State School, Box 368, Denton, Texas.

FOR SALE: LOCATED IN AUSTIN. General practice with surgery. Practice built up for forty years. 1000 square feet of office space with very reasonable rent. Equipment and practice for sale at a good price. Available immediately. Will sell equipment separately from practice. Well equipped and in good condition. Please reply to AD-274, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

GENERAL PRACTITIONER TO JOIN 3-man general practice group in Terrell. Good hospital and laboratory facilities available. Advantages of practice in a town of 15,000, close to Dallas. Two out of three weekends off. Salary open. Percentage available later. Contact Drs. Alexander, Conradt and Wilson, 202 West Nash, Terrell, Texas 75160.

CLASSIFIED AD RATES & DATA: Classified Advertising sells for $6.00 per issue for 50 words or less, payable in advance. Ad numbers can be substituted for formal addresses upon request at no extra cost. Name and address of ad number listings can not be given out unless specific permission to do so has been given. The advertising office will not contact ad number holders except by mail. Copy deadline is the 20th of the month preceding publication. Send copy to Advertising Assistant, TEXAS MEDICINE, 1801 North Lamar Blvd., Austin, Texas 78701.

PEDIATRICIAN: To join an 8 man, mixed specialty group. Enlarging our pediatric department to accommodate third pediatrician. Guaranteed $25,000 to start. Contact F. L. Phillips, M.D., 7630 Bellfort Blvd., Houston, Texas. Phone 644-3344.

SITUATIONS AVAILABLE. A board certified or eligible OB/GYN with adequate subspecialty training in either OB or endocrinology needes as fifth OB/GYN in 107 member multi-specialty group. Excellent professional climate, hospital facilities, and recreational area. Fully accredited residency program. Requires academic interest. Salary negotiable. Liberal fringe benefits. Reply to Ad-279, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

RADIOLOGIST: to join group of two. Certified or board eligible; private office and two hospitals; includes general diagnostic radiology; therapy and nuclear medicine. Send curriculum vitae, personal interview required. Financial arrangement open to negotiation. Please reply to Ad-280, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

ATTENTION: GENERAL PRACTITIONERS-SURGEONS. If you would like the advantages of small city living together with a wide open field for practicing your profession, contact the Board of Directors, Taft Hospital District, 1220 Gregory Street, Taft, Texas 78390. A modern hospital and convalescent home is at your disposal. Added attraction: only 15 minutes by car from the Sparkling City by the Sea, Corpus Christi, Texas. Ideal climate, plus swimming, fishing, sailing, golfing, hunting, and social activities available. Write us for more details, or better still, come and see for yourself. You will be pleasantly surprised.

WANTED: GENERAL PRACTITIONER TO ASSOCIATE with two GP's doing surgery, obstetrics, orthopedics. Salary open with full partnership in one year. No investment needed. All white town with 4,000 population. Golf course, lake, hunting and fishing. 21-bed hospital fully staffed, licensed and approved for Medicare. Joins three-doctor clinic. On call every third night and every third weekend. Contact: A. D. Major, M.D. or K. J. Wharram, M.D., Box 239. Nocona, Texas 76255.

WANTED OB-GYN. A medium sized, multi-specialty clinic association in the Southwest with strong hospital and medical school association, is seeking a board certified or board eligible Ob-Gyn. Military obligation should be completed. Send curriculum vitae. Contact James E. Cunningham, M.D., 6303 South Park Blvd., Houston, Texas 77021.

RADIOLOGIST TO ASSOCIATE in diagnosis and therapy with established board man in hospital, office practice. Progressive South Texas city of 58,000. Minimal school and community strife. Leisurely pace. Growth potential. Intensifiers, automatic processing. Pre-partner first-year salary $30,000 if board certified, $25,000 if eligible. Write Ad-282, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

INTERNIST—Sixth member needed by 13-member multi-specialty group in North Texas university city of over 100,000 population. Board certified or eligible. Fully equipped lab and x-ray. Starting salary $25,000 plus percentage with liberal fringe benefits. Please reply to Ad-273, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

ON GALVESTON BAY—We need an internist, board certified or eligible, and a general practitioner to join our multi-specialty group. Salary plus percentage. Contact Stan M. Sheppard, Manager, Beeler-Manske Clinic, 818 5th Street North, Texas City, Texas 77590. 713-948-8521.

Situations Wanted

BOARD ELIGIBLE PATHOLOGIST seeks full time practice with a group or as an associate in one of the cities in the state of Texas. Date available, November 1, 1970. Contact Ad-278, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

SEEKING LOCATION: Diagnostic radiologist, board certified, age 33, seeks position in small East Texas town. Please reply to Ad-283, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

For Sale or For Rent

AVAILABLE—Office suite designed for obstetrician or general practitioner in doctors building. Richardson, Texas. For additional information call AC 214, 363-2001, Dallas.

MEDICAL OFFICE FOR RENT: Prime location in North Dallas. Completely partitioned and available for immediate occupancy. Call area code 214, 363-6415 or 363-2770, or write Dr. Robert Londeree, 6140 Sherry Lane, Dallas, Texas 75225.

Miscellaneous

FOR SALE: FINE ART. Doctors only. Antique paintings, silver, porcelains, crystal, cut glass, bronzes, persian rugs. Paintings by Robert Wood, Salinas, Grandee, Fried Pal, Rockwell, Onderdonk, Wiggins, Ryder, Cortes, Dyf, Sharp, Picasso and others. Contact Carl F. Rainone, D.D.S., 1212 West Park Row, Arlington, Texas 76010. Phone AC 817, 261-7844.

YOURS FOR THE ASKING!

The many services of the

MEMORIAL LIBRARY

of the

TEXAS MEDICAL ASSOCIATION

45,000 BOUND VOLUMES • EXTENSIVE REPRINT COLLECTION • 1,100 NEW JOURNALS RECEIVED MONTHLY • OVER 400 PROFESSIONAL AND LAY FILMS • CURRENT AUDIO-DIGEST TAPES IN GENERAL PRACTICE AND EIGHT SPECIALTIES • AMA NEWS JOURNAL

Write — Call — Come By

1801 NORTH LAMAR BLVD.

AUSTIN, TEXAS 78701 (512) 477-6704

HOMESTEAD

CHILD PLACEMENT AGENCY

and

HOMESTEAD MATERNITY HOME

1250 W. Rosedale

335-5942 **336-7905**

Fort Worth, Texas

Licensed Adoption Service and Private, Confidential maternity care provided unwed expectant mothers. Obstetrical services by a Diplomate of THE AMERICAN BOARD. Also pediatric care furnished by a licentiate of THE AMERICAN BOARD.

ONCOLOGY

Oscar L. Morphis, M.D., F.A.C.R.
Radiation Therapy
Radium Therapy

R. P. O'Bannon, M.D., F.A.C.R.
Radiation Therapy

Norris Gilfillan, M.D., F.A.C.S.
Chemotherapy

Tom B. Bond, M.D., F.A.C.R.
Consultant

Jack M. Morgan, M.S., F.A.C.R.
Consultant-Physicist

1550 West Rosedale, Suite 620 Fort Worth 336-2028

ADVERTISING INDEX

Arch Laboratories
Dicarbosil 39

Barnes-Hind Laboratories
Tinver Lotion 15

Becton, Dickinson and Company
Plastipak 9-10

Beverly Hills Hospital and Clinic 123

Blue Cross-Blue Shield of Texas 7

The Brown Pharmaceutical Company
Android 110
Cerebro-Nicin 110

Bristol Laboratories
Salutensin 54-55

Burroughs Wellcome & Company, Inc.
Neosporin 60

Campbell Soup Company 21

Casualty Indemnity Exchange
Malpractice Insurance 41

Dallas Medical & Surgical Clinic and Hospital 2nd Cover

The Dow Chemical Company
Novahistine LP 125

Flint Laboratories
Synthroid 142-3rd Cover

Francis Hospitels Incorporated
Convalescent Care 90

Highland Hospital 124

Hoechst Pharmaceutical Co.
Doxidan 16

Homestead Child Placement 140

Humco Laboratory
Vasomist 32

Hynson, Westcott and Dunning, Inc.
Lactinex 35

Ives Laboratories, Inc.
Cyclospasmol 36-37

Kelsey-Seybold Clinic 97

King's Daughters Clinic Back Cover

Lederle Laboratories
Achrostatin V 124
Declostatin 61

Eli Lilly and Company
Cordran Tape 26

The Martin X-Ray and Radium Clinic 118

Medical Arts Clinic, Corsicana 128

The Medical Protective Company
Professional Liability Insurance 118

The National Drug Company
AVC 34
Quinamm 33
Tepanil Ten-tab 116

Oncology—Fort Worth 140

Pfizer, Inc.
Pfizer Laboratories Division
Bonine 78-79
Vibramycin 18-20

William P. Poythress & Company, Inc.
Mudrane 59
Trocinate 126

T. Rowe Price Growth Stock Fund, Inc. 39

The Prudential Insurance Company of America
TMA Group Insurance Plan 100

Radiology Associates of Fort Worth 128

A. H. Robins Company
Phenaphen 24

Roche Laboratories
Berocca 91, 127
Valium 25

Schering Corporation
Garamycin 105-103

Julius Schmid Pharmaceuticals
Candeptin 38-39

Scott and White Clinic Back Cover

G. D. Searle & Company
Flagyl 22-23

Smith Kline & French Laboratories
Thorazine 40

Starlite Village Clinic 128

Surgical Mechanical Research, Inc.
Medical and Dental Equipment 32

Terrell's Laboratories and Medical Group 1

Texas Medical Association
Conference on Public Affairs and Public Relations 54
Memorial Library 140
Orient Adventure 114
Texas Medicine 102

Timberlawn Psychiatric Hospital 97

Torbett, Hutchings, Smith Memorial Hospital 2nd Cover

Travis Clinic and Nan Travis Memorial Hospital 128

Turner's Clinical & X-Ray Laboratories 118

Wichita Falls Clinic-Hospital 54

Physicians' Directory 129-138

Classified Advertisements 139-140

ADVERTISING RATES & DATA: Available on request from the Advertising Director, Texas Medicine. Advertising plates should be sent directly to the printer. Space reservations, copy and proofs should be sent to the Advertising Director. Represented nationally by the State Medical Journal Advertising Bureau, Inc., 1010 Lake Street, Oak Park, Ill. 60301.

ADVERTISING & BUSINESS OFFICES: Texas Medical Association, 1801 North Lamar Blvd., Austin 78701; Telephone: 512-477-6704.

PRINTING OFFICES: Texas Medicine, c/o Stafford-Lowdon Company, 1114 West Daggett, Fort Worth 76104.

Drive Defensively.

Published to save lives in cooperation with
The Advertising Council and the National Safety Council.

280403

Synthroid®

(sodium levothyroxine)

Indications: SYNTHROID (sodium levothyroxine) is specific replacement therapy for diminished or absent thyroid function resulting from primary or secondary atrophy of the gland, congenital defect, surgery, excessive radiation, or antithyroid drugs. Indications for SYNTHROID (sodium levothyroxine) **Tablets** include myxedema, hypothyroidism without myxedema, hypothyroidism in pregnancy, pediatric and geriatric hypothyroidism, hypopituitary hypothyroidism, simple (non-toxic) goiter, and reproductive disorders associated with hypothyroidism. SYNTHROID (sodium levothyroxine) **Injection** is indicated in myxedematous coma and other thyroid dysfunctions where rapid replacement of the hormone is required. When a patient does not respond to oral therapy, SYNTHROID (sodium levothyroxine) injection may be administered intravenously to avoid any question of poor absorption by either the oral or the intramuscular route.

Precautions: As with other thyroid preparations, an overdosage may cause diarrhea or cramps, nervousness, tremors, tachycardia, vomiting and continued weight loss. These effects may begin after four or five days or may not become apparent for one to three weeks. Patients receiving the drug should be observed closely for signs of thyrotoxicosis. If indications of overdosage appear, discontinue medication for 2-6 days, then resume at a lower dosage level. In patients with diabetes mellitus, careful observations should be made for changes in insulin or other antidiabetic drug dosage requirements. If hypothyroidism is accompanied by adrenal insufficiency, as Addison's Disease (chronic subcortical insufficiency), Simmonds's Disease (panhypopituitarism) or Cushing's syndrome (hyperadrenalism), these dysfunctions must be corrected prior to and during SYNTHROID (sodium levothyroxine) administration. The drug should be administered with caution to patients with cardiovascular disease; development of chest pains or other aggravations of cardiovascular disease requires a reduction in dosage.

Contraindications: Thyrotoxicosis, acute myocardial infarction.

Side effects: The effects of SYNTHROID (sodium levothyroxine) therapy are slow in being manifested. Side effects, when they do occur, are secondary to increased rates of body metabolism: sweating, heart palpitations with or without pain, leg cramps, and weight loss. Diarrhea, vomiting, and nervousness have also been observed. Myxedematous patients with heart disease have died from abrupt increases in dosage of thyroid drugs. Careful observation of the patient during the beginning of any thyroid therapy will alert the physician to any untoward effects.

In most cases with side effects, a reduction in dosage followed by a more gradual adjustment upward will result in a more accurate indication of the patient's dosage requirements without the appearance of side effects.

Dosage and Administration: The activity of a 0.1 mg. SYNTHROID (sodium levothyroxine) TABLET is equivalent to approximately one grain thyroid, U.S.P. Administer SYNTHROID tablets as a single daily dose, preferably after breakfast. In hypothyroidism without myxedema, the usual initial adult dose is 0.1 mg. daily, and may be increased by 0.1 mg. every 30 days until proper metabolic balance is attained. Clinical evaluation should be made monthly and PBI measurements about every 90 days. Final maintenance dosage will usually range from 0.2-0.4 mg. daily. In adult myxedema, starting dose should be 0.025 mg. daily. The dose may be increased to 0.05 mg. after two weeks and to 0.1 mg. at the end of a second two weeks. The daily dose may be further increased at two-month intervals by 0.1 mg. until the optimum maintenance dose is reached (0.1-1.0 mg. daily).

Supplied: Tablets: 0.025 mg., 0.05 mg., 0.1 mg., 0.15 mg., 0.2 mg., 0.3 mg., 0.5 mg., scored and color-coded, in bottles of 100 and 500. Injection: 500 mcg. lyophilized active ingredient and 10 mg. of Mannitol, N.F., in 10 ml. single-dose vial, with 5 ml. vial of Sodium Chloride Injection, U.S.P., as a diluent.

SYNTHROID (sodium levothyroxine) INJECTION may be administered intravenously utilizing 200-400 mcg. of a solution containing 100 mcg. per ml. If significant improvement is not shown the following day, a repeat injection of 100-200 mcg. may be given.

FLINT LABORATORIES
DIVISION OF TRAVENOL LABORATORIES, INC.
Morton Grove, Illinois 60053

THE LIBRARY
UNIVERSITY OF CALIFORNIA
San Francisco
THIS BOOK IS DUE ON THE LAST DATE STAMPED BELOW

7 DAY LOAN

7 DAY
APR 9 1971

RETURNED
APR 9 1971

7 DAY
MAY 1 0 1972

RETURNED
MAY 3 - 1972

7 DAY
JAN 2 9 1973

RETURNED
JAN 2 4 1973

7 DAY
FEB 2 8 1973

RETURNED
FEB 2 8 1973

7 DAY
APR 9 1975

RETURNED
APR - 4 1975

7 DAY
JAN 1 5 1976

RETURNED
JAN - 8 1976

7 DAY
DEC - 9 1976

RETURNED
MAR 1 1 1977

7 DAY
MAR 2 1 1978

RETURNED
MAR 1 5 1978

15m-5,'70(N6490s4)4315-A33-9

St

257750

JULY 1970

TEXAS MEDICINE

U. C. SAN FRANCISCO
MEDICAL CENTER LIBRARY
JUL 3 0 1970

FOOTBALL INJURIES—MINOR?
TB WITH HISTOPLASMOSIS
PREADMIT HOSPITAL PATIENTS

25731

Torbett, Hutchings, Smith Memorial Hospital
And The Torbett Clinic

306 Coleman Street
Post Office Box 60

Marlin, Texas

Telephone: WE 6-3561

GENERAL SURGERY
Howard O. Smith, M.D., F.A.C.S.
D. R. Swetland, M.D., F.A.C.S.
Howard L. Smith, M.D., F.A.C.S.

INTERNAL MEDICINE
W. F. McKinley, Jr., M.D.
James S. Bussell, M.D.
C. G. Brown, M.D.

EYE, EAR, NOSE AND THROAT
S. W. Hughes, M.D.

ALLERGY
Walter S. Smith, M.D.*

OBSTETRICS AND PEDIATRICS
M. A. Davison, M.D., F.A.C.O.G.
W. L. Reese, M.D., F.A.C.O.G.

RADIOLOGY
J. M. Brown, M.D., F.A.C.R.

PATHOLOGY
W. W. Klatt, M.D.
Ronald E. Henderson, Jr., M.D.
Kent Smith, M.D.

UROLOGY
Howard O. Smith, M.D., F.A.C.S.

DENTISTRY
B. E. Latimer, D.D.S.

NEUROPSYCHIATRY
S. B. Morrison, M.D.

DERMATOLOGY
Maurice C. Barnes, M.D., D.A.B.D.

Administrator:
J. D. Norris, Jr.

Superintendent of Nurses:
Ruby Lowrance, R.N.

Howard O. Smith, M.D., FACS, Chairman of the Board of Trustees, of Torbett, Hutchings, Smith Memorial Hospital and the Torbett Clinic which opened January, 1963. The original hospital was founded by Dr. J. W. Torbett, Sr., in 1898.

The Torbett Clinic and Memorial Hospital continues to utilize the Marlin Hot Mineral Water and other forms of physical therapy as an adjunct in the treatment of arthritis and allied rheumatic conditions.

*Expired 4-24-69.

THE DALLAS MEDICAL & SURGICAL CLINIC AND HOSPITAL

4105 Live Oak Street

DALLAS, TEXAS

Telephone TA 3-4151

*Geo. M. Underwood, M.D., F.A.C.P., Diagnosis & Gastroenterology, D.A.B. Internal Medicine & Gastroenterology
P. E. Luecke, Sr., M.D., F.A.A.P., Pediatrics Diplomate American Board Pediatrics
*G. A. Davidson, B.S., M.D., Dermatology
*Wm. H. Potts, B.A., F.A.C.P., Internal Medicine
*Ozro T. Woods, M.D., Surgery, Emphasizing Tumors
Richard M. Smith, M.D., F.A.C.P., Diagnosis & Internal Medicine
J. Wilbur Bourland, Jr., M.D., Obstetrics & Gynecology
Harry M. Spence, M.D., D.A.B.U., F.A.C.S., Urology
Wells M. Wade, D.D.S., Dental Surgery
Halcuit Moore, M.D., F.A.A.P., Pediatrics Diplomate American Board Pediatrics
John B. Bourland, M.D., Gynecology & Obstetrics Diplomate American Board OB-GYN
Raymond W. Burford, M.D., D.A.B.R., Radiology
Henry G. Montgomery, M.D., F.A.C.S., D.A.B.S., Surgery
Edwin M. Cleveland, M.D., Internal Medicine
[illegible] B. Allen, M.D., Internal Medicine Diplomate American Board Internal Medicine
M. [illegible]rnside, M.D., D.A.B.O., Ophthalmology
[illegible]en, M.D., Surgery
Morris [illegible]agers, M.D., Internal Medicine Dip[illegible] American Board Internal Medicine
B. Celia Slaughter, M.D., F.A.A.P., Pediatrics Diplomate American Board Pediatrics
D. W. Shuster, M.D., D.A.B.O., Otolaryngology and Otologic Surgery
P. E. Luecke, Jr., M.D., Pediatrics, F.A.A.P., Diplomate American Board Pediatrics
Channing Woods, M.D., Internal Medicine
William W. Hoffman, M.D., D.A.B.U., F.A.C.S., Urology
James M. Copps, M.D., D.A.B.O., Ophthalmology
Joe B. Caldwell, M.D., D.A.B.R., Radiology
Terry D. Allen, M.D., D.A.B.U., Urology
J. Boyd Hollabaugh, D.D.S., General Dentistry
George P. Fosmire, M.D., F.A.C.S., D.A.B.S., General Surgery
Richard C. Stone, M.D., Internal Medicine and Gastroenterology
Daniel L. Maddox, D.D.S., General Dentistry
William N. New, M.D., Dermatology
John R. Woodward, M.D., Obstetrics & Gynecology, Diplomate American Board OB-GYN
Masashi Kawasaki, M.D., D.A.B.O., Otolaryngology, Tumor and Reconstructive Surgery of the Head and Neck

Miss Billye J. Norris, R.N., Director of Nurses

C. H. Rosamond, Administrator

Arthur L. Cook, Business Manager

*Inactive status

TERRELL'S LABORATORIES

T. C. TERRELL, M.D., F.C.A.P., F.A.C.P., DIRECTOR
JOHN S. TERRELL, M.D., F.A.A.P., ASSISTANT DIRECTOR

FORT WORTH, TEXAS

211 Medical Arts Building

DEPARTMENT OF PATHOLOGY
T. C. Terrell, M.D., F.C.A.P., F.A.C.P.
May Owen, M.D., F.C.A.P., F.A.C.P.
Robert Hausman, M.D., F.C.A.P.
Joan Windmiller, M.D., F.A.A.P.

DEPARTMENT OF RADIOLOGY
H. W. Banker, M.D., D.A.B.R., M.A.C.R.
Ernest E. Holt, M.D., D.A.B.R., M.A.C.R.
James C. Moore, M.D., D.A.B.R., M.A.C.R.

DEPARTMENT OF CHEMISTRY
LaMonte A. Tucker, Ph.D.

DEPARTMENT OF BACTERIOLOGY & MYCOLOGY
Robert F. Devlin, Ph.D.

CONSULTING & ANALYTICAL SERVICES

PATHOLOGY, FORENSIC PATHOLOGY & VETERINARY PATHOLOGY: Histology, Cytology.
CLINICAL PATHOLOGY: Serology, Bacteriology & Mycology, Parasitology, Hematology.
INDUSTRIAL & CLINICAL CHEMISTRY: Radioassay, SMA-12 survey and other Automated Procedures. Hormone Chemistry, Chromatography, Electrophoresis, Immunochemistry.
TOXICOLOGY: Drugs, Water, Foods & Biological materials.
MANUFACTURING DEPARTMENT: Allergenic Extracts and Treatment Sets, Mounting Media, Specifically Prepared Reagents and Stains for Laboratory Use.

TERRELL MEDICAL GROUP

FORT WORTH, TEXAS

210 Medical Arts Building

INTERNAL MEDICINE Diagnosis, Allergy, Cardiology	T. C. Terrell, M.D., F.C.A.P., F.A.C.P. Elizabeth A. Taylor, M.D.
NEUROPSYCHIATRY Electroencephalography	Henry G. Gardiner, Jr., M.D.
PEDIATRICS Pediatric Hematology Adolescent Medicine & Pediatric Consultation	Joan Windmiller, M.D., F.A.A.P. John S. Terrell, M.D., F.A.A.P.
CLINICAL PSYCHOLOGY	Michael W. Wheeler, Ph.D.

TEXAS MEDICINE

VOLUME 66 NUMBER 7 JULY 1970

SCIENTIFIC ARTICLES

46 Pulmonary Tuberculosis Complicated by Pulmonary Histoplasmosis

George M. Powell, FACP, is director of outpatient services at San Antonio State Tuberculosis Hospital. A retired Army major general, he formerly was the commanding general of Brooke General Hospital and Brooke Army Medical Center, Fort Sam Houston. His coauthor, Maj Tony M. Toledo, currently is chief of medicine at the 91st Evacuation Hospital, Republic of South Vietnam. Before his assignment overseas he completed a residency in internal medicine at Brooke General Hospital.

52 Clinical and Research Aspects of Reconstruction of the Cervical Trachea

Byron J. Bailey is Wiess Professor and chairman of the Department of Otolaryngology, The University of Texas Medical Branch, Galveston. He is a diplomate of the American Board of Otolaryngology and has written numerous articles on head and neck cancer surgery, partial laryngectomy and laryngeal reconstruction, and maxillofacial trauma.

56 A Schema for Roentgenographic Diagnosis of Disseminated Alveolar Disease

Thomas N. Williams is an intern in the Department of Internal Medicine, The University of Texas Medical Branch, Galveston. His coauthor is Melvyn H. Schreiber, professor of radiology. Dr. Williams is a graduate of Texas Tech in Lubbock and the UT Medical Branch, and is a member of Mu Delta, honorary medical society, and Alpha Omega Alpha society.

58 Football Injuries: Acute Subdural Hematoma Without Loss of Consciousness

Thomas D. Meek of Odessa is a diplomate of the American Board of Neurological Surgery and a member of the Congress of Neurological Surgeons, American Association of Neurological Surgeons, and Southern Neurological Society. He is in private practice.

60 Group Therapies in the Problem Habit, Alcoholism

Ronald J. Catanzaro is medical director, Palm Beach Institute on Problem Habits and

POWELL

BAILEY

WILLIAMS

MEEK

CATANZARO

RUCHELMAN

BREITNER

Personality Development, West Palm Beach, Fla, and clinical associate professor at the Department of Psychiatry, University of Florida College of Medicine, Gainesville. He is a diplomate of the American Board of Psychiatry and Neurology, and has done extensive work with programs for alcoholics and studies of alcoholism. This article is based on Dr. Catanzaro's talk before the Texas Summer Studies on Alcohol, July 1969, in Austin.

68 Systemic Manifestations of Sjögren's Syndrome

Harry Ruchelman of Brooklyn, NY, diplomate of the American Board of Internal Medicine, prepared this article while he was on the staff of the Houston VA Hospital. His coauthor, Ferenc Györkey, is professor of pathology at Baylor College of Medicine, Houston.

72 An Assimilative View of Neurosis

I. Emery Breitner practices psychiatry in Roslyn, NY, and is staff psychiatrist at Nassau Hospital, Mineola, NY. He is a member of the American Psychiatric Association and the American Group Psychotherapy Association. Dr. Breitner, a native of Hungary and graduate of the University of Budapest Medical School, took his residency in psychiatry at The University of Texas (Southwestern) Medical School in Dallas and at High Point Hospital, Port Chester, NY, and Hillside Hospital, New York City.

78 Clinicopathologic Conference

This is the first in a series of CPCs from Baylor College of Medicine in Houston. Guest editors are Harlan J. Spjut, professor of pathology, and Montague Lane, professor of internal medicine and pharmacology. Other participants this month are Vincent E. Friedewald, third-year resident in internal medicine, Phil Davis, professor of internal medicine; John Roehm, Jr, clinical instructor of radiology; Robert E. Fechner, assistant professor of pathology; and Ethan A. Natelson, postdoctoral fellow in hematology, Department of Internal Medicine.

EDITORIALS

31 Let's Communicate with News Media
James O. McBride

32 Pre-admit Hospital Patients
Heinrich Lamm

33 Nursing: The Cost of Caring
Dorothy Pettigrew

34 Questions and Answers: Reporting Minor Laceration Repair on Insurance Forms
M. E. Rougraff

39 Physicians Not Solely Responsible for Health-Care System Deficiencies
Walter Walthall

DEPARTMENTS

4 Association and Late News

13 Highlights of Coming Meetings

19 Continuing Education Courses

87 News

103 Personals

103 Pamphlets

104 New Books in TMA Library

104 Recent Deaths

ON THE COVER

The tribal chant swells. Clad in traditional costume and headdress the young males circle, close, bend forward; then, breaking away, each trots toward his appointed place. The chant quickens as the natives anticipate the next movement in the familiar Rites of Autumn: "Hit 'em again, hit 'em again! Harder! Harder!" The next scene is on the cover. Enter the witch doctor or physician, take your pick: WD shoves the stomped lad back to the field, intoning "No evil spirit better mess with that kid for another 50 yards." MD first tries to make sure the boy is still in one piece—somebody else can worry about yardage. Back to reality. The player might have a subdural hematoma (page 58) even if he isn't knocked unconscious immediately.

NEXT MONTH

Editorials will focus on accreditation from two points of view—the physician's and the administrator's. Scientific articles now scheduled include the Texas Cancer Information Service, fluoride levels in drinking water in Texas, present status of selective coronary cinearteriography, air embolism following subclavian vein catheterization, hyperbaric oxygen as an adjunct to radiation therapy, the tack operation for Meniere's disease, and carcinoma of the ampulla of Vater.

PUBLICATION INFORMATION

Texas Medicine is published monthly by the Texas Medical Association.

Editorial and Business Offices: 1801 N. Lamar Blvd., Austin, Texas 78701; **Telephone:** Area Code 512 477-6704.

Second Class Postage paid at Austin, Texas, with additional entry at Fort Worth, Texas, under Act of March 3, 1879.

Subscription communications should be sent to the Business Offices, $3 per year for members; $6 for nonmembers; $8 for foreign; $3 for medical students; single copy, $1.

Contributions, previously unpublished, are welcomed for review; suggestions for preparation are available from the Editorial Offices. News and other items should be sent to the Editorial Offices by the 10th of the month preceding the month of publication. All contributions are sent at the owner's risk.

Printing Offices: c/o Stafford-Lowdon Company, 1114 West Daggett, Fort Worth 76104.

ASSOCIATION & LATE NEWS

Texas delegates effectively influence AMA policy; Sammons elected trustee; Himler revisions success

The Texas delegation effectively influenced policies of the American Medical Association at the 1970 Annual Meeting in Chicago on June 21-25.

The Texas delegation posted a record of accomplishment. Three resolutions introduced by Texas were approved by the AMA House of Delegates. One called for opposition to new regulations of the Food and Drug Administration requiring each package of oral contraceptives received by the patient to contain a printed statement of potential hazards in the use of the drug. A second resolution suggested to medical staffs of hospitals that they consider revising their respective hospital constitutions and by-laws to differentiate clearly between medical and administrative duties. The AMA House of Delegates also approved a Texas resolution calling for the issuance of a commemorative stamp in honor of the late Dr. George N. Papanicolaou.

Further, the AMA House approved two Texas resolutions which had been introduced in 1969 and studied during the past year by the AMA Board of Trustees and appropriate committees. These resolutions placed the AMA on record as (a) reiterating existing policy which clearly recognizes the right of the physician to collect appropriate fees for services above that which may be allowed by third parties; and (b) urging the Federal Railroad Administration to investigate the best means of promoting the concept of reflectorization of railroad cars.

Texas made significant contributions to amending and rewriting the Report of the AMA Committee on Planning and Development (Himler Report). The delegation was particularly well prepared for those discussions following an extraordinary session of the TMA House of Delegates in early May. Observers at the AMA Annual Meeting stated that Texas exerted a greater influence on the final report than any other state delegation.

The delegation was successful in its efforts to elect Dr. James H. Sammons, Baytown, to a position on the AMA Board of Trustees, which should help insure that the views of Texas physicians are better reflected in AMA actions in the future.

The AMA House of Delegates adopted a memorial resolution recognizing the long and outstanding service of Dr. John L. Otto, Galveston. Dr. Otto had served for many years as a delegate from Texas and as a member of the AMA Council on Mental Health.

TMA Himler revisions successful at AMA

In a mood to bite off only what the medical profession could comfortably chew, the House of Delegates of the American Medical Association cut the Report of the AMA Committee on Planning and Development (Himler Report) down to a digestible size.

All 58 of the original recommendations of the report were grouped into 20 basic recommendations with subparagraphs or parts. Of these 58 recommendations eight were adopted outright, 11 were rejected outright, 21 were referred to AMA for further study or filing and 18 were amended substantially or rewritten to change basically their meaning.

Illustrative of the editing and revision is the definition of health adopted by the AMA. The Himler Report had recommended the World Health Organization's definition:

> "Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity."

The Texas Medical Association's House of Delegates revised the Himler recommendation to read:

> "Health is a state of physical and mental well-being, and not merely the absence of disease or infirmity."

The final revision coming from the AMA House of Delegates defined health as:

> "Health is a state of physical and mental well being."

The Texas recommendations on the Himler Report served as a bellwether for the AMA Reference Committees which adopted Texas wording outright or substantially in 14 instances.

Throughout the recommendations, the reference committees and House of Delegates of the AMA struck the term "health care" and "health services," and focused on "medical care" or "medical services." The apologetic tone of the Himler Report was rejected, and the House was willing to assume responsibility only for that aspect of health over which the medical profession has some control; that is, medical care.

Earlier in the meeting, the House of Delegates of the AMA adopted a change in the Bylaws establishing a Council on Long-Range Planning and Development to consist of nine members, four appointed by the Speaker of the House of Delegates and four appointed by the Board of Trustees. The ninth member is to come from the Student American Medical Association.

AMA House of Delegates' actions on the Himler Report were most satisfactory to the Texas delegation. Texas positions were either adopted or strengthened by the House.

A comparison of Texas Medical Association and American Medical Association actions to the original Himler Report may be obtained by writing to the Texas Medical Association, 1801 N. Lamar Blvd., Austin 78701.

Clear-cut constitutions recommended to staffs

Acting favorably upon a Texas resolution, the American Medical Association has suggested to medical staffs of hospitals that they consider revising hospital constitutions and by-laws to differentiate clearly between medical and administrative duties.

The Texas resolution pointed out that some hospital constitutions and by-laws presently do not delineate distinctly the limits of staff medical duties. As a result, physicians may be expected to perform administrative duties at the expense of time which should be devoted to patient care.

The AMA House of Delegates agreed with the Texas delegation, and suggested to medical staffs of hospitals that they consider revising existing constitutions and by-laws to differentiate clearly between medical and administrative duties.

Commemorative stamp urged for Dr. Pap

The House of Delegates went on record supporting the issuance of a commemorative stamp in honor of the late Dr. George N. Papanicolaou. The American Medical Association will work for the issuance of the commemorative stamp, as urged by the Texas Medical Association.

The Texas resolution pointed out that cancer of the uterine cervix once was the largest killer of American women. Now, however, the death rate from this disease is less than one-half of the rate 30 years ago. This saving of lives has resulted primarily from early detection through use of the smear test developed by Dr. Papanicolaou. His contribution represents one of the most significantly useful, practical discoveries in the field of cancer.

The Texas resolution proposed that the commemorative stamp be issued in 1972, the tenth anniversary of the death of Dr. Papanicolaou.

Dr. Sammons elected to AMA Board of Trustees

Dr. James H. Sammons, Baytown, has been elected to the Board of Trustees of the American Medical Association. Dr. Sammons was elected unanimously during the 1970 Annual Meeting in Chicago on June 21-25.

At the time of his election, Dr. Sammons was vice chairman of the Texas delegation. He was elected an alternate delegate to the AMA in 1963 and elevated to delegate in 1966.

Dr. Sammons has served as chairman of the Board of Directors of the American Medical Political Action Committee for the past year. He tendered his resignation following election to the AMA Board of Trustees. The vacancy on the AMPAC board was offered to Dr. Joe T. Nelson, Weatherford.

Dr. Sammons is President-Elect of the Texas Medical Association. He has served as president of the Houston Academy of Medicine and as president of the East Harris County Branch of the Harris County Medical Society.

AMA opposes action by FDA on contraceptives

The American Medical Association will continue to oppose the implementation of action by the Food and Drug Administration which requires that each package of oral contraceptives received by the patient contain a printed statement of potential hazards in the use of the drug.

The House of Delegates approved a Texas resolution which requested the AMA to oppose through all appropriate means, including legislation and legal, the 120-word package warning. The proposed insert states that "oral contraceptives are powerful and effective drugs which can cause side effects in some users and should not be used at all by some women. The most serious side effect is abnormal blood clotting, which can be fatal."

New regulations published by the Food and Drug Administration also call for manufacturers to provide physicians with a "full disclosure" leaflet which they can make available to patients.

The Texas resolution emphasized that the action to supply information on side effects of a prescription drug directly to the patient is a dangerous departure from present practice. The resolution states that the action "intrudes upon the patient-physician relationship and compromises individual medical evaluation; it would establish a precedent by allowing the government to introduce a barrier between the physician and his patient; it would interfere with the physician's decision to prescribe drugs by exerting undue influence."

The Texas delegation pointed out that the statement would confuse and alarm many patients, and charged that the package insert is an inappropriate means of providing a patient with information regarding any prescription drug. It was pointed out that the physician should inform his patients of the potential hazards of drugs he prescribes.

Reflectors for rail cars encouraged by AMA

The American Medical Association has agreed to urge the Federal Railroad Administration to investigate the best means of promoting reflectors on railroad cars.

The Texas delegation previously had asked the AMA to investigate the desirability of a federal regulation to require all railway vehicles to bear lights, reflecting paint, reflectors, or combinations, so that they would be clearly visible at night from all sides. The Texas resolution was introduced for the purpose of preventing accidents and to save lives at railway crossings.

After studying the question, the AMA Board of Trustees reported that most crashes into railway cars occur in daylight hours. Approximately half of the crashes which occur in the dark take place at crossings that are lighted, have flashing signals, or reflectorized gates. Most of the drivers in such crashes apparently overrun their headlights or are intoxicated.

Nevertheless, it was agreed that some lives might be saved and some injuries might be prevented by promoting the concept of reflectorization. The AMA Committee on Medical Aspects of Automotive Safety will urge the Federal Railroad Administration to investigate the best means of promoting the concept. Reflectorization of the sides of railway cars is required in Canada. A few American railroads are experimenting with various types of reflectors.

Physician's right to set his fees supported

The AMA House of Delegates, acting favorably upon a Texas resolution and a report from the AMA Board of Trustees, has reiterated existing policy which clearly recognizes the right of the physician to collect appropriate fees for services above that which may be allowed by third parties.

The Texas delegation asked for reiteration of the AMA policy after expressing concern about contracts which set fees for services by physicians in accordance with schedules established by fiscal intermediaries, insurance companies, and third parties.

The existing policy of the AMA, relating to bases of payment for physicians' services, stated initially in 1967, reads as follows:

"It is proper for the physician to establish the fee which he charges to any patient for the professional service rendered, with recognition of the fact that a duly constituted local or state medical society committee of his peers may appropriately review and pass upon the equity and justice of his charge."

In exercising the privilege of determining his own fee, the physician concomitantly has an obligation to assure that his patient, or the individual acting on behalf of the patient, is acquainted fully with the amount of the fee involved.

The AMA long has urged physicians to establish the practice of discussing completely and freely with patients the amount of fees for services which are rendered. This obligation continues to be valid and may be even more essential as the patient places increasing reliance upon third-party financing mechanisms to meet all or a portion of his health care expenses.

The AMA policy statement affords adequate protection against exploitation of a physician through recognition that the propriety of his fee, if questioned, will be reviewed and its equity determined by a duly constituted local or state committee of his peers. AMA policy strongly endorses and urges fullest implementation and compliance with medical peer review.

The AMA also recognizes the right of the physician, in each individual instance, to bill the patient directly for services rendered, or if he prefers, to accept an assignment. The AMA Board of Trustees emphasized in its report that the method of billing chosen should be understood commonly between the physician and his patient or the responsible party.

Texas honors new AMA Auxiliary president

The Gold Coast Room at The Drake Hotel, Chicago, decorated with yellow roses in tall crystal epergnes and yellow tapers, was the site of a reception honoring Mrs. R. C. L. Robertson of Houston as incoming AMA Auxiliary president. This reception on Tuesday evening, June 23, was hosted by Texas Medical Association and its Woman's Auxiliary.

Receiving guests with Dr. and Mrs. Robertson were their son, Lt. James Robertson of Corpus Christi; Dr. Walter Walthall, President of Texas Medical Association, and Mrs. Walthall; Mrs. Eugene P. Schoch, Jr., president of the Woman's Auxiliary to the TMA, and Dr. Schoch; Dr. Walter C. Bornemeier, incoming president of AMA, and Mrs. Bornemeier; and Mrs. George Turner of El Paso, a past national Auxiliary president.

Present en masse were the Texas delegates and alternates, Mr. C. Lincoln Williston, and Mr. Philip R. Overton who sang "The Eyes of Texas," under the direction of Dr. Walthall, to Mrs. Robertson.

Hostesses at the reception included Texas Auxiliary delegates and wives of TMA's delegates and officials. Arrangements for the event were coordinated by Mrs. Eugene P. Schoch, Jr., and Mrs. Martha D. James.

Included in the invitations were all national Auxiliary officers and directors, state presidents and presidents-elect, certain national staff members, personal friends and relatives of Mrs. R. C. L. Robertson, and all Texas members in attendance at the Chicago conventions.

Officials from Texas Medical Association and Harris County Medical Society also joined Texas Auxiliary members the following morning for the ceremony installing Mrs. Robertson as 1970-71 president of Woman's Auxiliary to the American Medical Association.

There is one right way

There is a right stance.
A right grip. A right follow-through.
Just one right way. And of course,
many other ways.

And when it comes to prepayment
of hospital-medical care, once again,
there is also a right way,
and it's the BLUE CROSS®
and BLUE SHIELD®′ way.
More than 72 million Americans are
protected by the "Blues", today!
And think what a collection
problem that takes off the "providers"
in the health care field!
No wonder —

"Everybody's swingin' to the Blues!"

BLUE CROSS® and BLUE SHIELD®′

Hospital and Health Care Coverage
(GROUP HOSPITAL SERVICE, INC.)

Medical and Surgical Benefits
(GROUP LIFE & HEALTH INSURANCE COMPANY)

OF TEXAS

MAIN AT NORTH CENTRAL EXPRESSWAY ■ DALLAS, TEXAS 75222

® American Hospital Association
®′National Association of Blue Shield Plans

HIGHLAND HOSPITAL

ASHEVILLE, NORTH CAROLINA

Founded 1904

A DIVISION OF THE DEPARTMENT OF PSYCHIATRY OF DUKE UNIVERSITY

Accredited by the Joint Commission on Accreditation and Certified for Medicare

Complete facilities for evaluation and intensive treatment of psychiatric patients, including individual psychotherapy, group therapy, psychodrama, electro-convulsive therapy, Indoklon convulsive therapy, drugs, social service work with families, family therapy, and an extensive and well organized activities program, including occupational therapy, art therapy, music therapy, athletic activities and games, recreational activities and outings. The treatment program of each patient is carefully supervised in order that the therapeutic needs of each patient may be realized.

High school facilities for a limited number of appropriate patients are now available on grounds. The School Program is fully integrated into the hospital treatment program and is accredited through the Asheville School System.

Complete modern facilities with 85 acres of landscaped and wooded grounds in the City of Asheville.

Brochures and information on financial arrangements available

Contact: (1) Mrs. Elizabeth Harkins, ACSW, Coordinator of Admissions

or

(2) Samuel N. Workman, M.D.
Chief of Clinical Services

(3) Charles W. Neville, Jr., M.D.
Assistant Professor of Psychiatry and Medical Director

Area Code 704 - 254-3201

Vasomist

(ANTIHISTAMINIC)

VASOCONSTRICTOR, NASAL DECONGESTANT AND LOCAL ANTIHISTAMINIC

Active Ingredients:
Phenylephrine Hcl 0.25%
Phenylpropanolamine Hcl ...0.50%
Chlorobutanol 0.15%
Tripelennamine Hel 0.50%
In Isotonic Solution

Vasomist

(PLAIN)

VASOCONSTRICTOR AND NASAL DECONGESTANT

Active Ingredients:
Phenylephrine Hcl 0.25%
Phenylpropanolamine Hcl ...0.50%
Chlorobutanol 0.15%
In Isotonic Solution

USE: Temporary relief of nasal congestion due to colds and hay fever.

DIRECTIONS: Adults and Children: Instill two or three drops into each nostril, using no more than needed to provide relief. Repeat every three to four hours as needed but not oftener.

AVAILABILITY

In plastic squeeze bottles containing ¾ fluid oz. and in dropper bottles containing 1 fluid oz.

HUMCO LABORATORY
TEXARKANA, ARK.-TEX.

HUMCO LABORATORY
TEXARKANA, ARK.-TEX.
Our Integrity is Your Guarantee

Schering

After only one year:

Administered to more people than live in Galveston, Waco, and Texas City.*

Injectable
Garamycin®
brand of
gentamicin sulfate
injection

*An estimated 208,000 patients have received GARAMYCIN Injectable to date. The combined population of Galveston, Waco, and Texas City is 203,000. (Estimated 1969 figures from The New York Times Encyclopedic Almanac 1970.)

See Clinical Considerations section on last page...

Mounting acceptance in the hospital...

Proven clinical effectiveness

Respiratory Infections

Outstanding results in serious gram-negative respiratory infections[1,2]

GARAMYCIN Injectable may prove successful where other antibiotics have failed.

Urinary Tract Infections

Strikingly effective in selected urinary tract infections[3]

With relatively low intramuscular doses, the promptly attained levels of GARAMYCIN achieved in the urine are considerably higher than the concentrations required for effectiveness against virtually all susceptible gram-negative pathogens. (Appropriate precautions are indicated in patients with impaired renal function; consult Package Insert for full details.)

Septicemia

May be lifesaving[4-6]

Numerous investigators have drawn attention to the value of GARAMYCIN Injectable in the treatment of gram-negative septicemias, often complicated by shock. Many hospital strains of *Serratia* are susceptible.[6]

Wounds and Burns

Response may be dramatic in wounds and burns complicated by sepsis[7]

The established efficacy of GARAMYCIN Injectable against *Pseudomonas*—as well as most other gram-negative pathogens—makes it an especially useful agent in the treatment of infected wounds and burns.

Important Precautionary Note Patients receiving treatment with GARAMYCIN Injectable (gentamicin sulfate injection) should be under close clinical observation because of the toxicity associated with the use of the drug. Ototoxicity, vestibular and auditory, can occur in patients, primarily those with preexisting renal damage, treated with GARAMYCIN Injectable for longer periods or with higher doses than recommended.

GARAMYCIN Injectable is potentially nephrotoxic, and this should be kept in mind when it is used in patients with preexisting renal damage.

This drug should be limited to the treatment of serious infections caused by susceptible gram-negative bacteria, with due regard for relative antibiotic toxicity. (See Clinical Considerations section.)

Mounting evidence in the laboratory...

Schering

Over 95% gram-negative pathogens sensitive.*

No other antibiotic performed comparably *in vitro* against gram-negative pathogens.
In a nationwide culture audit of antibiotic sensitivity patterns, sensitivity reports from 106 hospitals, geographically representative by census tract and of varying sizes, were analyzed. During the three-month period, **every** gram-negative culture slip from **every** hospital was surveyed. The total number of cultures involved in the audit was 97,091. The total number of sensitivity determinations was 643,503.

Pathogens	Percentage of sensitive strains Number of strains tested Antibiotics*							
	Garamycin	Kanamycin	Cephalothin	Cephaloridine	Ampicillin	Colistimethate	Chloramphenicol	Tetracycline
Klebsiella pneumoniae	99.5% 962	84.7% 992	86.2% 995	76.1% 67	32.7% 1,020	96.3% 640	82.9% 1,028	77.1% 1,026
Aerobacter aerogenes	95.9% 2,739	86.1% 2,818	53.5% 2,985	58.8% 1,514	22.7% 3,066	88.6% 2,603	85.8% 3,071	67.8% 2,981
Klebsiella aerobacter group	98.8% 566	83.9% 547	66.1% 522	60.5% 276	28.0% 553	89.5% 560	86.2% 587	62.8% 433
Klebsiella, all others	92.7% 2,944	83.3% 3,186	77.4% 2,976	67.5% 627	13.5% 2,883	95.0% 2,105	81.6% 3,212	70.6% 3,063
Pseudomonas aeruginosa	91.6% 4,528	29.8% 4,460	6.6% 4,418	6.6% 1,279	6.0% 4,360	91.3% 3,852	26.9% 4,608	26.4% 4,404
Proteus, indole-positive	91.8% 1,031	85.8% 1,062	39.9% 981	54.1% 364	40.2% 1,042	10.3% 758	76.1% 1,096	42.1% 1,051
Proteus mirabilis, indole-negative	94.9% 3,272	90.1% 3,378	83.1% 3,290	77.5% 975	78.0% 3,274	8.8% 2,634	85.9% 3,469	26.8% 3,278
Proteus, unspecified	96.2% 1,335	85.8% 1,371	71.7% 1,434	70.0% 647	64.7% 1,435	11.2% 1,233	76.0% 1,421	22.4% 1,298
Escherichia coli and all other Escherichias	96.4% 12,557	91.4% 12,818	87.8% 12,686	88.8% 4,251	74.6% 12,899	95.4% 10,623	94.1% 13,086	70.0% 12,559
Paracolobactrum, all	93.4% 303	88.9% 325	62.0% 305	74.2% 62	43.8% 340	80.9% 215	87.1% 350	72.6% 340
Coliform bacteria	99.0% 593	91.2% 649	81.5% 637	66.7% 21	52.7% 624	95.6% 607	91.6% 678	76.1% 637
Totals	95.1% 30,830	80.5% 31,606	65.3% 31,229	68.1% 10,083	50.3% 31,496	75.8% 25,829	79.7% 32,606	56.5% 31,070
Gram-positive (included for consistency with Package Insert, not an approved indication)								
Staph—S. aureus, coagulase-positive	97.4% 1,548	88.8% 1,458	97.7% 2,050	98.7% 636	61.1% 1,559	20.4% 628	94.4% 2,123	83.7% 1,966
Staph—S. aureus, unspecified	99.3% 993	92.8% 902	98.1% 1,289	95.3% 213	45.8% 1,153	29.3% 116	96.4% 1,427	82.3% 1,360

*Adapted from a three-month, nationwide hospital audit by R. A. Gosselin and Co., Inc., Dedham, Massachusetts (mid-May to mid-August, 1969).[8]
Antibiotics with significant gram-negative spectra are included. Organisms are listed as reported by laboratory.
Sensitivity testing was done by the disc method, a generally reliable test in the hospital setting. It should be noted, however, that the results with GARAMYCIN were somewhat higher than the results reported where the tube dilution technique was used. (See Clinical Considerations section which follows.) The concentration of the GARAMYCIN disc was 10 mcg.
Whereas standard testing methods were used by all hospitals, it is acknowledged that in a survey of this kind considerations such as differences in methodology are possible sources of error. The comparative percentage-sensitivity results derived from a survey of this kind are, therefore, not absolute. One should keep in mind also that the proper selection of an antibiotic is based not only on susceptibility testing but on relative toxicity and other clinical considerations as well.
It is felt, nonetheless, that the broad scope of the survey and the extreme care in data collection and tabulation permit a conclusion that the results are *generally* representative of current nationwide antibiotic sensitivity patterns.

Injectable Garamycin®
brand of gentamicin sulfate injection

See Clinical Considerations section on last page...

Injectable Garamycin®
brand of gentamicin sulfate injection

Schering

ADULT DOSAGE GUIDELINES

See definitive prescribing information in Package Insert.

Patients with Normal Renal Function

Total Daily Dose (administered in two, three, or four divided doses)			
	Less Severe	Resistant/ Moderately Severe	Serious/Life-Threatening
Urinary Tract Infections (due to susceptible strains of gram-negative bacteria)†	0.8-1.2 mg./kg. for 7-10 days	Larger doses or additional antibacterial therapy should be considered in severe urinary tract infections or in resistant cases involving the renal parenchyma or anatomic anomaly.	up to 5 mg./kg.
Other Infections including bacteremia, infected surgical wounds, severe soft tissue infections, and respiratory tract infections (due to susceptible strains of gram-negative bacteria)	3 mg./kg. for 7-10 days		

†Alkalinization of the urine may be a useful therapeutic adjunct.

Patients with Impaired Renal Function

To minimize the risk of ototoxicity in patients with impaired kidney function, only the first dose should be that normally recommended. Each subsequent dose should be half or less of that recommended for patients with normal renal function, depending upon the degree of renal impairment.

In patients with renal failure who are undergoing 14-hour hemodialysis twice weekly, administration of 1 mg./kg. GARAMYCIN Injectable at the end of each dialysis period has been suggested.

Clinical Considerations

Indications: GARAMYCIN Injectable is clinically effective in infections due to susceptible strains of gram-negative bacteria, including *Pseudomonas aeruginosa,* and species of indole-positive and indole-negative *Proteus, Escherichia coli,* and *Klebsiella-Aerobacter.* Bacteriologic studies should be conducted to identify the causative organism and to determine its sensitivity to gentamicin sulfate. Sensitivity discs of the drug are available for this purpose. If the susceptibility tests indicate that the causative organism is resistant to gentamicin sulfate, other appropriate antibiotic therapy should be instituted.

IN VITRO INHIBITION OF CLINICALLY IMPORTANT BACTERIA BY GENTAMICIN SULFATE (TUBE DILUTION STUDIES)

BACTERIA	No. of Strains Tested	No. of Strains (%) Inhibited by: 4 mcg./cc. or less		8 mcg./cc. or less*		No. of *In Vitro* Studies
Staphylococcus aureus	1,210	1,200	(99%)	1,206	(99%)	11
Pseudomonas aeruginosa	885	771	(87%)	828	(93%)	16
Escherichia coli	836	736	(88%)	779	(93%)	11
Indole-positive and indole-negative *Proteus* species	477	210	(44%)	358	(75%)	12
Klebsiella-Aerobacter species	292	205	(70%)	231	(79%)	10

*Number of strains (%) of gram-negative bacteria inhibited by 10 mcg./cc. or less are as follows: *Pseudomonas aeruginosa,* 828 (93%); *Escherichia coli,* 792 (95%); *Proteus* species, 393 (82%); *Klebsiella-Aerobacter* species, 284 (97%). From same studies as above.
Source: Package Insert

This drug should be limited to the treatment of serious infections caused by gram-negative bacteria, particularly *Pseudomonas aeruginosa, Proteus* and other susceptible organisms, with due regard for relative antibiotic toxicity. Therefore, the drug should be considered for use against gram-negative: 1. Bacteremia; 2. Infected surgical wounds; 3. Severe soft tissue infections, including burns complicated by sepsis; 4. Respiratory tract infections; and 5. Selected cases of urinary tract infection.

Contraindications: GARAMYCIN Injectable is contraindicated in individuals with a history of hypersensitivity or toxic reactions to gentamicin.

Warnings: Patients receiving treatment with GARAMYCIN should be under close clinical observation because of the toxicity associated with the use of this drug. Ototoxicity, vestibular and auditory, can occur in patients, primarily those with pre-existing renal damage, treated with GARAMYCIN Injectable, usually for longer periods or with higher doses than recommended.

GARAMYCIN Injectable is potentially nephrotoxic, and this should be kept in mind when it is used in patients with pre-existing renal impairment. Kidney function diminished by infection of the upper urinary tract may, however, improve during effective treatment with GARAMYCIN Injectable.

Concurrent administration of potentially ototoxic drugs such as streptomycin and kanamycin or of potentially nephrotoxic drugs such as polymyxin, colistin, and kanamycin with gentamicin sulfate has not been shown to afford any clinical advantages and, moreover may result in additive toxicity. Monitoring of vestibular, cochlear, and renal function will provide guidance for therapy in such cases.

Precautions: In patients with impaired renal function in whom serious infection develops, serum concentrations of the drug may rise, with consequently increased risk of ototoxicity. In these patients or in those in whom recommended dosage or duration of therapy must be exceeded as a life-saving measure, routine studies of kidney function should be performed when possible. These may be supplemented by evaluation of the vestibular and auditory function and measurement of serum concentration of the drug when feasible. Serum concentrations of gentamicin should be maintained below the range of 10-12 mcg./ml. to reduce risk of ototoxicity.

Ordinarily, treatment should not be given for more than 7 to 10 days or be repeated unless required for serious infection not responsive to other agents.

As with other antibiotics, treatment with GARAMYCIN Injectable may occasionally result in overgrowth of nonsensitive organisms. If superinfection occurs, appropriate therapy is indicated.

Safety for use in pregnancy or the potential for fetal ototoxicity or nephrotoxicity have not been established. Studies in pregnant animals have not revealed teratogenic or ototoxic effects in the fetus. GARAMYCIN Injectable should not be used in pregnant patients or in women of childbearing age unless its use is deemed advisable by the physician.

Adverse Reactions: The overall incidence of ototoxicity considered related to treatment with GARAMYCIN Injectable was 2.8 per cent (16 of 565 patients). Contributory factors (two or more factors were relevant to most patients) were as follows: 10 had azotemia, 10 received a total of 1 gram or more of the drug, 7 had recently received other potentially ototoxic antibiotics (streptomycin or kanamycin), and 5 were over 60 years of age. Six also had decreased high-tone hearing acuity, which returned to or toward normal in the 4 patients retested.

Analysis of BUN data indicated that 4 (2%) of 172 patients showed increases in BUN that were probably related to treatment with GARAMYCIN Injectable. Of 20 increases probably or possibly related to treatment, 7 were reversible, 9 occurred in terminal patients, and 4 had no follow-up.

Other adverse reactions associated with treatment were one instance each of urticaria, decreased hematocrit, and reversible depression of granulocytes with normal bone marrow. Other rarely reported and possibly treatment-related adverse reactions were anemia, increased reticulocyte count, rash, purpura, drug fever, hypotension, convulsions, twitching, salivation, nausea, vomiting, increased transaminase activity (SGOT or SGPT), increased serum bilirubin, decreased serum calcium, and joint pain.

Packaging: GARAMYCIN Injectable, 40 mg./cc., 2-cc. multiple-dose vials, for intramuscular administration.

References: (1) Brayton, R. G., and Louria, D. B.: Gentamicin in gram-negative urinary and pulmonary infections, Arch. Int. Med. *114*:205, 1964.* (2) Louria, D. B.; Young, L.; Armstrong, D., and Smith, J. K.: Gentamicin in the treatment of pulmonary infections, J. Infect. Dis. *119*:483, 1969. (3) Cox, C. E.: Gentamicin, a new aminoglycoside antibiotic: Clinical and laboratory studies in urinary tract infections, J. Infect. Dis. *119*:486, 1969. (4) Groll, E.: Clinical experience with gentamicin, data from 12 German clinics, in Gentamicin: First International Symposium, Paris, January 1967, Lucerne, Essex Chemie AG, pp. 121-128.* (5) Jackson, G. G.: Laboratory and clinical investigation of gentamicin, *ibid.,* pp. 62-74. (6) Medeiros, A. E.: Discussion, J. Infect. Dis. *119*:533, 1969. (7) Polk, H.: Discussion, J. Infect. Dis. *119*:529, 1969. (8) Three-month, nationwide hospital audit by R. A. Gosselin and Co., Inc., Dedham, Massachusetts (mid-May to mid-August, 1969).

*Dosage in this investigational study was less than now recommended in Package Insert.

For more complete prescribing details, consult package insert or Physicians' Desk Reference. Schering literature is also available from your Schering Representative or Medical Services Department, Schering Corporation, Union, New Jersey 07083.

AHFS CATEGORY 8:12.28 S-029

POSTGRADUATE MEDICAL ASSEMBLY OF SOUTH TEXAS

Astroworld Hotel will be headquarters for the 36th annual meeting of the Postgraduate Medical Assembly of South Texas July 27-29. Sessions on internal medicine, surgery, obstetrics and gynecology, ophthalmology, and otolaryngology are planned. Panel sessions will include discussions on pulmonary embolism, ovulation induction, trauma, acute crisis intervention in psychiatry, diagnosis and management of arrhythmias following acute myocardial infarction, shock, pulmonary edema, and cardiovascular emergencies. Speakers include Drs. Isadore Dyer, New Orleans; Clark M. Hinkley, Birmingham, Ala.; David L. Knox, Baltimore; Frank N. Ritter, Ann Arbor, Mich.; and George Dekle Taylor, Jacksonville, Fla. Private and special group social functions are planned for Monday night, and a reception-cocktail party will be held Tuesday evening. Registration fee is $35.

Contact: Mrs. W. H. Dahme, 410 Jesse H. Jones Library Bldg., Texas Medical Center, Houston 77025, executive secretary.

TEXAS PHARMACEUTICAL ASSOCIATION

Texas Pharmaceutical Association's 91st annual meeting will be staged at the Statler Hilton Hotel in Dallas July 26-29. Program speakers and their presentations will include Donald E. Miller, Washington, D.C., chief counsel, Bureau of Narcotics and Dangerous Drugs, "Controlled Dangerous Substance Act"; Carl Roberts, Washington, D.C., director, legal division, American Pharmaceutical Association, "Unions in Pharmacy Today"; and Howard E. Mossberg (PhD), dean, school of pharmacy, University of Kansas, Lawrence, "Mandatory Continuing Education." Addressing the House of Delegates will be Dr. Walter Walthall, President, Texas Medical Association, and William R. Whitten, President, American Pharmaceutical Association. A new innovation in the educational program will be sidewalk seminars, with topics ranging from technical and scientific aspects to the economics of pharmacy practice. Registration fee is $25.

Contact: Luther R. Parker, 404 Austin Savings Bldg., Austin, executive officer.

AMERICAN SOCIETY OF ABDOMINAL SURGEONS

American Society of Abdominal Surgeons, South Central Section, will hold its fifth annual meeting at the Royal Coach Inn, Dallas, Aug. 28-30. Featured speakers at the scientific program will be Drs. Milford O. Rouse, Arthur Grollman, Charles S. Petty, Earle Williams (DDS), G. Ray Ridings, Fred J. Bonte, all of Dallas; Grady L. Hallman, Houston; and Meyer O. Cantor, Huntington Woods, Mich. Topics to be covered are the role of the internist and abdominal surgeon in gastroenterology, fluid and electrolyte balance in abdominal surgery, medico-legal medicine, abdominal vascular problems, intestinal obstruction, therapeutic irradiation of abdominal disorders, and radio isotopic scanning of abdominal organs. A cocktail party and banquet are planned for Saturday evening.

Contact: Dr. Virgil M. Payne, Jr., 1210 Medical Arts Bldg., Dallas 75201, chairman, committee on arrangements.

HIGHLIGHTS OF COMING MEETINGS

CURRENT REGIONAL MEETINGS

SOUTHERN OBSTETRIC AND GYNECOLOGIC SEMINAR will take place July 27-31 in Asheville, N.C. A wide variety of gynecological and obstetrical subjects will be covered, including cervical incompetence, cervical dysplasia and carcinoma, pituitary-ovarian relationships, cryosurgery, and vaginal surgery. Speakers will be Drs. Robert Greenblatt, Robert Barter, Robert Franklin, Raymond Kaufman, Duane Townsend, and Charles Hendricks. Contact: Dr. George T. Schneider, 1514 Jefferson Highway, New Orleans 70121, secretary.

CURRENT NATIONAL MEETINGS

AMERICAN ACADEMY OF PHYSICAL MEDICINE AND REHABILITATION will hold its 32nd annual assembly Aug. 16-18 at the New York Hilton in New York City. Seminars, symposiums, lectures followed by discussions, and technical and scientific exhibits will be presented. Studies in osteoporosis, recent advances in cord bladder management, reconditioning following hip arthroplasty, rheumatoid arthritis: management by drugs and their complications, predictive factors in stroke rehabilitation, and kinesiology of the hand as a basis for management are some of the topics to be covered at the scientific meeting. Round table discussions are planned and will offer registrants an opportunity for further discussion with the authors of many of the papers presented at the assembly. Registration fee for members is $35. Contact: Creston C. Herold, 30 N. Michigan Ave., Chicago 60602, executive director.

AMERICAN CONGRESS OF REHABILITATION MEDICINE'S 47th annual session will take place Aug. 19-21 at the New York Hilton in New York City. The scientific program will consist of paper presentations and discussions, scientific films, panel discussions, and a new feature—"Meet the Experts" breakfasts—which will provide an opportunity for a personal exchange with recognized authorities in seven selected areas of interest to rehabilitation professionals. Topics to be covered at the breakfast sessions are aphasia, undergraduate medical education, orthotics, electromyography, medical writing, rehabilitation success predictors, and cerebral palsy. Registration fee for members is $35. Contact: Creston C. Herold, 30 N. Michigan Ave., Chicago 60602, executive director.

XI INTERNATIONAL CONGRESS ON DISEASES OF THE CHEST, sponsored by the American College of Chest Physicians, will be held Aug. 3-7 in Lausanne, Switzerland. International Committee Seminars will offer discussion of recent advances and possible future developments in the prophylaxis, diagnosis, and treatment of cardiovascular and respiratory diseases. Nine major symposia are planned at which internationally known scientists and clinicians will present papers on various aspects of cardiopulmonary medicine and surgery. Subjects of current interest involving recent observations and the use of modern technology will be covered in luncheon panel discussions and the audience will be invited to participate in a question and answer period. Also planned are medical motion picture presentations and scientific exhibits. Contact: Dr. Alfred Soffer, 112 E. Chestnut St., Chicago 60611, executive director.

MORE HIGHLIGHTS OF COMING MEETINGS

■ Denotes Texas meetings.

ALSO IN AUGUST

THE UNIVERSITY OF WISCONSIN, Ninth National Conference on Therapies for Advanced Cancers, Madison, Wis., Aug. 20-22, 1970. Dr. Robert J. Samp, Assistant Professor of Surgery and Clinical Oncology, University Hospitals, Madison, Wis. 53706, Program Coordinator.

WORLD MEDICAL ASSOCIATION, Oslo, Norway, Aug. 16-22, 1970. Dr. A. Z. Romualdez, 10 Columbus Circle, New York 10019, Sec.

SEPTEMBER

AMERICAN ACADEMY OF GENERAL PRACTICE, San Francisco, Sept. 25-Oct. 1, 1970. Mac F. Cahal, Volker Blvd. at Brookside, Kansas City, Mo., Exec. Dir.

AMERICAN ASSOCIATION OF MEDICAL CLINICS, San Francisco, Sept. 20-23, 1970. Dr. Edward M. Wurzel, 719 Prince St., Alexandria, Va. 22313, Exec. Dir.

AMERICAN ELECTROENCEPHALOGRAPHIC SOCIETY, Washington, D.C., Sept. 17-19, 1970. Dr. Philip T. White, Marquette University School of Medicine, 8700 W. Wisconsin Ave., Milwaukee, Wis. 53226, Sec.

AMERICAN FRACTURE ASSOCIATION, New York, Sept. 26-30, 1970. Dr. H. W. Wellmerling, 610 Griesheim Bldg., Bloomington, Ill. 61701, Sec.-Gen.

■ AMERICAN HEART ASSOCIATION, TEXAS AFFILIATE, INC., Dallas, Sept. 15-20, 1970. Dudley H. Hafner, Box 9928, 8600 Hwy. 183 N., Austin 78757, Exec. Officer.

■ AMERICAN HOSPITAL ASSOCIATION, Houston, Sept. 14-17, 1970. James E. Hague, 840 N. Lake Shore Dr., Chicago, Sec.

AMERICAN HUMANE ASSOCIATION, St. Louis, Sept. 27-30, 1970. Rutherford T. Phillips, P. O. Box 1266, Denver 80201, Exec. Dir.

AMERICAN MEDICAL ASSOCIATION, Third National Congress on Medical Ethics, Chicago, Sept. 19-20, 1970. Judicial Council, AMA, 535 N. Dearborn St., Chicago 60610.

AMERICAN MEDICAL ASSOCIATION, 30th Annual Congress on Occupational Health, Los Angeles, Sept. 30-Oct. 1, 1970. Department of Occupational Health, AMA, 535 N. Dearborn St., Chicago 60610.

AMERICAN MEDICAL WRITERS ASSOCIATION, New York, Sept. 24-27, 1970. W. Wayne Curtis, 420 Lexington Ave., New York 10017, Exec. Officer.

AMERICAN ROENTGEN RAY SOCIETY, Miami Beach, Sept. 30, 1970. Dr. William B. Seaman, 20 N. Wacker Dr., Chicago 60606, Exec. Officer.

AMERICAN SOCIETY OF CLINICAL PATHOLOGISTS and COLLEGE OF AMERICAN PATHOLOGISTS, annual, Atlanta, Ga., Sept. 14-21, 1970. Albert G. Boeck, Jr., 710 S. Wolcott, Chicago, Exec. Officer.

ASSOCIATION OF LIFE INSURANCE MEDICAL DIRECTORS OF AMERICA, Boston, Sept. 28-30, 1970. Dr. Arthur E. Brown, c/o ALIMDA, P.O. Box 594, Newark, N.J.

■ TEXAS MEDICAL ASSOCIATION, Austin, Sept. 18-20, 1970. C. Lincoln Williston, 1801 N. Lamar Blvd., Austin 78701, Exec. Sec.

■ TEXAS PEDIATRIC SOCIETY, Fort Worth, Sept. 24-26, 1970. Dr. Pat A. Cato, 1015 E. 32nd St., Austin 78705, Sec.

■ TEXAS SOCIETY OF CHILD PSYCHIATRY, Fort Worth, Sept. 25-26, 1970. Dr. Ann H. Hughes, 3643 W. Lake Dr., Austin, Sec.

■ THE UNIVERSITY OF TEXAS SOUTHWESTERN MEDICAL SCHOOL AT DALLAS and CHILDREN'S MEDICAL CENTER OF DALLAS, Pediatric Anesthesia Symposium, Moore Auditorium, Children's Medical Center, Dallas, Sept. 12-13, 1970. Dr. C. R. Stephen, Dept. of Anesthesia, Children's Medical Center, 1935 Amelia St., Dallas 75235.

OCTOBER

AMERICAN ACADEMY OF CLINICAL TOXICOLOGY, San Francisco, Oct. 24-26, 1970. Dr. Eric G. Comstock, P. O. Box 2565, Houston 77001, Exec. Dir.

AMERICAN ACADEMY OF OPHTHALMOLOGY AND OTOLARYNGOLOGY, Las Vegas, Oct. 5-9, 1970. Dr. C. M. Kos, 15 Second St., SW, Rochester, Minn. 55901, Exec. Sec.-Treas.

AMERICAN ACADEMY OF PEDIATRICS, annual, San Francisco, Oct. 17-22, 1970. Dr. Robert G. Frazier, 1801 Hinman Ave., Evanston, Ill. 60204, Exec. Dir.

AMERICAN ASSOCIATION OF BLOOD BANKS, San Francisco, Oct. 25-29, 1970. Lois J. James, 30 N. Mich. Ave., Chicago, Central Office Mgr.

AMERICAN ASSOCIATION OF MEDICAL ASSISTANTS, Des Moines, Iowa, October, 1970. Pauline M. Hunter, 5652 N. 10th St., Phoenix, Ariz., Sec.

■ AMERICAN CANCER SOCIETY, TEXAS DIVISION, INC., annual, Dallas, Oct. 14-15, 1970. Curt W. Reimann, 5014 Bull Creek Rd., Austin 78731, Exec. Officer.

AMERICAN COLLEGE OF CHEST PHYSICIANS, annual, Los Angeles, Oct. 25-30, 1970. Dr. Alfred Soffer, 112 E. Chestnut St., Chicago 60611, Exec. Dir.

AMERICAN COLLEGE OF EMERGENCY PHYSICIANS, annual, Las Vegas, Oct. 18-23, 1970. Executive Secretary, 120 W. Saginaw, E. Lansing, Mich. 48823.

AMERICAN COLLEGE OF GASTROENTEROLOGY, New York, Oct. 25-31, 1970. Daniel Weiss, 299 Broadway, New York 10007, Exec. Officer.

AMERICAN COLLEGE OF SURGEONS, Chicago, Oct. 12-16, 1970. Dr. C. Rollins Hanlon, 55 E. Erie St., Chicago 60611, Dir.

AMERICAN DIETETIC ASSOCIATION, Cleveland, Oct. 5-9, 1970. Ruth M. Yakel, 620 N. Mich. Ave., Chicago 60611, Exec. Dir.

■ AMERICAN PUBLIC HEALTH ASSOCIATION, Houston, Oct. 26-30, 1970. Berwyn F. Mattison, 1790 Broadway, New York 10019, Exec. Dir.

AMERICAN SOCIETY OF ANESTHESIOLOGISTS, New York, Oct. 17-21, 1970. John W. Andes, 515 Busse Hwy., Park Ridge, Ill., Exec. Sec.

ASSOCIATION OF AMERICAN PHYSICIANS AND SURGEONS, INC., Richmond, Va., Oct. 1-3, 1970. Frank K. Woolley, 230 N. Mich. Ave., Chicago 60601, Exec. Dir.

■ EASTER SEAL SOCIETY FOR CRIPPLED CHILDREN & ADULTS OF TEXAS, INC., San Antonio, Oct. 8-10, 1970. William E. Russell 4429 N. Central Expwy., Dallas, Exec. Dir.

OKLAHOMA CITY CLINICAL SOCIETY, Oklahoma City, Oct. 26-28, 1970. Mrs. Alma O'Donnell, 601 N.W. Expwy., Oklahoma City 73118.

■ PANHANDLE DISTRICT MEDICAL SOCIETY, Amarillo, Oct. 17, 1970. Mrs. Carlie Umphres, Box 3276, Amarillo 79106, Exec. Sec.

SOCIETY FOR CRYOSURGERY, Seminar on Cryosurgery in EENT, Las Vegas, Oct. 4, 1970. Dr. John G. Bellows, 30 N. Michigan Ave., Chicago 60602, Sec.

SOUTHERN PSYCHIATRIC ASSOCIATION, West Palm Beach, Fla., Oct. 4-6, 1970. Mrs. Annette S. Boutwell, P.O. Box 10387, Raleigh, N. C. 27605, Exec. Sec.

NOVEMBER

AMERICAN ASSOCIATION FOR THE ACCREDITATION OF LABORATORY ANIMAL CARE, Chicago, Nov. 2-6, 1970. Joseph J. Garvey, 4 E. Clinton St., Suite 605, P. O. Box 13, Joliet, Ill. 60434, Exec. Sec.

AMERICAN ASSOCIATION FOR INHALATION THERAPY, New Orleans, Nov. 14-18, 1970. Mark T. Bowers, 3554 Ninth St., Riverside, Calif. 92501, Exec. Sec.

AMERICAN CANCER SOCIETY, annual, New York, Nov. 4-6, 1970. Norman R. Hollis, 219 E. 42nd St., New York 10017, Asst. Sec.

AMERICAN DENTAL ASSOCIATION, Las Vegas, Nov. 8-12, 1970. Dr. C. Gordon Watson (DDS), 211 E. Chicago Ave., Chicago 60611, Exec. Dir.

AMERICAN HEART ASSOCIATION, Atlantic City, Nov. 12-17, 1970. Dr. James M. Hundley, 44 E. 23rd St., New York 10010, Exec. Officer.

AMERICAN MEDICAL ASSOCIATION, clinical session, Boston, Nov. 29-Dec. 2, 1970. AMA, 535 N. Dearborn St., Chicago 60610.

AMERICAN MEDICAL RECORD ASSOCIATION, Colorado Springs, Nov. 1-6, 1970. Mrs. Mary-j Waterstraat, 211 E. Chicago Ave., Chicago 60611, Exec. Officer.

AMERICAN MEDICAL WOMEN'S ASSOCIATION, INC., Puerto Rico, Nov. 7-10, 1970. Gertrude F. Conroy, 1790 Broadway, New York 10019, Exec. Dir.

AMERICAN SOCIETY OF CLINICAL HYPNOSIS, Miami Beach, Nov. 4-8, 1970. F. D. Nowlin, 800 Washington Ave., SE, Minneapolis 55414, Exec. Sec.

AMERICAN SOCIETY OF CYTOLOGY, Los Angeles, Nov. 4-7, 1970. Dr. Warren R. Lang, 7112 Lincoln Dr., Philadelphia 19119, Sec.-Treas.

ASSOCIATION OF MILITARY SURGEONS OF THE US, Washington, D.C., Nov. 29-Dec. 3, 1970. BG Frank E. Wilson, AUS, Ret., 8502 Conn. Ave., Chevy Chase, Md. 20015, Exec. Dir.

■ BLACKFORD MEMORIAL LECTURES, annual, Denison, Nov. 7, 1970. Dr. John D. Gleckler, 211 N. Fannin, Denison 75020, Chrmn.

CONGRESS OF COUNTY MEDICAL SOCIETIES, annual, Cincinnati, Nov. 6-8, 1970. Dr. Joseph F. Boyle, P. O. Box 54571, Terminal Annex, Los Angeles 90054, Chrmn., Bd. of Trustees.

INTERNATIONAL COLLEGE OF SURGEONS, Las Vegas, Nov. 20-24, 1970. Dr. Aldo Parentela, 1516 Lake Shore, Chicago 60610, Exec. Officer.

MEDICAL SOCIETY OF THE US AND MEXICO, annual, Guadalajara, Jal. Mexico, Nov. 4-7, 1970. Virginia E. Bryant, 333 W. Thomas Rd., #207, Phoenix 85013, Exec. Sec.

NATIONAL SOCIETY FOR THE PREVENTION OF BLINDNESS, INC., New York, Nov. 19, 1970. Margaret S. Banks, 79 Madison Ave., New York 10016, Admin. Asst.

RADIOLOGICAL SOCIETY OF NORTH AMERICA, Chicago, Nov. 29-Dec. 4, 1970. Mrs. Marguerite H. Henry, 713 E. Genesee St., Syracuse, N.Y. 13210, Exec. Dir.

■ SOUTHERN MEDICAL ASSOCIATION, Dallas, Nov. 16-19, 1970. Robert F. Butts, 2601 Highland Ave., Birmingham, Ala. 35205, Exec. Dir.

■ SOUTHWESTERN MEDICAL ASSOCIATION, El Paso, Nov. 4-6, 1971. Bob Reid, 723 Mills Bldg., El Paso 79901, Exec. Sec.

■ TEXAS ASSOCIATION FOR CHILDREN WITH LEARNING DISABILITIES, INC., Austin, Nov. 20-21, 1970. Mrs. William F. Howard, 4601 Small Drive, Austin 78731, Chrmn.

UNIVERSITY OF FLORIDA COLLEGE OF MEDICINE, seminar in obstetrics and gynecology, Gainesville, Fla., Nov. 19-20, 1970. Division of Postgraduate Education, University of Florida College of Medicine, J. Hillis Miller Health Center, Gainesville 32601.

DECEMBER

AMERICAN ACADEMY OF DERMATOLOGY, Chicago, Dec. 5-10, 1970. Mrs. Dorothy P. Compton, 2250 N.W. Flanders St., Portland, Ore., Exec. Sec.

AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE, Chicago, Dec. 26-31, 1970. Dr. Dael Wolfle, 1515 Massachusetts Ave., NW, Washington, D.C. 20005, Exec. Officer.

ASSOCIATION OF STATE AND TERRITORIAL HEALTH OFFICERS, Washington, D.C., Dec. 6-10, 1970. Noble J. Swearingen, 234 E. Capitol St., Washington, D.C. 20002, Dir.

SOUTHERN SURGICAL ASSOCIATION, Boca Raton, Fla., Dec. 7-9, 1970. Dr. David C. Sabiston, Jr., Duke University Medical Center, Durham, N.C., Sec.

■ TEXAS ACADEMY OF INTERNAL MEDICINE, Galveston, Dec. 5, 1970. Dr. O. Roger Hollan, 703 Nix Bldg., San Antonio 78205, Sec.

■ TEXAS SOCIETY OF INTERNAL MEDICINE, INC., Dec., 1970. Mrs. Iris Wenzel, 1801 N. Lamar Blvd., Austin 78701, Exec. Sec.

■ TEXAS SOCIETY OF OPHTHALMOLOGY AND OTOLARYNGOLOGY, Corpus Christi, Dec. 4-5, 1970. Dr. Bland H. Schwarting, 304 Med. Prof. Bldg., San Antonio, Sec.

■ TEXAS STATE BOARD OF MEDICAL EXAMINERS, Fort Worth, Dec. 7-9, 1970. Dr. M. H. Crabb, 1612 Summit Ave., Suite 303, Fort Worth 76102, Sec.

JANUARY

ARIZONA HEART ASSOCIATION, Fourteenth Annual Cardiac Symposium, Phoenix, Jan. 22-24, 1971. Arizona Heart Association, 1720 E. McDowell Rd., Phoenix 85006.

■ FIFTH DISTRICT MEDICAL SOCIETY, annual, San Antonio, Jan. 29, 1971. S. E. Cockrell, Jr., 202 W. French Place, San Antonio 78212, Exec. Officer.

■ INTERNATIONAL MEDICAL ASSEMBLY OF SOUTHWEST TEXAS, annual, San Antonio, Jan. 28-29, 1971. S. E. Cockrell, Jr., 202 W. French Place. San Antonio 78212, Exec. Officer.

NATIONAL CONFERENCE ON CANCER OF THE COLON AND RECTUM, San Diego, Jan. 7-9, 1971. Dr. Ronald N. Crant, c/o American Cancer Society, Inc., 219 E. 42nd St., New York 10017.

■ TEXAS MEDICAL ASSOCIATION, Austin, Jan. 15-17, 1971. C. Lincoln Williston, 1801 N. Lamar Blvd., Austin 78701, Exec. Sec.

■ TEXAS RADIOLOGICAL SOCIETY, annual, Dallas, Jan. 29-30, 1971. Dr. Herman C. Sehested, 1550 W. Rosedale, Fort Worth 76104, Sec.

FEBRUARY

AMERICAN ACADEMY OF ALLERGY, annual, Chicago, Feb. 20-24, 1971. James O. Kelley, 756 N. Milwaukee St., Milwaukee, Wis. 53202, Exec. Officer.

AMERICAN COLLEGE OF CARDIOLOGY, annual, Washington, D.C., Feb. 3-7, 1971. William D. Nelligan, 9650 Rockville Pike, Bethesda, Md. 20014, Exec. Dir.

■ FIRST DISTRICT MEDICAL SOCIETY, annual, Pecos, February, 1971. Dr. John Emmett, 1900 N. Oregon, El Paso, Sec.

PAN-PACIFIC SURGICAL ASSOCIATION, annual, Honolulu, Feb. 26-March 3, 1972. Harriet N. DeVault, 236 Alexander Young Bldg., Honolulu 96813, Exec. Sec.

MARCH

AMERICAN ACADEMY OF ORTHOPAEDIC SURGEONS, annual, San Francisco, March 6-11, 1971. John K. Hart, 430 N. Michigan Ave., Chicago 60611, Exec. Sec.

AMERICAN ASSOCIATION OF PATHOLOCISTS AND BACTERIOLOGISTS, annual, Montreal, Quebec, March 6-9, 1971. Dr. K. M. Brinkhous, Dept. of Pathology, University of North Carolina, Chapel Hill, N.C. 27514, Sec.

AMERICAN COLLEGE OF ALLERGISTS, annual, San Francisco, March 28-April 1, 1971. Dr. John D. Cillaspie, 2141 14th St., Boulder, Colo. 80302, Exec. Sec.

AMERICAN COLLEGE OF PHYSICIANS, annual, Denver, March 28-April 2, 1971. Dr. Edward C. Rosenow, Jr., 4300 Pine St., Philadelphia 19104. Exec. Dir.

AMERICAN COLLEGE OF RADIOLOGY, annual, St. Louis, March 29-April 3, 1971. William C. Stronach, 20 N. Wacker Dr., Rm. 2920, Chicago 60606, Exec. Dir.

AMERICAN SOCIETY OF INTERNAL MEDICINE, annual, Denver, March 26-28, 1971. W. R. Ramsey, 525 The Hearst Bldg., San Francisco 94103. Exec. Officer.

■ DALLAS SOUTHERN CLINICAL SOCIETY, annual, Dallas, March 15-18, 1971. Millard J. Heath, 433 Medical Arts Bldg., Dallas 75201, Exec. Officer.

NEW ORLEANS GRADUATE MEDICAL ASSEMBLY, annual, New Orleans, March 8-11, 1971. Irma B. Sherwood, 1430 Tulane Ave., New Orleans 70112, Exec. Sec.

SOCIETY FOR CRYOSURCERY, annual, Hollywood, Fla., March 1-5, 1971. Dr. John G. Bellows, 30 N. Michigan Ave., Chicago 60602, Sec.

■ TEXAS ASSOCIATION OF OBSTETRICIANS AND GYNECOLOGISTS, annual, Corpus Christi, March 5-6, 1971. Dr. J. L. Jinkins, Jr., 200 University Blvd., Galveston 77550, Sec.-Treas.

■ TEXAS UROLOGICAL SOCIETY, annual, Wichita Falls, March 11-13, 1971. Dr. Charles Dryden, 1605 Tenth St., Wichita Falls 76301, Sec.-Treas.

US-MEXICO BORDER PUBLIC HEALTH ASSOCIATION, annual, Tucson, March 29-April 2, 1971. Dr. Jorge Jimenez-Gandica, 501 U.S. Court House, El Paso 79901, Sec.

APRIL

AMERICAN ASSOCIATION OF ANATOMISTS, annual, Philadelphia, April 18-23, 1971. Dr. Russell T. Woodburne, Dept. of Anatomy, The University of Michigan, 4643 Medical Science Bldg., Ann Arbor, Mich. 48104, Sec.-Treas.

AMERICAN ASSOCIATION FOR THORACIC SURGERY, Atlanta, April 26-28. 1971. Ada Hanvey, 7710 Carondelet Ave., St. Louis 63105, Admin. Asst.

AMERICAN COLLEGE HEALTH ASSOCIATION, annual, San Francisco, April 27-30, 1971. James W. Dilley, 2807 Central St., Evanston, Ill. 60201, Exec. Dir.

AMERICAN GERIATRICS SOCIETY, annual, Chicago, April 23-24, 1971. Dr. Edward Henderson, 10 Columbus Circle, New York 10019, Exec. Dir.

INDUSTRIAL MEDICAL ASSOCIATION, annual, Atlanta, April 18-22, 1971. Howard N. Schulz, 55 E. Washington, Chicago 60602, Exec. Dir.

SOUTHWESTERN SURCICAL CONGRESS, annual, Las Vegas, April 19-22, 1971. Dr. Jack A. Barney, 301 Pasteur Medical Bldg., Oklahoma City 73103, Sec.-Treas.

MAY

AMERICAN ACADEMY OF FACIAL PLASTIC AND RECONSTRUCTIVE SURGERY, annual, San Francisco, May 25-27, 1971. Dr. Carl N. Patterson, 1110 W. Main, Durham, N.C. 27701, Sec.

■ AMERICAN PHYSICAL THERAPY ASSOCIATION, TEXAS CHAPTER, annual, San Antonio, May, 1971. Hilda McKethan, 4162 Monaco Dr., Corpus Christi 78411, Sec.

AMERICAN PROCTOLOGIC SOCIETY, annual, Las Vegas, May 9-13, 1971. Harriette Gibson, 320 W. Lafayette, Detroit 48226, Exec. Officer.

Equipped for the thyroid emergency?

When an ambulance arrives with the unexpected patient presenting the classical picture of myxedema coma, is your hospital suitably equipped? It is if SYNTHROID® (sodium levothyroxine) injectable is at hand. You are also ready to conveniently handle post-operative thyroid medication situations until oral therapy can be reinstated.

In tablet form this single entity synthetic thyroid provides smooth, predictable response for thyroid replacement. An excellent drug for long-term therapy.

But in an emergency, when rapid replacement is needed to sustain life, prompt clinical response is essential. SYNTHROID injection makes this therapy instantly available. Is it available in your hospital?

Levothyroxine has a high binding capacity for serum proteins in contrast to other thyroid medicaments that may contain a thyroactive agent with low binding capacity. *The bound levothyroxine is totally measurable using the serum PBI test. It is not unusual to find PBI levels of 8-10 mcg. per 100 ml. of serum.*

INDICATIONS: SYNTHROID (sodium levothyroxine) INJECTION is specific replacement therapy for diminished or absent thyroid function resulting from primary or secondary atrophy of the gland, congenital defect, surgery, excessive radiation, or antithyroid drugs. It is indicated in myxedematous coma and other thyroid dysfunctions where rapid replacement of the hormone is required. When o patient does not respond to oral therapy, SNYTHROID (sodium levothyroxine) INJECTION may be administered intravenously.

PRECAUTIONS: As with other thyroid preparations, overdose may cause diarrhea or cramps, nervousness, tremors, tachycardia, insomnia and continued weight loss. These effects may become apparent in from 4 days to three weeks. Therefore, patients should be kept under close observation. Medication, in such cases, should be stopped for 2 to 6 days, then resumed at a lower level. In patients with diabetes mellitus, look for possible changes in metabolic activity which may affect insulin or other antidiabetic drug dosage requirements.

CONTRAINDICATIONS: Thyrotoxicosis, acute myocardial infarction.

SIDE EFFECTS: Side effects are secondary to increased rates of body metabolism: sweating, heart palpitations with or without pain, leg cramps, weight loss, diarrhea, vomiting and nervousness. Myxedematous patients with heart disease have died from abrupt increases in dosage of thyroid drugs. In most cases, a reduction in dosage followed by a more gradual adjustment upward will indicate the patient's dosage requirements without the appearance of side effects.

DOSAGE AND ADMINISTRATION: In myxedematous stupor or coma, with no evidence of severe heart disease, 200 to 400 mcg. of SYNTHROID (sodium levothyroxine) INJECTION may be administered intravenously utilizing a solution containing 100 mcg. per ml. Detectable effects are usually observed by the sixth hour after injection and are fully appreciated during the following day. A repeat injection of 100 to 200 mcg. may be given on the second day if significant improvement has not occurred. The intravenous use of sodium levothyroxine in myxedematous coma is advantageous because it produces a predictable increase in the concentration of protein-bound iodine, eliminates the need for multiple doses until oral therapy is reinstated, circumvents the uncertainty of oral absorption, and avoids the risk of pulmonary aspiration.

SUPPLIED: SYNTHROID (sodium levothyroxine) INJECTION is supplied in 10 ml. vials containing 500 mcg. of lyophilized active ingredient and 10 mg. of Mannitol, N.F.; a 5 ml. vial containing Sodium Chloride Injection, U.S.P. is provided as diluent.

Also supplied as SYNTHROID (sodium levothyroxine) TABLET in color coded compressed tablets, and in seven strengths: 0.025 mg. (orange), 0.05 mg. (white), 0.1 mg. (yellow), 0.15 mg. (violet), 0.2 mg. (pink), 0.3 mg. (green), and 0.5 mg. (blue). Each strength is supplied in bottles of 100 and 500 tablets.

Synthroid®
(sodium levothyroxine, FLINT)
Injection

FLINT LABORATORIES
DIVISION OF TRAVENOL LABORATORIES, INC.
Morton Grove, Illinois

CONTINUING EDUCATION COURSES

Coronary Care: Designed for physicians, registered nurses, licensed vocational nurses, nursing aides (with recommendation), engineers, and students in all categories involved in or contemplating involvement in coronary care, and for paramedical and premedical personnel interested in broadening their understanding of this new field, the College of Engineering, in cooperation with the Division of Extension of The University of Texas at Austin and the School of Nursing, The University of Texas System, is sponsoring a short course on The Coronary Care Unit, Data Interpretation. The course will be held from 4-5 p.m. in the Joe C. Thompson Conference Center, Austin, July 20-31.

Detailed information will be presented through lectures, discussions, and demonstrations regarding data interpretation at the clinical level. Some time will be devoted to detection and localization of infarction, ischemia, and injury, as well as to electrolyte abnormalities discernible in the electrocardiogram. The majority of time, however, will be devoted to systematic coverage of arrhythmias as seen on the oscilloscope and ECG read-out. Interpretation of pacemaker traces and venous pressure records will also be discussed.

Tuition for the course is $20 for non-full-time University of Texas students; $15 for full-time University students. Application and tuition should be sent to Engineering Institutes, c/o Div. of Extension, P.O. Box K., The University of Texas at Austin, Austin 78712. Faculty in charge is Dr. Thomas M. Runge, professor of biomedical engineering programs, Dept. of Aerospace and Engineering Mechanics at UT at Austin.

Teaching Emergency Care: A three-day course in techniques of emergency care education of paramedical personnel will be held Sept. 9-11 at the San Antonio Convention Center, with demonstration sessions at the U. S. Army Medical Training Center at Fort Sam Houston. It will be of interest to physicians who may conduct training courses for ambulance attendants, policemen, firemen, volunteer rescue squad workers, and others who provide emergency medical aid. Contact Dr. Charles A. Rockwood, Jr., The University of Texas Medical School at San Antonio, San Antonio, Tex. 78229.

General Practice Review: Directed toward the practical aspects of general practice, this course will be held at Galveston's Jack Tar Hotel Sept. 20-25. Information is available from Dr. S. R. Lewis, Director, Postgraduate Education, The University of Texas Medical Branch, Galveston, Tex. 77550.

Emergency Department Nurses: A postgraduate course for emergency department nurses will be held Nov. 8-11 at Dallas' Holiday Inn Downtown. Sponsored by the American Academy of Orthopaedic Surgeons, Committee on Injuries, in conjunction with Southwestern Medical School, Dallas County Medical Society, and the Texas Nurses Association, the course is limited to 200 registrants; tuition is $50. Topics will include cardiopulmonary resuscitation, shock, control of hemorrhage, burns, poisonings, narcotics and LSD intoxication, cardiac emergencies, unconscious patient, dental emergencies, fractures, psychiatric emergencies, intravenous catheterization technique, and legal and religious aspects of emergency care.

For information write Dr. George N. Aldredge, Jr., 1244 Medical Arts Bldg., Dallas, Tex. 75201.

Pediatrics: Seizure Disorders of Children, an annual postgraduate symposium sponsored by Baylor College of Medicine, Departments of Pediatrics and Neurology, and the Blue Bird Circle Children's Clinic for Neurological Disorders, will be held at Texas Children's Hospital in Houston Nov. 12-14.

Guest faculty members will be Dr. David D. Daly, professor of neurology at UT Southwestern Medical School at Dallas; Philip R. Dodge, professor of pediatrics and neurology, Washington University School of Medicine, St. Louis; Dr. Henri Gastaut, dean of the faculty of medicine, Marseilles, France; Dr. Theodore Rasmussen, Director of Montreal Neurological Institute; Dr. Preston Robb, professor of neurology, Montreal Neurological Institute; and Dr. Richard P. Schmidt, professor of neurology, University of Florida.

For information write Dr. Thomas E. Zion, Department of Pediatrics, Baylor College of Medicine, 1200 Moursund Ave., Houston, Tex. 77025.

Psychiatry: A postgraduate course on "Emotional Dimensions of Medical Problems" will be offered from October to December, 1970, by The University of Texas Southwestern Medical School at Dallas, Department of Psychiatry and Division of Postgraduate Education. Instructor for the two-hour, one day per week course will be Dr. Jack E. Ponder, assistant professor of psychiatry at Southwestern. Dates and times for the course, which will be limited to 10 participants, will be announced later.

Inquiries may be directed to Dr. Ponder, The University of Texas Southwestern Medical School, 5323 Harry Hines Blvd., Dallas 75235.

Birth Defects: The University of Florida College of Medicine at Gainesville will host its second annual Birth Defects Symposium on "Disorders of Glucose Metabolism in Children" on Oct. 30-31, 1970. Sponsored by the university's institutional division of endocrinology and metabolism and the National March of Dimes Foundation Birth Defects Center, the symposium will feature discussions of diabetes mellitus, hypoglycemias of childhood and energy metabolism, as well as case presentations. Guest faculty includes Dr. Allan L. Drash, associate professor of pediatrics, University of Pittsburgh, and Dr. Donough O'Brien, professor of pediatrics, University of Colorado.

Registration fees will be waived for interns and residents. Additional information and schedule of fees is available from Mrs. Betty L. Howard, Division of Postgraduate Education, J. Hillis Miller Health Center, Gainesville, Fla. 32601.

Otolaryngology: Otolaryngology for the Family Practitioner, an AAGP-accredited course sponsored by the University of Miami, School of Medicine, Department of Otolaryngology, is scheduled for Nov. 13-14 at the Sheraton Four Ambassadors Hotel in Miami. For information write Dr. Fredric W. Pullen, II, Neuro-Otologic Laboratory, University of Miami, School of Medicine, P. O. Box 875, Biscayne Annex, Miami, Fla. 33152.

Various Subjects: The postgraduate medical education calendar for the University of Colorado School of Medicine lists the following July-August courses: Pediatrics, July 19-22, Aspen, Colo.; internal medicine, July 27-31, Estes Park, Colo.; and clinical management and control of tuberculosis, Aug. 17-28, National Jewish Hospital, Denver. Information is available from The Office of Postgraduate Medical Education, University of Colorado School of Medicine, 4200 East Ninth Avenue, Denver, Colo. 80220.

HELP!
IN SWIMMER'S EAR,

help comes fast with Furacin Otic. Diperodon hydrochloride provides rapid relief of pain and pruritus . . . antibacterial Furacin (nitrofurazone) and antimycotic Micofur (nifuroxime) combat the susceptible pathogens. The nonmacerating, hygroscopic vehicle softens cerumen . . . penetrates to the infection . . . permits free drainage.

FURACIN® OTIC

(nitrofurazone)

antibacterial/anesthetic/antifungal

Formula: Contains (w/w) 0.2% Furacin, brand of nitrofurazone, 0.375% Micofur®, brand of nifuroxime, and 2% diperodon hydrochloride dissolved in water-soluble, nondrying, hygroscopic polyethylene glycol.

Indications: For treatment of bacterial otitis externa, bacterial otitis media and otomycosis. In otitis media, this preparation is not effective if the tympanic membrane is intact.

Furacin (nitrofurazone) and Micofur (nifuroxime) are active against a variety of gram-positive and gram-negative organisms. Activity versus Pseudomonas sp. is limited to certain strains. Micofur (nifuroxime) is active against Candida (Monilia) albicans.

Precautions: Sensitization may occur with prolonged use and is more likely to develop in eczematous otitis externa. To minimize such reactions (a) limit application to a week or less, and (b) avoid use of excessive amounts which may run down the face.

This preparation is not indicated for use in treatment of cholesteatoma, where surgical intervention is necessary.

Supplied: Bottle of 15 cc. with dropper.

™ Originators and Developers of The Nitrofurans
EATON LABORATORIES
Division of The Norwich Pharmacal Company
NORWICH, NEW YORK 13815

I love my family.
I adore this house.
My in-laws are great.
The neighbors are wonderful.

Indications: For use in management of anxiety and tension occurring alone or as accompanying symptom complex to medical and surgical disorders and procedures. Though not a hypnotic, fosters normal sleep through antianxiety and related muscle-relaxant properties.

Contraindications: History of sensitivity to meprobamate.

Important Precautions: Carefully supervise dose and amounts prescribed, especially for patients prone to overdose themselves. Excessive prolonged use has been reported to result in dependence or habituation in susceptible persons, as alcoholics, ex-addicts, and other severe psychoneurotics. After prolonged excessive dosage, reduce dosage gradually to avoid possibly severe withdrawal reactions. Abrupt discontinuance of excessive doses has sometimes resulted in epileptiform seizures.

Warn patients of possible reduced alcohol tolerance, with resultant slowing of reaction time and impairment of judgment and coordination.

Reduce dose if drowsiness, ataxia or visual disturbance occurs; if persistent, patients should not operate vehicles or dangerous machinery.

Side Effects include drowsiness, usually transient, if persistent and associated with ataxia, usually responds to dose reduction; occasionally concomitant CNS stimulants (amphetamine, mephentermine sulfate) are desirable. Allergic or idiosyncratic reactions are rare, but such reactions, sometimes severe, can develop in patients receiving only 1 to 4 doses who have had no previous contact with meprobamate. Previous history of allergy may or may not be related to incidence of reactions. Mild reactions are characterized by itchy urticarial or erythematous maculopapular rash, generalized or confined to groin. Acute nonthrombocytopenic purpura with cutaneous petechiae, ecchymoses, peripheral edema and fever have been reported. One fatal case of bullous dermatitis following intermittent use of meprobamate with prednisolone has been reported. If allergic reaction occurs, meprobamate should be stopped and not reinstituted. Severe reactions, observed very rarely, include angioneurotic edema, bronchial spasms, fever, fainting spells, hypotensive crises (1 fatal case), anaphylaxis, stomatitis and proctitis (1 case) and hyperthermia. Treat symptomatically as with epinephrine, antihistamine and possibly hydrocortisone. Aplastic anemia (1 fatal case), thrombocytopenic purpura, agranulocytosis and hemolytic anemia have occurred rarely, almost always in presence of known toxic agents. A few cases of leukopenia, usually transient, have been reported on continuous administration.

Meprobamate may sometimes precipitate grand mal attacks in patients susceptible to both grand and petit mal. Extremely large doses can produce rhythmic fast activity in the cortical pattern. Impairment of accommodation and visual acuity has been reported rarely. After excessive dosage for weeks or months, withdraw gradually (1 or 2 weeks) to avoid recurrence of pretreatment symptoms (insomnia, severe anxiety, anorexia). Abrupt discontinuance of excessive doses has sometimes resulted in vomiting, ataxia, tremors, muscle twitching and epileptiform seizures. Prescribe very cautiously and in small amounts for patients with suicidal tendencies. Suicidal attempts have resulted in coma, shock, vasomotor and respiratory collapse and anuria. Excessive doses have resulted in prompt sleep, reduction of blood pressure, pulse and respiratory rates to basal levels; and occasionally hyperventilation. Treat with immediate gastric lavage and appropriate symptomatic therapy. (CNS stimulants and pressor amines as indicated). Doses above 2400 mg./day are not recommended.

Composition. Tablets, 200 mg. and 400 mg. meprobamate. Coated Tablets, WYSEALS® EQUANIL (meprobamate) 400 mg. (All tablets also available in REDIPAK® [strip pack], Wyeth.) Continuous-Release Capsules, EQUANIL L-A (meprobamate) 400 mg.

The young homemaker: her underlying anxiety and tension can surface and intensify under the continuous stress of rearing a growing family. Especially when she's confined to the home and its environs so much.

You can help her over the rough spots with reassurance and counsel. Equanil can help relieve tension, ease anxiety—with little risk of serious side effects. Time and experience will probably do the rest.

Equanil®
(meprobamate)

Wyeth Laboratories
Philadelphia, Pa.

Photo professionally posed.

The girth control pill

Tepanil® Ten-tab

(continuous release form)

(diethylpropion hydrochloride)

works on the appetite not on the 'nerves'

When girth gets out of control, TEPANIL can provide sound support for the weight control program you recommend. TEPANIL reduces the appetite—patients enjoy food but eat less. Weight loss is significant—gradual—yet there is a relatively low incidence of CNS stimulation.

Contraindications: Concurrently with MAO inhibitors, in patients hypersensitive to this drug; in emotionally unstable patients susceptible to drug abuse.

Warning: Although generally safer than the amphetamines, use with great caution in patients with severe hypertension or severe cardiovascular disease. Do not use during first trimester of pregnancy unless potential benefits outweigh potential risks.

Adverse Reactions: Rarely severe enough to require discontinuation of therapy, unpleasant symptoms with diethylpropion hydrochloride have been reported to occur in relatively low incidence. As is characteristic of sympathomimetic agents, it may occasionally cause CNS effects such as insomnia, nervousness, dizziness, anxiety, and jitteriness. In contrast, CNS depression has been reported. In a few epileptics an increase in convulsive episodes has been reported. Sympathomimetic cardiovascular effects reported include ones such as tachycardia, precordial pain, arrhythmia, palpitation, and increased blood pressure. One published report described T-wave changes in the ECG of a healthy young male after ingestion of diethylpropion hydrochloride; this was an isolated experience, which has not been reported by others. Allergic phenomena reported include such conditions as rash, urticaria, ecchymosis, and erythema. Gastrointestinal effects such as diarrhea, constipation, nausea, vomiting, and abdominal discomfort have been reported. Specific reports on the hematopoietic system include two each of bone marrow depression, agranulocytosis, and leukopenia. A variety of miscellaneous adverse reactions have been reported by physicians. These include complaints such as dry mouth, headache, dyspnea, menstrual upset, hair loss, muscle pain, decreased libido, dysuria, and polyuria.

Convenience of two dosage forms: TEPANIL Ten-tab tablets: One 75 mg. tablet daily, swallowed whole, in midmorning (10 a.m.); TEPANIL: One 25 mg. tablet three times daily, one hour before meals. If desired, an additional tablet may be given in midevening to overcome night hunger. Use in children under 12 years of age is not recommended.

T-006A / 1/70 / U.S. PATENT NO. 3,001,910

THE NATIONAL DRUG COMPANY
DIVISION OF RICHARDSON-MERRELL INC.
PHILADELPHIA, PENNSYLVANIA 19144

Painful night leg cramps...

unwelcome bedfellow for any patient– including those with arthritis, diabetes or PVD

One thing patients can sleep without, particularly patients with chronic disease conditions such as arthritis, diabetes or PVD, is painful night leg cramps. Although seldom the presenting complaint, night leg cramps can tie your patients up in painful knots. Now, just one tablet of QUINAMM at bedtime can usually bring an end to shattered sleep and needless suffering. Your patients will sleep restfully—gratefully—with QUINAMM, specific therapy to prevent painful night leg cramps.

Prescribing Information—Composition: Each white, beveled, compressed tablet contains: Quinine sulfate, 260 mg., Aminophylline, 195 mg. **Indications:** For the prevention and treatment of nocturnal and recumbency leg muscle cramps, including those associated with arthritis, diabetes, varicose veins, thrombophlebitis, arteriosclerosis and static foot deformities. **Contraindications:** QUINAMM is contraindicated in pregnancy because of its quinine content. **Precautions/Adverse Reactions:** Aminophylline may produce intestinal cramps in some instances, and quinine may produce symptoms of cinchonism, such as tinnitus, dizziness, and gastrointestinal disturbance. Discontinue use if ringing in the ears, deafness, skin rash, or visual disturbances occur. **Dosage:** One tablet upon retiring. Where necessary, dosage may be increased to one tablet following the evening meal and one tablet upon retiring. **Supplied:** Bottles of 100 and 500 tablets.

THE NATIONAL DRUG COMPANY
DIVISION OF RICHARDSON-MERRELL INC.
PHILADELPHIA, PENNSYLVANIA 19144

Quinamm™
(quinine sulfate 260 mg., aminophylline 195 mg.)

Specific therapy for night leg cramps

f you can hang on for a few more minutes, Doctor, 'm sure I'll sneeze again."

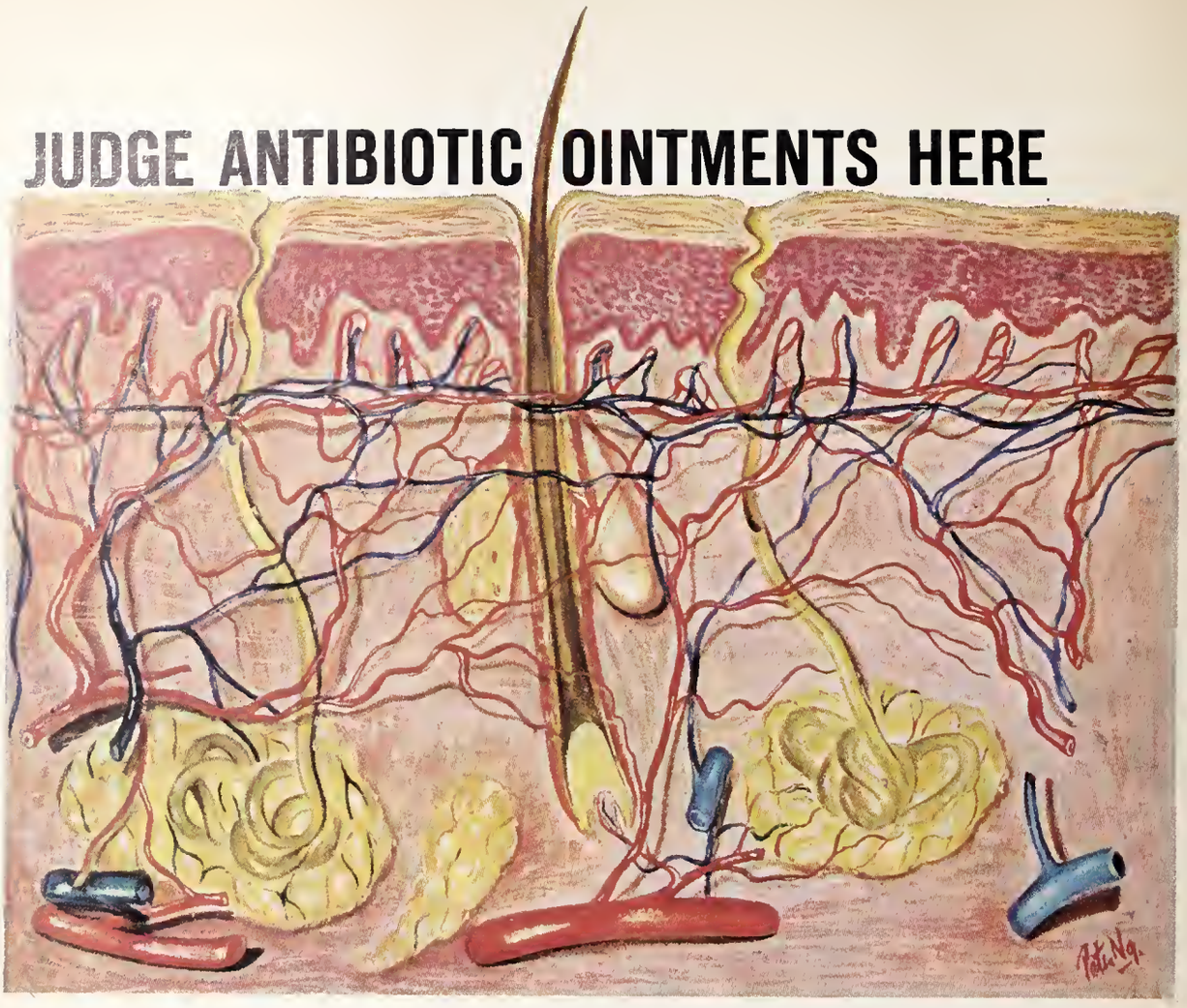
ıd sneeze. And sneeze some more. But with Novahis-ıe® LP, most patients get prompt and long-lasting lief from the symptoms of allergies and colds. These ıntinuous-release tablets have a vasoconstrictor-anti-stamine formulation that begins working in minutes, en continues to provide relief for hours. Even when ısal congestion is due to repeated allergic episodes, o Novahistine LP tablets, morning and evening, let most patients breathe freely all day and all night. Use with caution in individuals with severe hypertension, diabetes mellitus, hyperthyroidism or urinary retention. Caution ambulatory patients that drowsiness may result.

Novahistine® LP decongestant

(Each tablet contains 25 mg. of phenylephrine hydrochloride and 4 mg. of chlorpheniramine maleate.)

DOW **THE DOW CHEMICAL COMPANY** Rx Pharmaceuticals Indianapolis

JUDGE ANTIBIOTIC OINTMENTS HERE



Results on skin are final proof of any topical antibiotic's effectiveness

No in vitro test can duplicate a clinical situation on living skin. 'Neosporin' (polymyxin B—bacitracin—neomycin) Ointment has consistently proven its effectiveness in thousands of cases of bacterial skin infection. The spectra of the three antibiotics overlap in such a way as to provide bactericidal action against most pathogenic bacteria likely to be found topically. Diffusion of the antibiotics from the special petrolatum base is rapid since they are insoluble in the petrolatum, but readily soluble in tissue fluids. The Ointment is bland and nonirritating.

Caution: As with other antibiotic preparations, prolonged use may result in overgrowth of nonsusceptible organisms and/or fungi. Appropriate measures should be taken if this occurs. Articles in the current medical literature indicate an increase in the prevalence of persons allergic to neomycin. The possibility of such a reaction should be borne in mind.

Contraindications: This product is contraindicated in those individuals who have shown hypersensitivity to any of its components.

Supplied: Tubes of 1 oz., ½ oz. with applicator tip, and ⅛ oz. with ophthalmic tip.

Complete literature available on request from Professional Services Dept. PML.

'NEOSPORIN'®
brand

POLYMYXIN B-BACITRACIN-NEOMYCIN OINTMENT

BURROUGHS WELLCOME & CO. (U.S.A.) INC., Tuckahoe, N.Y.

Clinical Extension of a pure Smooth Muscle Relaxant

TROCINATE®

Brand THIPHENAMIL HCl

400 mg./100 mg. S/C tablets

Trocinate relaxes all smooth muscles. Its direct action (musculotropic) does not involve the autonomic nervous system and it is not mydriatic. It is metabolized by the body and eliminated in the urine as harmless degradation products. Trocinate has a remarkable history of freedom from side-effects.

When a pure direct-acting smooth muscle relaxant is indicated, Trocinate is the drug of choice.

DIARRHEA (functional) . . . *the first 400 mg. tablet usually relieves the discomfort of diarrhea so promptly that it ceases to be a bother.*

DIVERTICULITIS—MUCOUS COLITIS . . . *the accompanying discomforts can be relieved by this direct smooth muscle relaxant.*

BLADDER SPASM . . . *relaxation is immediate. One or two tablets condition the bladder for cystoscopy in one hour.*

SPASTIC URETER . . . *the specific relaxing effect of Trocinate on the spastic ureter has been proven by animal studies and affirmed clinically. (J. Urol. 73:487-93)*

PRESCRIBING INFORMATION

WARNING: Do not give in advanced kidney or liver disease. PRECAUTIONS: Trocinate relaxes all smooth muscles. Large dosage or prolonged usage may cause feeling of weakness or can theoretically precipitate gall-bladder colic, due to relaxing the vascular and duct systems. Caution should be observed in patients with urinary bladder obstruction. DOSAGE: 400 mg. May be repeated in 4 hours. After relief, lengthen the dose frequency. (see side note)

NOTE: *The high therapeutic index of Trocinate permits its administration in dosage sufficient to relieve smooth muscle spasm promptly. 400 mg. dosage usually creates a therapeutic blood level. In reducing dosage after relief, lengthening the time between dosage rather than lessening the recommended dose is preferable. The prompt direct action allows a consciousness of the first suggestion of return of symptom . . . a guide to dose spacing and to determining when treatment is complete. A prescription for twelve or sixteen 400 mg. tablets will usually correct spasm and leave a few tablets for a reserve.*

WILLIAM P. POYTHRESS & CO., INC.
RICHMOND, VIRGINIA 23217
Manufacturers of Ethical Pharmaceuticals

CAUTION:

OVEREATING MAY BE HAZARDOUS TO YOUR HEALTH.

According to the Framingham Heart Study, the obese face:

86% greater risk of angina pectoris,
82% greater risk of diabetes,
71% greater risk of coronary heart disease.*

Obesity may also aggravate osteoarthritis, flat feet, intertriginous dermatitis, varicose veins, and ventral or diaphragmatic hernias.[1-3]

If you are considering weight reduction, consider

Preludin®
phenmetrazine hydrochloride
Endurets®
prolonged-action tablets

Often effective

Controlled studies in a general patient population have shown that when Preludin is used with diet, the rate of weight loss exceeds that obtained by placebo and diet.

Long acting

Slow, even release of the active principle usually suppresses appetite continuously for about 12 hours.

Once-a-day dosage

One Endurets tablet after breakfast. It helps reduce weight and costs, conveniently.

For contraindications, warning, precautions, and adverse reactions, please see the full prescribing information.
It is summarized on this page.

Where there's no will there's a therapeutic way.

*Among persons 20% or more overweight as compared with median weight for persons of like height and sex.

1. Kannel, W.B., *et al.*: *Circulation* 35:734, 1967.
2. Thomas, H.E., Jr., *et al.*: *Med. Times* 95:1099, 1967.
3. Albrink, M.J., in: Beeson, P.B. & McDermott, W. (eds.): *Cecil-Loeb Textbook of Medicine*, ed. 12, Phila.: W.B. Saunders Co., 1967.

Preludin®
phenmetrazine hydrochloride

Preludin is indicated only as an anorexigenic agent in the treatment of obesity. It may be used in simple obesity and in obesity complicated by diabetes, moderate hypertension (see Precautions), or pregnancy (see Warning).

Contraindications: Severe coronary artery disease, hyperthyroidism, severe hypertension, nervous instability, and agitated prepsychotic states. Do not use with other CNS stimulants, including MAO inhibitors.

Warning: Do not use during the first trimester of pregnancy unless potential benefits outweigh possible risks. There have been clinical reports of congenital malformation, but causal relationship has not been proved. Animal teratogenic studies have been inconclusive.

Precautions: Use with caution in moderate hypertension and cardiac decompensation. Cases involving abuse of or dependence on phenmetrazine hydrochloride have been reported. In general, these cases were characterized by excessive consumption of the drug for its central stimulant effect, and have resulted in a psychotic illness manifested by restlessness, mood or behavior changes, hallucinations or delusions. Do not exceed recommended dosage.

Adverse Reactions: Dryness or unpleasant taste in the mouth, urticaria, overstimulation, insomnia, urinary frequency or nocturia, dizziness, nausea, or headache.

Dosage: One 25 mg. tablet b.i.d. or t.i.d. Or one 75 mg. Endurets tablet a day, taken by mid-morning.

Availability: Pink, square, scored tablets of 25 mg. for b.i.d. or t.i.d. administration, in bottles of 100 and 1000.

Pink, round Endurets® prolonged-action tablets of 75 mg. for once-a-day administration, in bottles of 100 and 1000.

(B)R3-46-560-B

For complete details, please see full prescribing information.

Under license from
Boehringer Ingelheim G.m.b.H.

Geigy Pharmaceuticals
Division of
Geigy Chemical Corporation
Ardsley, New York 10502

PR-7169

Now available for your prescribing needs

Cordran® Tape

Flurandrenolide Tape (4 mcg. per sq. cm.)

Additional information available upon request • Eli Lilly and Company, Indianapolis, Indiana 46206

000121

Lilly

TEXAS MEDICINE

VOLUME 66 NUMBER 7 JULY 1970

Devoted to the interests of the medical profession and public health in Texas

BOARD OF PUBLICATION
Charles P. Hardwicke, MD, Austin Chairman
James A. Hallmark, MD, Fort Worth
John M. Smith, Jr, MD, San Antonio Vice Chairman
R. Harvey Bell, MD, Palestine
N. L. Barker, MD, Paris
C. W. Yates, MD, Rosenberg
Don G. Harrel, MD, Dallas

TMA OFFICERS
Walter Walthall, MD, San Antonio President
C. Lincoln Williston, Austin Executive Secretary

EDITORIAL AND BUSINESS OFFICES
1801 North Lamar Blvd, Austin
Telephone: 477-6704
Marilyn Baker, Managing Editor
Rae Vajgert, Assistant Managing Editor
Sharon Walker, Editorial Assistant
Judy Harris, Editorial Secretary
E. Maxwell Jones, Business Manager
Jon R. Hornaday, Advertising Director
Anne Shelnutt, Advertising Assistant

PRINTING OFFICES
c/o Stafford-Lowdon Company
1114 West Daggett, Fort Worth 76104

Subscriptions: $3 per year for members; $6 for nonmembers; $8 for foreign; $3 for medical students. Single copy: $1.

Copyright 1970 by The Texas Medical Association. Owned and issued monthly by the Association.

Editorial

LET'S COMMUNICATE WITH NEWS MEDIA

The *Fort Worth Star-Telegram* recently published a front-page story concerning Medicare and Medicaid which most of the physicians in this area felt was an unfair presentation.

All reputable newspapers feel a responsibility to the public to provide fair coverage of both sides of any story. Thus, several of us felt that perhaps this story had come about because the editor and his reporters did not realize there was another side to it.

Subsequently, our rebuttal to the initial article was given the same front-page and headline treatment that the first article had received. This, to me, is even more than one could expect from any major newspaper; physicians are not nearly as newsworthy as some of us would like to believe. The *Fort Worth Star-Telegram's* conscientious regard for fair reporting really is quite impressive.

In recent years the Tarrant County Medical Society has enjoyed a friendly relationship with both the *Fort Worth Star-Telegram* and the *Fort Worth Press*, their editors, and reporters. This has resulted largely from efforts of Dr. James Short, who took the time to become acquainted with reporters and editors.

We believe that most of the doctors' difficulties lie in the fact that they talk to each other about their problems, but do not see fit to talk about them with people who could be quite helpful if given a chance. Dr. Short has worked on public relations for several years and, as a result, the Tarrant County Medical Society enjoys an excellent working relationship with the press. This year we have held monthly meetings with the news media in which several reporters and the editors of both major papers are included. The newspapers pick up the tab one month and the medical society picks it up the next month. We hope that this will improve communications with the news media.

I believe that all of the large medical societies in this state would do well to consider improving their communications with the news media, and then do something about it. Talk without action is not only useless, it is irresponsible and perhaps even may cause harm.

Finally, I believe that physicians must come out of their shells and be a part of the community in which they live in every way. I do not believe there is any justification for doctors' saying they do their charity work and that this constitutes their whole response to their community duties.

I encourage you to become acquainted with your newscasters, reporters, editors, and radio news people. I think it is time for physicians to speak up, stand up, and be counted.

James O. McBride, MD, Fort Worth.

PRE-ADMIT HOSPITAL PATIENTS

Years ago you could send a patient to the hospital with a slip, "Please admit John Doe, and oblige . . ."

The patient then went to the city or county hospital, and often you lost sight of him.

For those of us who practice in rural areas, things always have been different. We follow our patients closely and we remain in charge of those hospital patients we want to treat ourselves. But things have changed in the cities, also.

Today hospital beds are scarce. Hospital costs have risen. Out-and-out charity patients have become rare. Many patients have insurance or are "under a program" such as Medicare, Medicaid, or Military Medicare, or the like.

Today if you send a nonemergency patient to the hospital with an "admit and oblige" slip, you ask for trouble; the hospital may have no bed, the patient may not be able to make a deposit, the operating room schedule may be closed for days ahead, etc, etc.

That's why hospitals have been asking doctors to *pre-admit* patients, ie, *to send them to the hospital admission office a few days before the planned admission.* Then the hospital people can do the admission paper work in peace, look into the insurance or "program" aspects of the case, have the routine laboratory work done, discuss room needs, reserve a bed, and make any other necessary arrangements.

Typically, you pre-admit a patient first by a telephone call to the admission office. Then the patient goes there (usually at a time when admission clerks are not swamped with people who *must* be admitted immediately), gives the required information, shows his insurance policy or his identification cards, learns about deposits, makes financial arrangements, discusses his room preference, gets a bed assigned, and is taken to the laboratory and x-ray department for routine admission work. Then he goes home, to return a few days later with a paper stating he is ready for admission.

Patients love it; once they are pre-admitted they know where they stand; they know about financial matters; they know which arrangements are complete and which are not; they know they won't have to sit in the lobby the night before the operation, waiting for a harried admission clerk to get all the data; and they know they will get a bed. They also know that their doctor has the results of basic laboratory and x-ray work. Little children (and those adults who react like children) do better if they are not stuck for blood tests the evening before the operation; often they are worried enough as is.

The hospital people love it; they like to have a chance to talk things over with future patients during an unhurried period rather than when the lobby is full of tense and worried people, all eager to be admitted and anxious to ask a thousand questions.

We doctors should love it; first, because anything that pleases our patients and the hospital makes our work easier: Pleased people are easier to work with than worried, harried, discontented, unhappy, or rushed people. To know of a patient's low hemoglobin level five days before the planned hysterectomy surely is better than to learn about it half an hour before the operation, as can happen if emergencies keep the laboratory personnel busy from

the time the patient checks in until nearly the time for surgery.

An added benefit: The wise and disciplined doctor uses the pre-admission office visit to survey his chart, to fill in gaps in history and findings, and *to dictate history and findings for the hospital chart.* Then they are on the chart when the patient comes in. The nurses then can learn all about that patient at once, and this clearly makes for better nursing care. The surgeon won't have to wrestle with the operating room supervisor and the chief of the surgical service ("History and physical examination must be on the chart before the patient goes to the operating room.") Surgeon and anesthesiologist can check the chart for details which suddenly may have become important, for example, history of allergies, previous operations, long-term medication, date of last menstrual period, etc.

Pre-admitting patients is simple and easy to get used to; *it has advantages for all and no disadvantages that I can think of. We should use it whenever we can.*

Heinrich Lamm, MD, Harlingen.

NURSING: THE COST OF CARING

Mounting concern about the cost of the nation's health services has made each health profession acutely aware of both its obligation to the consumer—the patient—and its role in the total health care cost picture.

Professional nursing believes its obligation to the consumer is to give maximum nursing care for each dollar spent, but how will we provide maximum care in the light of an ever-present shortage of practitioners?

We must identify the role model of professional in the health care picture and provide an operational framework for its implementation. The nursing role must be dynamic, operating on a continuum of education, research, and practice with all three facets of equal importance and providing an uninterrupted sequence of activity and analysis one to the other. The identified obligation and end-product of nursing care provides a uniting force for the integrated, yet discrete parts.

Education represents the innovator on the continuum. There exists both a professional and a technical aspect of nursing practice, each with its own unique but interdependent contribution. Nursing education must continue the development of nursing programs and educational agencies for each aspect of practice, and to place both programs in perspective.

Education and practice must recognize their interdependence on, and responsibility to, each other and use the resources offered by each to the benefit of the patient and the student of nursing. They must work together to see that funds are made available for educational and health care facilities, and for student loan services.

Research has become a unique but integral part of professional nursing. We must accelerate and support research efforts to develop tools and systems for the delivery of nursing care. The goals of these efforts must be as follows: (1) to determine the hours and standards of nursing care per patient needed for optimum care; (2) to develop guidelines for assigning a cost value to nursing care; (3) to determine the ratio of professional to nonprofessional personnel needed on the immediate health care team to provide the desired level of care; (4) to determine a safe distribution of nursing activities among workers of various skills; (5) to determine a more pertinent conceptual framework for the organization of professional nurses into more effective strata in agency hierarchies with the result being that of the desired level of care; and (6) to determine nursing curricula essential to producing the desired behavioral objectives in both the professional and technical aspects of nursing practice.

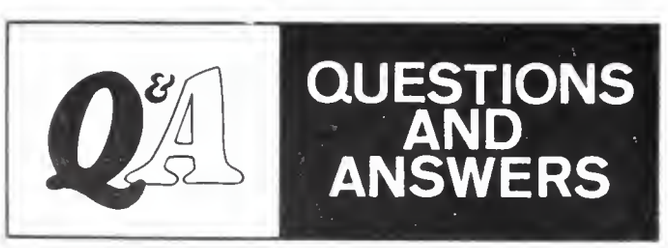
Nursing practice is the implementation point on the continuum. Through practice we

must utilize the potential of all nursing to the fullest. We must concentrate on both the administrative and clinical aspects of nursing practice. Through administration we must provide an environment conducive to self-development and clinical effectiveness at the unit level.

Utilizing our professional education and research efforts, we must become actively involved in cost control and budget planning. We must recognize our responsibilities as contributing members of our health teams and our communities. We must assist the physician more effectively in his efforts to provide adequate, but economical, care to patients.

We must support administrative management of health care facilities through active participation in new systems of operation, geared toward improved patient care, and contribute to their success. Likewise, we must uphold our responsibility to administrative management by keeping them informed when innovations become detrimental to patient care.

Dorothy Pettigrew, RN, Dallas,
Texas Nurses Association Representative,
TMA Committee on Health Care Costs.



Reporting Minor Laceration Repair On Insurance Forms

Q For a minor laceration repair, shouldn't other factors such as time of surgery, quality of surgical repair, and location of wound be considered more important than the number of sutures which is already described on the insurance form?

A At the time health insurance in the United States showed its big growth spurt, during and after World War II, indicating the number of sutures seemed to be an easy way to reimburse for suturing a laceration. Some of the contracts made during that time are, of course, still in force. In fact, many of these surgical schedules clearly state the maximum reimbursible amount allowed per stitch.

Today's insurance plans do permit more realistic attention to the type of wound, where it is located, the complexity of the surgery, the qualifications of the surgeon, and the results. However, the insurer must know the size of the wound and whether it was sutured in layers or merely with two or three skin stitches.

The patient's insurance coverage also determines what claims information will be requested. If he has a health insurance program which reimburses on the basis of usual, customary, and reasonable fees, the claims reviewer may have little interest in how many stitches were applied. On the other hand, if the patient has a hospital/surgical insurance policy with a stated reimbursement for suturing, the claims reviewer must know how many stitches were placed. Some surgeons routinely note at the end of their report the approximate or actual number of sutures involved. This saves correspondence in many instances.

Q Do insurers ever notify the examining physician whether or not an insurance applicant was rated?

A This is not done usually. However, occasionally an insurance applicant is offered and accepts a contract at an extra premium. A few years later, after treatment has corrected or improved his health status, he may ask the insurers for a premium reduction. The insurer then may request a second examination of the applicant. At this point, the examining physician would receive a letter from the insurance company's medical director explaining the circumstances and requesting that he give specific attention to the current status and effects of therapy.

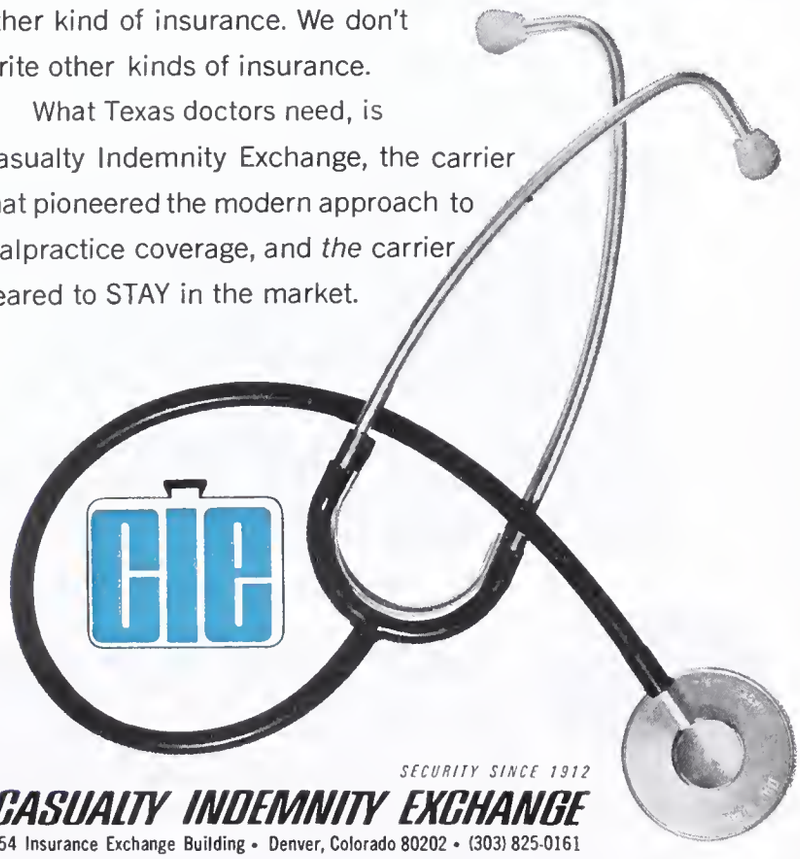
M. E. Rougraff, MD,
Vice President and Medical Director,
Great Southern Life Insurance Company, Houston.

What Texas doctors need, is a Malpractice Liability Carrier that won't fade when trouble comes.

This means the up-to-date carrier. The one that's replete with innovations and new developments in this clouded, sensitive area of liability protection. And the one that doesn't talk malpractice coverage just to get a foot in the door for every other kind of insurance. We don't write other kinds of insurance.

What Texas doctors need, is Casualty Indemnity Exchange, the carrier that pioneered the modern approach to malpractice coverage, and *the* carrier geared to STAY in the market.

Contact your local agent or
RUSSELL GRACE INSURANCE
2304 W. 7th St.
Ft. Worth, Texas 76107
(817) 332-9269
In Dallas, Call
(214) 264-4300



SECURITY SINCE 1912
CASUALTY INDEMNITY EXCHANGE
754 Insurance Exchange Building • Denver, Colorado 80202 • (303) 825-0161

—The lowest priced tetracycline—nystatin combination available—

Serving Texas Physicians for Over Forty Years

Precision-engineered, functionally-built equipment

SMR keeps you and your patients' comfort and satisfaction in mind . . . a room that reflects professional good taste.

SMR has manufactured medical and Dental equipment for over forty years on a direct to user basis.

STAINLESS STEEL POLISH

SMR Stainless Steel Polish cleans, and preserves with superior results —ends fingerprints, watermarks and surface stains. 22 oz. economy $2.75 F.O.B. Plant

Factory Direct Sales

NEW CATALOG NOW AVAILABLE

SMR®

SURGICAL MECHANICAL RESEARCH, INC.

Post Office Box 1185 • (714) 646-4405

960 W. 16th St., Newport Beach, Calif. 92663

Established Over 40 Years

Please visit our booths, numbers 1, 2, 3, AAOO, Oct. 5-9, 1970, Las Vegas, Nevada.

anxiety: the tyrant

Excessive anxiety can often dominate the patient made vulnerable by illness, surgery, prolonged emotional stress. It can induce or aggravate symptoms, disrupt medical management, divert energy the patient needs for recovery.
The antianxiety action of Librium® (chlordiazepoxide HCl)—used adjunctively or alone—has demonstrated clinical usefulness in virtually every field of medical practice where anxiety complicates the patient's condition.

for the patient ruled by anxiety

Librium®
(chlordiazepoxide HCl) 5-mg, 10-mg, 25-mg capsules

Before prescribing, pleose consult complete product informotion, a summory of which follows:

Indications: Indicated when onxiety, tension and apprehension are significont components of the clinical profile.

Contraindications: Patients with known hypersensitivity to the drug.

Warnings: Coution potients about possible combined effects with olcohol ond other CNS depressants. As with all CNS-acting drugs, caution patients against hazordous occupations requiring complete mentol alertness (e.g., operating machinery, driving). Though physical ond psychological dependence have rarely been reported on recommended doses, use coution in administering to oddiction-prone individuols or those who might increase dosage; withdrawal symptoms (including convulsions), following discontinuotion of the drug and similor to those seen with barbiturates, have been reported. Use of any drug in pregnancy, lactation, or in women of childbeoring age requires thot its potential benefits be weighed against its possible hazards.

Precautions: In the elderly and debilitated, and in children over six, limit to smollest effective dosage (initiolly 10 mg or less per day) to preclude ataxia or oversedation, increasing gradually as needed and tolerated. Not recommended in children under six. Though generally not recommended, if combinotion theropy with other psychotropics seems indicated, corefully consider individuol phormocologic effects, porticulorly in use of potentiating drugs such as MAO inhibitors and phenothiazines. Observe usual precautions in presence of impaired renol or hepatic function. Paradoxicol reactions (e.g., excitement, stimulation and acute rage) have been reported in psychiotric patients and hyperactive aggressive children. Employ usuol precoutions in treatment of anxiety states with evidence of impending depression; suicidal tendencies may be present ond protective meosures necessary. Vorioble effects on blood coogulation have been reported very rarely in potients receiving the drug and orol anticoagulants; causal relotionship hos not been estoblished clinically.

Adverse Reactions: Drowsiness, atoxia ond confusion may occur, especially in the elderly and debilitated. These are reversible in most instances by proper dosage odjustment, but ore also occasionolly observed ot the lower dosage ronges. In o few instances syncope hos been reported. Also encountered are isoloted instonces of skin eruptions, edemo, minor menstrual irregulorities, nousea ond constipation, extrapyramidol symptoms, increased ond decreased libido—all infrequent and generolly controlled with dosage reduction; changes in EEG potterns (low-voltage fost activity) moy oppeor during ond ofter treotment; blood dyscrasias (including agronulocytosis), joundice ond hepotic dysfunction have been reported occasionolly, moking periodic blood counts ond liver function tests odvisoble during protrocted theropy.

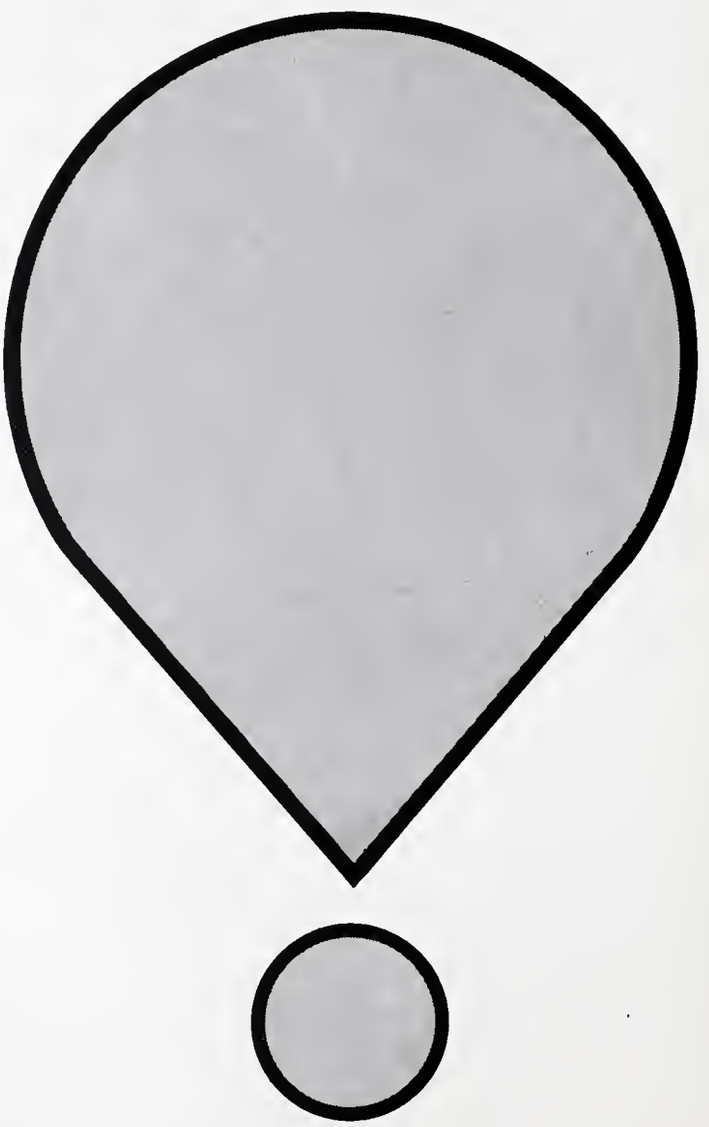
Roche
LABORATORIES
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

A LOOK AT TEXAS MEDICINE TODAY

ONE OF A SERIES

Editorials

The doctor's lounge may still be the safest place in the world to editorialize, but if you want to make headway with your idea or if you want to hear the viewpoints of a physician you never see in the lounge, TEXAS MEDICINE is your source. Our guest-written editorials are pertinent commentaries on our times. They reflect both the official policy of the Texas Medical Association and the individual viewpoints of Texas physicians. Unbiased judges have referred to our editorials as "hard-hitting," and indeed they do exhibit the vigorous efforts of physicians in a variety of areas. Also in this section of the journal, readers may query the experts about socioeconomic, medical, and political questions. They may also write letters challenging the viewpoints of the journal's authors. So right away—write or read a TEXAS MEDICINE editorial.



Physicians Not Solely Responsible For Health-Care System Deficiencies

The physicians of America, loosely and irresponsibly referred to by our critics as "the AMA" nationally and "the TMA" in Texas, have been blamed for all of the deficiencies in the medical or health-care system, occasionally and again irresponsibly referred to as "no system."

Recently, however, a few faint voices have been heard in defense of physicians and the system that has lengthened life in these United States by about 30 years per person. Among these voices is that of Dr. Stanley Olson, former dean of the Baylor medical school and now president of the Southwest Foundation for Research and Education in San Antonio, and a new member of the Bexar County Medical Society. He presents some interesting points:

The amount of money spent in 1969 on health was approximately $63 billion, of which 4% was for nursing homes, 6% for dental care, 10% for medicine and drugs, 20% for physicians' services, 40% for hospital care, and 20% for administration, public health, education, research, etc. It amounted to $315 per person, of which $175 can be attributed to personal health expenses.

Of course, health insurance is widely used, but is not as efficient as it could be. While 85% of the population had such insurance—either public or private—it paid for less than 60% of the cost of health care. Moreover, there are more than 1,100 companies selling health insurance, with an amazing variety of costs and benefit payments.

Programs like Medicare and Medicaid rely on the myth that only a lack of money prevents the aged and the indigent from receiving adequate health care. The real problems are: (1) shortage of health manpower; (2) shortage of services in areas of great need; and (3) that health insurance puts a premium on high-cost health care by paying, in many cases, for care in hospitals only.

We, the physicians, must continue to improve our system of delivering medical care to the rapidly expanding population. I will, in the future, point to some possible ways of improving the delivery of private, personal medical care.

Walter Walthall, M.D.

Walter Walthall, MD, President, Texas Medical Association.

THE HIGHEST OF STANDARDS!

FRANCIS HOSPITELS INCORPORATED

FRANCIS CONVALESCENT CENTERS
DIVISION OF FRANCIS HOSPITELS, INC.

FRANCIS HOSPITELS, INC., 7129 Highway 290 East, Austin, 512 454-2725

FRANCIS HOSPITELS—WACO: Francis Hospitel, 2501 Maple Avenue, Ph. 752-0311 **FRANCIS CONVALESCENT CENTERS**—AUSTIN: Retirement Inc., 6909 Burnet Road, Ph. 452-5719; FORT WORTH: Francis Convalescent Center, 1000 6th Avenue, Ph. 335-1903; CORPUS CHRISTI: Francis Convalescent Center, 3050 Sunnybrook, Ph. 853-9981; LONGVIEW: Highland Pines, 1100 N. 4th Street, Ph. 753-7661; SAN ANTONIO: San Pedro Manor, 616 West Russell, Ph. 732-5181 **FRANCIS MANAGEMENT**—PORT ARTHUR: The Golden Triangle Convalescent Center, 3900 Highway 365, Ph. 727-1651.

A specific solution for tinea versicolor

Although tinea versicolor is not a serious disease it is chronic and recurrent and specific treatment is cosmetically important. "Of the wide variety of compounds recommended for the treatment of tinea versicolor, sodium thiosulphate still remains the standard."* However, when sodium thiosulfate is administered alone it decomposes rapidly and produces an offensive odor. These disadvantages have been largely eliminated by the development of TINVER Lotion, which contains sodium thiosulfate and salicylic acid in MICEL A® base.†

TINVER—the likable lotion for tinea versicolor—is clinically effective, cosmetically acceptable, and easy to apply. It produces rapid, visible improvement without the objectionable features of oily pastes and odorous solutions. Patient acceptability encourages continued therapy without interruption. TINVER is practical and economical for long-term therapy.

Indications: For topical use in the treatment of tinea versicolor.

Precautions: If signs of irritation or sensitivity develop, discontinue use. Do not use on or about the eyes.

Dosage and Administration: Thoroughly wash, rinse, and dry the affected area before applying medication. Apply a thin film of the lotion twice a day, or as directed. Although diagnostic evidence of the tinea versicolor may disappear in a few days, it is advisable to continue treatment for a much longer period. Clothing should be boiled to prevent reinfection.

Supply: 5 oz. polyethylene squeeze bottle.

*McClarin, W. M., and Knox, J. M.: Cutis 3:619 (June) 1967.

†The MICEL A® base is a thixotropic gel of colloidal alumina with unique compounding properties. The base dries to an invisible film that holds ingredients on the skin without powdering or flaking.

Tinver® Lotion

Sodium thiosulfate USP 25%, salicylic acid USP 1%, isopropyl alcohol NF 10%, and propylene glycol USP, in a MICEL A base of menthol USP, disodium edetate, colloidal alumina, and purified water USP.

BARNES-HIND LABORATORIES

Subsidiary of Barnes-Hind Pharmaceuticals, Inc.
Sunnyvale, Calif. 94086

Summer time...monilia time!

No wonder you see so many more cases of vaginal moniliasis during this season. A damp, warm bathing suit provides a perfect breeding ground for fungal invaders. But your patients need not suffer the pain, the embarrassment and the discomfort of these stubborn infections. Nor the disappointment which comes when they find "the cure didn't take."

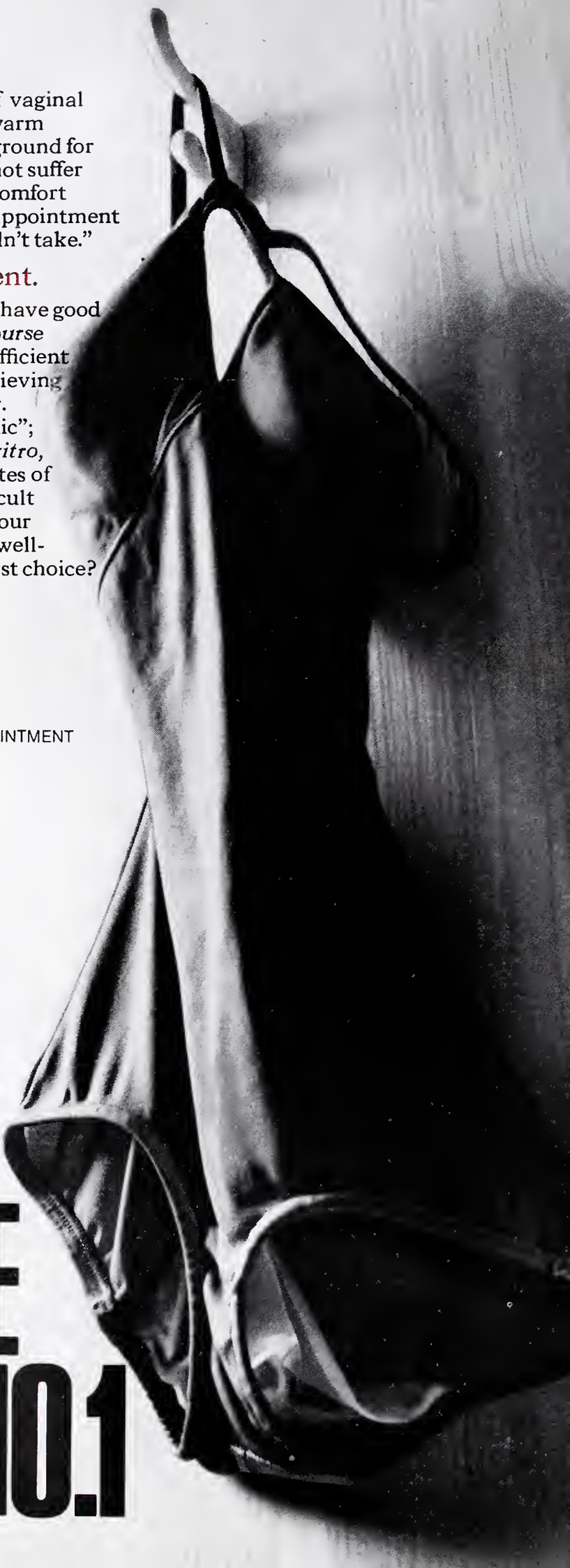
Candeptin avoids disappointment.

With CANDEPTIN, you and your patients have good reason for confidence. *A single, 14-day course of therapy* with CANDEPTIN is usually sufficient to eradicate the invader, while rapidly relieving itching, burning, discharge and malodor. And CANDEPTIN is "cidal" as well as "static"; 100 times more potent than nystatin *in vitro,* it has achieved culture-confirmed cure rates of 90% and more (even in notoriously difficult pregnant patients). Why not maximize your chances of success by adopting effective, well-tolerated CANDEPTIN as your agent of first choice?

Agent of first choice

Candeptin®

candicidin VAGINAL TABLETS/OINTMENT



the fortnight fungicide for

PRIVATE ENEMY NO.1

Candeptin® CANDICIDIN

Formula:
CANDEPTIN Vaginal Ointment contains a dispersion of candicidin powder equivalent to 0.6 mg. per gm. or 0.06% candicidin activity in U.S.P. petrolatum. 3 mg. of candicidin is contained in 5 gm. of ointment or one applicatorful. CANDEPTIN Vaginal Tablets contain candicidin powder equivalent to 3 mg. (0.3%) candicidin activity dispersed in starch, lactose and magnesium stearate.

Indications:
Vaginal moniliasis due to Candida albicans and other Candida species.

Contraindications:
Patient sensitivity to any of the components. During pregnancy manual tablet insertion may be preferred since the use of the ointment applicator or tablet inserter may be contraindicated.

Caution:
Clinical reports of sensitization or temporary irritation with CANDEPTIN Vaginal Ointment or Vaginal Tablets have been extremely rare. To avoid re-infection, it is recommended that the patient refrain from sexual intercourse during treatment or the husband wear a condom.

Dosage:
One vaginal applicatorful of CANDEPTIN Ointment or one Vaginal Tablet is inserted high in the vagina, twice a day, in the morning and at bedtime, for 14 days. Treatment may be repeated if symptoms persist or reappear.

Dosage forms:
CANDEPTIN Vaginal Ointment is supplied in 75 gm. tubes with applicator (14-day regimen requires 2 tubes). CANDEPTIN Vaginal Tablets are packaged in boxes of 28, in foil, with inserter—enough for a full course of treatment. Store under refrigeration.

Federal law prohibits dispensing without prescription. CANDEPTIN is a registered trade-mark of Julius Schmid, Inc.

JULIUS SCHMID
PHARMACEUTICALS
New York, N.Y. 10019

VECTORCARDIOGRAPHY — A WORKSHOP

October 19-22, 1970

Mountain Shadows Resort

Scottsdale, Arizona

This is an intensive four-day program covering the field of vectorcardiography and related areas. Major emphasis is placed on theoretical and practical applications of the technique as related to the patient's diagnostic problems. Half of the program is dedicated to individual analysis of the routine vectorcardiograms by the participants under the orientation of the guest and local faculty. This program is intended for those physicians who already have a basic understanding of electracardiagraphy and wish a clase exposure to the values and limitatians of vectorcardiography. Registration is limited to a maximum af 60.

PROGRAM DIRECTOR: A. Benchimol, M.D., F.A.C.C., Director, Institute for Cardiovascular Diseases, Good Samaritan Hospital, Phoenix, Arizona

GUEST FACULTY: Marvin Dunn, M.D., F.A.C.C., Paul Hugenhaltz, M.D., F.A.C.C. and Ronald Selvester, M.D., F.A.C.C.

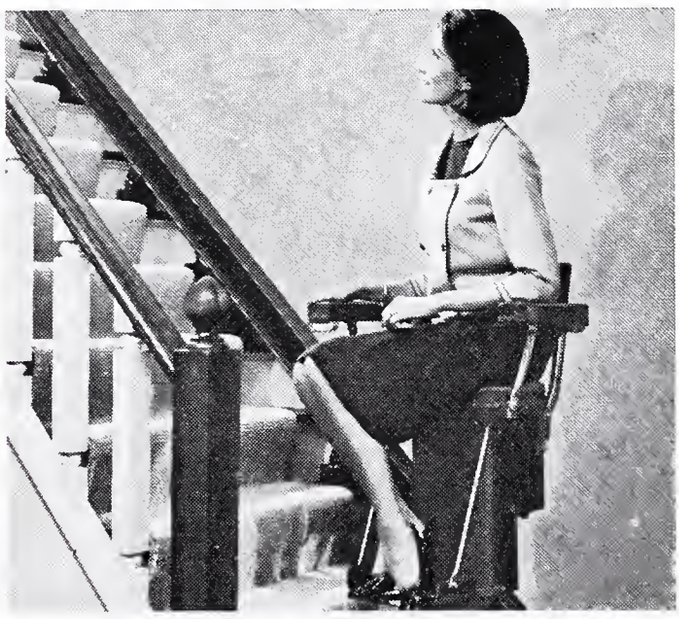
ADVANCE REGISTRATION IS REQUIRED.

FOR INFORMATION WRITE:

American College of Cardiology
9650 Rockville Pike
Bethesda, Maryland 20014

WELCOLATOR

STAIRWAY ELEVATOR



Sit down and ride up! (or down) at the touch of a button. Ideal way to climb stairs. Like living in a one-story home. Comfortable, attractive styling. The Wecolator is superbly engineered, cog drive—no cables, completely safe and virtually maintenance free. Installed on any straight or curved stairway . . . in just a few hours.

Write or Call:

CUSTOM HOME ELEVATOR CO.

P. O. Box 13627 Dept. M
Ft. Worth, Texas 76118 ● A/C 817/281-8188

DISTAL EARLY WARNING:

MILD CALF PAIN

It may not seem much, just a few twinges in the calf during or at the end of a walk.

Not much yet, but it may be the beginning of mild intermittent claudication—an early sign of peripheral vascular disease.

So, too, other distal early warning signs such as slow or unusual toenail growth, skin color changes, shiny skin and a loss of hair on the toes may suggest an impaired peripheral circulation.

Early diagnosis can mean more viable smooth musculature more capable of responding to vasospasmolytic therapy with Cyclospasmol.

□ Cyclospasmol lowers peripheral resistance in limb vessels...improves distal run-off, facilitates development of collateral circulation.

□ is a musculotropic without significant adrenergic or cardiostimulant effects.

□ is unrelated to epinephrine, papaverine or nicotinic acid.

A program of progressive walking exercise, cessation of smoking, foot care, proper diet and Cyclospasmol can be of long-term value to many patients with early occlusive disease.

Before arteriosclerosis obliterans becomes painfully evident

Cyclospasmol® (cyclandelate)

For long-term enhancement of peripheral circulation

Photograph professionally posed | See facing page for Brief Summary

Cyclospasmol (cyclandelate)

ACTIONS: Cyclospasmol (cyclandelate) is an orally effective peripheral spasmolytic and vasodilator that acts directly on the vascular smooth musculature to produce a gradual and progressive relaxation that enhances the peripheral and cerebral blood flow. **INDICATIONS:** For adjunctive therapy in occlusive and vasospastic diseases of the vascular system associated with an impaired circulation, such as: intermittent claudication; arteriosclerosis obliterans; thrombophlebitis (to control associated vasospasm and muscular ischemia); nocturnal leg cramps; local frostbite; Raynaud's phenomenon; as an aid to encourage healing of diabetic and trophic ulcers of the legs; and for selected cases of ischemic cerebral vascular disease. A faster response may be expected in conditions in which vasospasm is predominant in the pathological process. The drug is not intended to substitute for an adequate medical or surgical program in the treatment of peripheral or cerebral vascular disease. It is imperative that the patient continue to follow established therapy, e.g., foot care, discontinuance of smoking, etc., while taking Cyclospasmol. Since cerebrovascular disease is diagnosed most frequently only after destruction of nerve tissue, it cannot be expected that signs and symptoms arising from an interruption of neuronal function can be completely reversed by correcting the exciting cause. Nevertheless, restoration of blood flow towards more normal levels with cyclandelate may often produce marked relief from such signs and symptoms as head noises, ringing in the ears, a feeling of weakness, unsteady gait, mental confusion, temporary fluctuations in hearing acuity, poor memory and slurred speech. More important, the drug may provide prophylaxis against further circulatory embarrassment, particularly if the diminished circulation is associated with spasm of the vascular wall. **CONTRAINDICATIONS:** Cyclospasmol is contraindicated in cases of known hypersensitivity to the drug. **WARNINGS: 1.** Cyclandelate should be used with extreme caution in patients with severe obliterative coronary artery or cerebral vascular disease, since there is a possibility that these diseased areas may be compromised by vasodilatory effects of the drug elsewhere. **2. USE IN PREGNANCY:** The safety of cyclandelate for use during pregnancy or lactation has not been established; therefore, it should not be used in pregnant women or in women of childbearing age unless, in the judgment of the physician, its use is deemed absolutely essential to the welfare of the patient. **3.** Although no prolongation of bleeding time has been demonstrated in humans in therapeutic dosages, it has been demonstrated in animals at very large doses. Therefore, the hazard of a prolonged bleeding time should be carefully considered when administering cyclandelate to a patient with active bleeding or a bleeding tendency. **PRECAUTIONS:** Since Cyclospasmol is a vasodilator, it should be used with caution in patients having glaucoma. Consult direction circular before prescribing. **ADVERSE REACTIONS:** Gastrointestinal distress (pyrosis, pain and eructation) may occur with Cyclospasmol. These symptoms occur infrequently and are usually mild. Relief can often be obtained by taking the medication with meals or by the concomitant use of antacids. Mild flush, headache, feeling of weakness or tachycardia may occur, especially during the first weeks of administration. **SUPPLIED:** 200 mg. blue capsules in bottles of 100 and 500; 100 mg. orange tablets in bottles of 100 and 500.

May we send you reprints, detailed literature or professional samples?

IVES LABORATORIES INC.
685 Third Avenue, New York, N.Y. 10017

Ives®

Ulcer Re-lief!

Dicarbosil®
ANTACID

Your ulcer patients and others will respond favorably to it. Specify DICARBOSIL 144's—144 tablets in 12 rolls.

ARCH LABORATORIES
319 South Fourth Street, St. Louis, Missouri 63102

T. ROWE PRICE GROWTH STOCK FUND, INC.

Est. 1950

A NO-LOAD FUND

Investing in stocks carefully selected for long term growth possibilities

Individuals & institutions are invited to request free prospectus

NO SALES CHARGE

T. Rowe Price Growth Stock Fund, Inc.
One Charles Center, Dept. F-1
Baltimore, Md. 21201 Phone (301) 539-1992

Name _____

Address _____

_____ Zip _____

Pulmonary Tuberculosis complicated by

GEORGE M. POWELL, MD
MAJ TONY M. TOLEDO, MC, USA

Pulmonary histoplasmosis associated with pulmonary tuberculosis is not common. The frequency of "mycology proved" cavitary cases of histoplasmosis among 600 patients in the Missouri State Sanatorium was reported as 2.4% by Furcolow and Brasher.[1] In a two-year period, active histoplasmosis comprised 2.5% of admissions to the tuberculosis service of a naval hospital.[2] The Veteran's Administration Armed Forces Cooperative Study found histoplasmosis-complicated tuberculosis in 10% of patients with all clinical types and tuberculosis in 18% of chronic pulmonary histoplasmosis patients.[3]

IN A RECENT STUDY of the incidence of fungal diseases in Texas state tuberculosis hospitals, Hale and Townsend[4] reported 36 patients with systemic histoplasmosis among 10,817 patients admitted during a four-year period, 1965-1968.

Thus, the occurrence of histoplasmosis in patients admitted to tuberculosis hospitals, though uncommon, is sufficiently frequent to require physicians working with tuberculous patients to be aware of the need to search for fungal as well as tuberculous infections. The clinical manifestations of histoplasmosis, as well as other systemic mycotic diseases, are often similar, if not identical, to those of tuberculosis. It is most important that the exact etiologic agent or agents be determined in order that appropriate and specific therapy be provided. At the San Antonio State Tuberculosis Hospital all newly admitted patients are studied for evidence of fungal as well as tuberculous infections. Routine studies for mycotic diseases include cultures of the septum for pathogenic fungi and complement fixation tests for *Histoplasma capsulatum* yeast, *H capsulatum* mycelia, *Coccidioides immitis,* and *Blastomyces dermatitidis.* At the time of this writing, six patients among a hospital patient census of 650 were undergoing treatment with amphotericin B, five for histoplasmosis and one for coccidioidomycosis.

The case reported here is particularly interesting in that the patient had far advanced active pulmonary tuberculosis which responded satisfactorily to treatment with amphotericin B.

Case Report: A 56-year-old white man was admitted to the San Antonio State Tuberculosis Hospital on Feb 10, 1966. On admission, he

Pulmonary Histoplasmosis

complained of chills, fever, and a "run down" feeling for one month. He had lost about 20 lb during the preceding year. He was a farmer, and recently he had noticed that inhaling cotton gin dust consistently brought about a coughing seizure. About 20 years previously he had some type of an illness for which a chest x-ray was made. He said the doctors were alarmed because his lungs looked like a "snowstorm"; he refused any form of treatment and gradually "got well on his own."

He appeared to be chronically ill and dyspneic. He was 5 ft 10 inches tall and weighed 126 lb. There was cyanosis of the nail beds. Decreased focal fremitus, dullness to percussion, and crackling rales were present throughout the entire left side of the chest; the right side was normal.

The admission chest roentgenogram (Fig 1) showed widespread involvement of the entire left lung with a soft, nodular infiltrate with multiple cavities. The right lung was far less extensively involved and there was no evidence of cavitation.

Admission laboratory studies included a complete blood count, urinalysis, blood urea nitrogen, serum sodium, potassium, chlorides, and serum glutamic oxaloacetic transaminase. All values were negative or within normal limits.

Initial sputum specimens were positive on smear and culture for *Mycobacterium tuberculosis*. The sputum remained positive for *M tuberculosis* until after a left pneumonectomy was performed on July 6, 1966. The organisms were completely susceptible to isoniazid (INH), streptomycin (SM), para-aminosalicylic acid (PAS), and ethionamide (ETA). Intermediate-

Fig 1. Chest x-ray taken on Feb 10, 1966, date of initial admission, shows extensive soft infiltration involving the entire left lung with numerous cavities. The right shows much less involvement with no evidence of cavitation.

Fig 2. On July 6, 1966, the day before a left pneumonectomy was performed, regression of the infiltrate in the lower lobe of the left lung is evident. The left upper lobe and superior segment of the left lower lobe remain essentially unchanged from the admission x-ray.

strength PPD gave a 12 mm reaction. Histoplasmin and coccidioidin skin tests were negative. Six cultures of sputum for pathogenic fungi were negative. Complement fixation tests for histoplasmosis, coccidioidomycosis, and blastomycosis were negative.

A diagnosis of active, far advanced pulmonary tuberculosis was made and the patient was started on INH, SM, and PAS. ETA was added on April 16, 1966. Throughout the course, the organisms remained susceptible to INH, SM, PAS, and ETA. Early in his treatment, the patient developed symptoms resembling those of rheumatoid arthritis which were thought to be caused by INH. However, INH was not discontinued as the "arthritis" was controlled with small doses of prednisone and aspirin.

On July 1 it was decided that a left pneumonectomy was indicated. Differential bronchospirometric studies showed the right lung to have adequate function to sustain the patient.

A left pneumonectomy was done on July 7. A chest roentgenogram taken on the day before surgery is shown in Fig 2. The resected lung showed multiple tubercles, a necrotic 2 cm cavity in the superior segment of the lower lobe, and diffuse, bullous emphysema. The tissue was positive on smear and culture for typical acid-fast bacilli. Fungi were not found on histologic examination, smear, or culture of the tissue.

Twenty-one days postoperatively, the patient insisted that he be allowed to leave the hospital and be treated by his family physician. During the 21 days following surgery, prior to discharge, he received 1 gm of SM, 6 gm of PAS-C, and 500 mg of ETA daily. His physician agreed to continue this regimen, and the patient also was to be followed in our outpatient clinic. The chest roentgenogram taken on the day of discharge, July 27, is shown in Fig 3. From July 1966 to July 1967, considerable manipulation of his drugs became necessary due to dizziness, nausea, and transiently abnormal results of liver function tests. He was able to continue with at least one drug, and usually two, to which his organisms were still susceptible. However, from July 1967 until April 1968, he was able to take only INH. During this period, his x-rays remained stable and sputum cultures were negative for *M tuberculosis*.

Fig 3. On July 27, 1966, the day patient was discharged (21 days after left pneumonectomy) the x-ray shows almost complete opacity of the left chest with a small area at the apex yet to be filled in. The right lung shows no change from the x-ray of July 6.

Fig 4. A chest x-ray taken on Feb 12, 1968, shows the left chest to be completely opaque with satisfactory result from pneumonectomy. The right lung is unchanged since July 6, 1966.

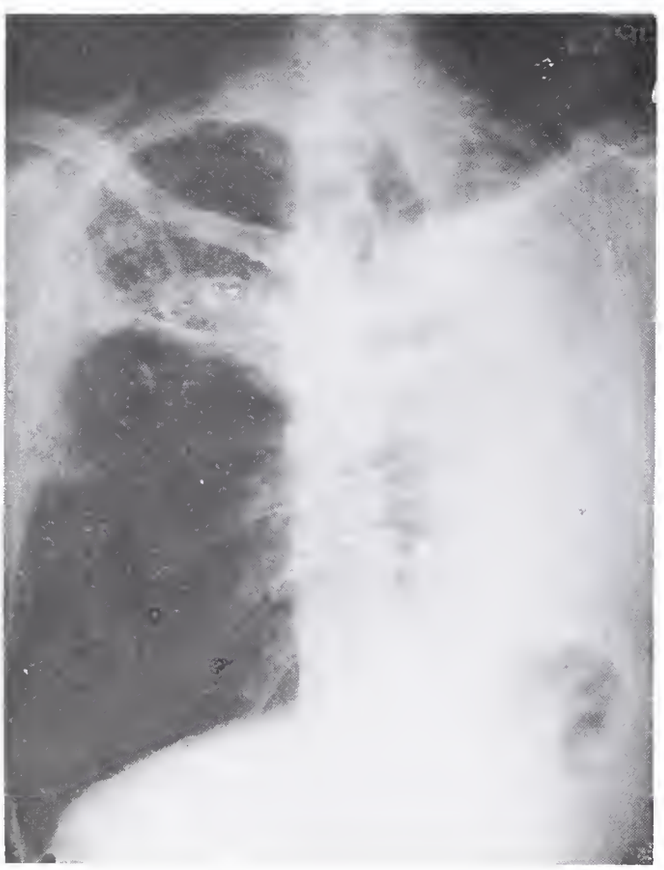


Fig 5. On April 1, 1968, the left chest is unchanged; the right lung shows considerable change since Feb 12, 1968. The upper lobe shows complete involvement with a "new" dense infiltrate not present on previous x-rays.

A chest x-ray taken Feb 12, 1969 (Fig 4) showed no essential change from the film taken on July 27, 1966 (Fig 3), the day of discharge from the hospital, except for the disappearance of the small postoperative air space in the left apical region. The right side of the chest remained radiologically stable. It showed only a minimal residual infiltrate in the apical posterior segment of the right upper lobe.

On April 1, 1968, a chest roentgenogram (Fig 5) revealed an extensive "new" infiltrate in the upper and midzone fields of the right lung. The patient was immediately hospitalized. At the time of his readmission, he complained of moderate shortness of breath, a slight cough, and a recent 10 lb weight loss. We did not know whether we were dealing with nonspecific pneumonitis, reactivation of the tuberculosis, or some other condition.

The most likely diagnosis was a reactivation of the tuberculosis. Therefore, in addition to treatment with penicillin and demethylchlortetracycline HCL, he was given INH, SM and ETA. The readmission sputum culture was positive for *M tuberculosis*. The organisms were still susceptible to all the primary drugs. On April 12 the chest roentgenogram showed a further increase of the infiltrate in the right lung. A histoplasmin skin test gave a 7 mm reaction. On April 10 complement fixation tests evidenced a titer of 1:16 for *H capsulatum* mycelia, a negative titer for *H capsulatum* yeast, a titer of 1:8 with histoplasma latex, and a titer of 1:16 for *B dermatitidis*. Repeat tests on three occasions within one month were unchanged. Sputum cultures for fungi were positive for *H capsulatum* on six occasions during April 1968. Confirmation of the positive culture was made by the Communicable Disease Center Branch, Kansas City, Kan.

Review of the slides of the left lung resected on July 6, 1966, revealed a rare organism consistent with *H capsulatum*. Amphotericin B was started on May 1, 1968. The patient tolerated the drug quite well and again, at his own insistence, he was discharged from the hospital on May 17, 1968, to continue with amphotericin B, INH, and ethambutol (EMB) under the direct care of his private physician.

He was not seen in our clinic again until

Aug 19, 1968. According to his physician, from May 17 to Aug 19, 1968, he tolerated the amphotericin B, INH, and EMB without unusual difficulty. Beginning on Aug 19, he returned to our outpatient clinic for monthly visits.

The patient last visited our outpatient clinic on March 17, 1969. Treatment with amphotericin B had been discontinued on Jan 6, 1969, after a total of 2,200 mg. His general health was excellent. A chest x-ray taken on March 17, 1969 (Fig 6) was unchanged from a film taken on Aug 19, 1968. However, the lesions had shown considerable resolution before the lungs became radiologically stable.

Sputum cultures, taken on each monthly visit, were consistently negative for both fungi and tuberculosis. Complement fixation titers were negative for *H capsulatum* mycelia and *C immitus,* and *H capsulatum* yeast titers varied between 1:8 and 1:32.

Summary: An interesting case of pulmonary tuberculosis complicated by histoplasmosis is presented.

The clinical manifestations of pulmonary fungal infections and tuberculosis are similar, and they coexist with sufficient frequency to require differential consideration in the diagnostic work-up.

The availability of highly effective specific therapy for both tuberculosis and fungal infections makes the establishment of the specific etiologic agents of paramount importance.

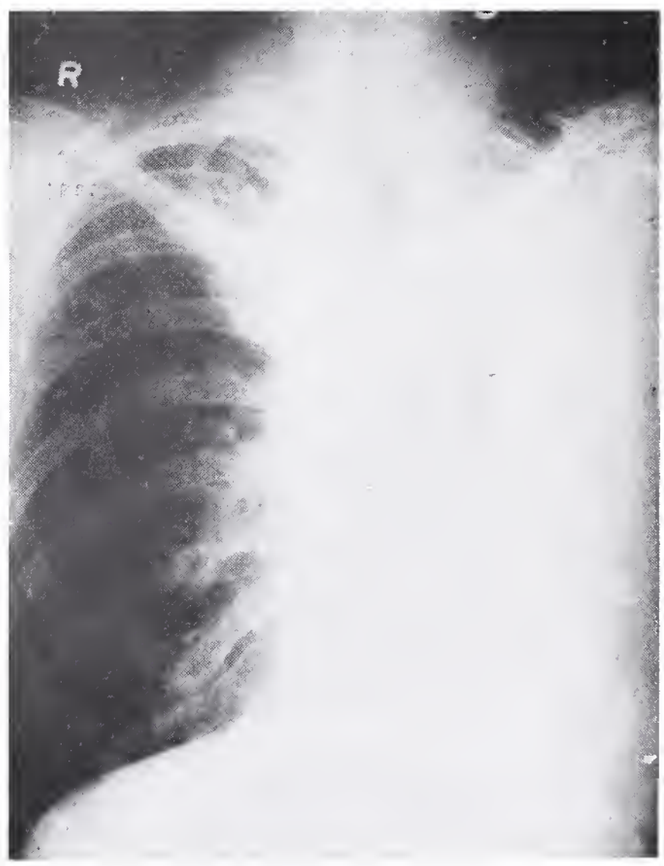


Fig 6. On March 17, 1969, the left side of the chest is unchanged. The right lung shows almost complete clearing of the "new" infiltrate which was first seen on x-ray April 1, 1968.

REFERENCES

1. Furcolow ML, Brasher CA: Chronic progressive (cavitary) histoplasmosis as a problem in tuberculosis sanatoriums. Amer Rev Tuberc 73:609-619, 1956.

2. Spencer GE, Gray JAC: The problem of histoplasmosis in a military tuberculosis hospital. Amer Rev Tuberc 75:833-835, 1957.

3. Veterans Administration-Armed Forces Cooperative Study on Histoplasmosis: Pulmonary histoplasmosis complicated by tuberculosis. Amer Rev Resp Dis 97:630-636, 1968.

4. Hale JM, Townsend FM: The incidence of fungus disease in Texas state tuberculosis hospitals. Presented at 27th annual meeting of the US-Mexico Border Public Health Association, Santa Fe, NM, June 2-6, 1969.

Dr. Powell, San Antonio Tuberculosis Hospital, Box 23340, Highland Hills Station, San Antonio, Tex 78223.

Major Toledo, Chief of Medicine, 91st Evacuation Hospital, APO San Francisco, Calif 96325.

CERVICAL
CLINICAL AND RESEARCH

BYRON J. BAILEY, MD

A variety of approaches to reconstruction of extensive defects of the cervical trachea are reviewed. The desirability of segmental resection of stenotic areas with primary reanastomosis of the trachea is emphasized by case reports with four- to five-year follow-up. One case illustrates the ability of trachea to stretch in response to cicatricial contraction. Research efforts in the development and evaluation of tracheal prostheses and in the area of tracheal transplantation are presented.

ALTHOUGH EXTENSIVE RECONSTRUCTION of the cervical trachea is an uncommon surgical problem for the otolaryngologist and his colleagues, the technical challenges and frustrations associated with restoring and maintaining a patent airway have encouraged a variety of approaches including local segmental excision and end-to-end anastomosis, tracheal "lengthening" procedures, use of local skin grafts and flaps, tracheal prostheses, and tracheal transplantation.

This article describes a number of current surgical techniques along with the author's clinical and research observations. A detailed historical review of the developments in tracheal reconstruction has been published.[2]

Clinical Observations: *Segmental Resection and Reanastomosis:* The earliest investigations in local segmental tracheal resection and reanastomosis were performed by Gluck and Zeller in 1881, and the technique was applied clinically with success by Kuster in 1884.[1] Subsequently, there have been many reports confirming the value of this technique, and most authors have repeatedly emphasized its desirability. As the length of the primary resection is increased, however, there is a concomitant increase in the tension on the anastomotic suture line until a point is reached at which the repair will break down.

Tracheal "Lengthening" Procedures: Several authors have reported experience with procedures to increase the length of the tracheal resection to as much as 6.5 cm. These have included (1) division of the right pulmonary ligament and reimplantation of the left mainstem bronchus more distally into the right mainstem or intermediate bronchus (Grillo[5] and Michelson[7], (2) circumferential incision of the annular tracheal ligaments with preservation of the integrity of the mucosa (Som[11]), and (3) hemicircumferential incisions of the trachea every few rings with patch grafting repair (Worman[12]).

Local Skin Grafts and Flaps: Although there have been reports of instances in which it has been possible to repair extensive defects of the cervical trachea successfully with these techniques, they are few in number and long-term follow-up is often missing. It seems logical to presume that in most cases, the absence of supporting tissue in the wall of the reconstructed passage will lead to stenosis of the airway secondary to fibrosis and cicatricial contraction.

Tracheal Prostheses: Metal tracheal prostheses have been fashioned from stainless steel springs (covered with fascia lata or plastic), stainless steel mesh (combined with fibrocollagen or plastic), Vitalium, nobelium, and tantalum mesh. Most of these prostheses failed because of stenosis of the airway secondary to granulation tissue formation.

Among the plastic materials which have been used for tracheal prostheses are Lucite, polyethylene tubing, Tygoflex, woven Teflon, Ivalon, polyurethane, silicone, rubber, polypropylene and Marlex mesh. The latter has enjoyed the widest acceptance in clinical practice; its use

Research studies mentioned in this paper were supported in part by USPHS, The National Institutes of Health, NINDB, NB-05902.

TRACHEA
ASPECTS OF RECONSTRUCTION

was pioneered and popularized by Beall.[3] We found only 14 case reports in which tracheal prostheses were used.

Tracheal Transplantation: The use of tracheal allografts (transplantation) has been investigated by Jackson[6] and Greenberg[4] who concluded that in dogs, the technique could not be used successfully to repair defects longer than 1 inch. No reports of the clinical utilization of tracheal transplantation were found.

Case Reports: *Segmental Resection and Reanastomosis:* A review of the long-term results in four cases which have been followed more than four years is of interest. The series consists of three women and one man ranging in age from 38 to 72 years. The stenosis was preceded by a hurried emergency tracheotomy in all four instances, and occurred at the tracheotomy site in two patients and at the level of the inflated cuff in the other two. The length of the stenosis ranged from 1.5 to 2.5 cm as determined by preoperative polytomography. All four patients complained of significant exertional limitation and had stridor.

The surgical procedures were similar in each case: (1) A transverse cervical incision was made at the level of stenosis. (2) Entry into the trachea at the lower end of the stenosis was aided by visualization and palpation of the fibrotic segment and by measurements from the preoperative roentgenograms. (3) After resection of the stenotic segment, the trachea was mobilized for a distance of about 2.5 cm superiorly and inferiorly. (4) The line of anastomosis was closed with two rows of silk sutures. The row nearest the anastomosis consisted of approximately eight sutures (4-0) placed around the tracheal rings adjacent to the cut tracheal ends. A second row of four sutures (3-0) was placed around the second tracheal ring from each end in an attempt to take some of the tension off the first row. An effort was made to pass the silk sutures between the cartilage of the tracheal rings and the tracheal mucosa where this was possible in order to minimize granulation tissue formation within the lumen. (5) Tracheotomy was performed two or three rings distant from the anastomosis (either proximal or distal). The patients were decannulated three to four weeks postoperatively.

One of the women patients had undergone previous cardiac surgery which involved mitral and aortic valve replacement. Her tracheal resection and reanastomosis was performed three months after the cardiac surgery, and eight months later she had a cerebrovascular accident and died. The remaining three patients are alive and have no symptoms of respiratory obstruction four to five years postoperatively.

Tracheal Stent and "Tracheal Stretching": The following case report is more complex, and its outcome is unique as far as I have been able to ascertain.

The patient, a 20-year-old Caucasian engineering student, was injured in a high-speed auto-signpost freeway accident in August of 1966, and was brought to Los Angeles County Harbor General Hospital. He had a severe anterior "crush injury" of the larynx and cervical trachea, with an almost complete transection of his trachea at approximately the level of the fifth tracheal ring, and with almost complete respiratory obstruction. An alert physician identified the distal tracheal remnant in the neck wound and inserted a tracheotomy tube. That night, three crushed tracheal rings were removed surgically, and a primary reanastomosis of the cervical trachea was done. The patient subsequently was transferred to the otolaryngology service for treatment of his laryngeal fractures (which were managed successfully with an indwelling laryngeal stent for three weeks). It was necessary to leave a tracheotomy tube in place below the area of tracheal repair.

From the first, the patient had bilateral vocal cord paralysis, but during the ensuing six months his voice became progressively weaker until he became totally aphonic.

Endoscopy and roentgenographic studies revealed an extensive area of stenosis of the cervical trachea, and in June 1967, surgical exploration of the anterior neck was performed. A complete stenosis of the trachea, 4 cm long, was found. There were remnants of tracheal cartilage in the stenotic area, but the interior of the trachea was replaced by granulation tissue and cicatrix. The tracheal lumen would barely admit the tip of a mosquito hemostat. In an attempt to restore a lumen for phonation, the granulation tissue and cicatrix was excised by sharp dissection, and a stent of Tygon tubing approximately 1.8 cm in diameter and 6 cm long was placed in the stenotic region. The stent extended from just below the inferior margin of the cricoid cartilage to a point about 1 cm above the level of the tracheotomy, and was anchored by a single stainless steel suture which was tied down around the trachea anteriorly, but not brought out through the skin.

The patient tolerated the stent without the slightest difficulty until it was removed 12 months later (June 1968). At that time, the area of obvious fibrosis had contracted from 4 cm to about 1.5 cm in length.

The trachea has remained sufficiently patent over the subsequent 10½ months for the patient to tolerate occlusion of his tracheotomy tube for several hours at a time and to phonate loudly.

We were fortunate to observe clinically what Pressman observed in his experiments on dogs,[9] namely, that the annular ligaments of the trachea are capable of considerable stretching over a period of months in response to cicatricial contracture. The possibility of employing this favorable property of the annular ligaments in lieu of more unpredictable methods of extensive reconstruction or implantation of a prosthesis deserves further careful investigation, and is being pursued in our research laboratory.

Experimental Observations: *Tracheal Prostheses:* During the past four years, I have studied a variety of tracheal prostheses in my research laboratory, and the interested reader can review the details of this work elsewhere.[2] Following is a brief summary of the various types of prostheses which were investigated along with a few pertinent observations about each category. These observations were made on a series of more than 100 experimental tracheal reconstructive operations.

1. Tissue Prostheses: An effort was made to fashion a tracheal prosthesis from thin strips of bone combined with either a layer of fat or a layer of Gelfoam. These prostheses were placed in a pouch created beneath the skin of the abdomen, and were removed after three months. In several instances the bone strip/Gelfoam combination produced a cylindrical tissue prosthesis which appeared quite sturdy and viable. In every instance, however, the tissue prosthesis stenosed rapidly when it was used to replace a long segment of excised trachea.

2. "Composite" Prostheses: This group of experiments involved attempts to combine an inert supporting material (stainless steel mesh) with a potentially living tissue (Gelfoam, which had been "matured" in the abdominal wall for three months and had become living fibrocollagen embedded in the inert metal mesh). One could not produce a usable prosthesis by the attempted combination of silicone rubber strips with Gelfoam or Gelfilm. Very durable-appearing prostheses could be developed from stainless steel mesh and Gelfoam (as Schilling[10] and Poticha[8] noted), but these nearly always underwent stenosis secondary to granulation tissue formation when they were employed in extensive defects (10-14 tracheal rings).

The prosthesis which has shown the most promise in our investigations has been constructed of an extruded Teflon cylinder which has been etched on its external surface to allow us to apply an outer layer of Dacron felt. This prosthesis is then implanted in the subcutaneous layer of the abdominal wall for three months to allow fibrocollagenous tissue to grow into the Dacron felt. These prostheses are then used to replace excised tracheal segments 10-14 rings in length. The major problems encountered to date have been the formation of granu-

lation tissue in the tracheal lumen at the ends of the cylinders, and infection in the Dacron felt on the outer surface of the Teflon. We have been pleasantly surprised to see fewer problems with the more recent modifications of this prosthesis, and also to observe the small amount of difficulty the dogs have in clearing their tracheobronchial secretions through these inert segments.

Tracheal Transplantation: Transplantation of cervical tracheal segments 10-14 rings long has been performed in 14 mongrel dogs in our laboratory. The transplanted segments have been supported by an inner cylindrical stent of extruded Teflon. There are six surviving animals and they have done satisfactorily for periods ranging from one month (two dogs) to 9-12 months (four dogs). We have followed carefully the failures in this series and have categorized them in this manner:

1. Avascular necrosis of the transplanted tracheal segment (probably not tissue rejection) characterized by the appearance of local neck infection at about one week which fails to respond to antibiotic therapy, generally toxic appearance to the animal, and observation of necrosis of the transplant on reexploration of the neck at two to four weeks (two dogs).

2. Localized, chronic infection at the site of the tracheal transplant with an otherwise healthy animal, and the subsequent development of pneumonia leading to death at 3.5 to 9 months postoperatively (two dogs).

3. Systemic infection such as heartworm, which is fatal to the animal but which is unrelated to the tracheal transplantation (four dogs).

These investigations are in a preliminary stage, and any conclusions concerning the clinical usefulness of the procedure would be premature; however, there appears to be some basis for guarded optimism.

Conclusions: While the most successful technique for surgical repair is almost a century old, most of the efforts to expand our abilities in this field have taken place in the past decade.

One might draw the following general conclusions from the published work on tracheal reconstruction: (1) Segmental resection and reanastomosis of the trachea is the most desirable solution to this challenging problem. (2) Tracheal "lengthening" procedures make it possible to resect up to 6.5 cm of the trachea and to reanastomose it primarily. (3) At present, there is no completely reliable and acceptable tracheal prosthesis, and the number of published cases in which a prosthetic replacement of a tracheal segment was attempted is quite small. (4) Tracheal transplantation appears to be feasible and investigations are proceeding in an effort to determine the extent to which it may be useful clinically. (5) The ability of the trachea to stretch by means of longitudinal expansion of the annular ligaments may provide an additional solution to the problem. A case report of such an instance is presented.

REFERENCES

1. Atamanyuk MY, Melrose DG: The treatment of circumferential defects of the trachea. Brit J Surg 52:59-65, 1965.

2. Bailey BF, Comp FA: Current concepts in reconstruction of the cervical trachea. Amer Surg 35:153-165, 1969.

3. Beall AC Jr, Harrington OB, Greenberg SD: Tracheal replacement with heavy Marlex mesh. Circumferential replacement of the cervical trachea. Arch Surg 84:390-396, 1962.

4. Greenberg SD: Tracheal homografts in dogs. Arch Otolaryng 67:577-586, 1958.

5. Grillo HC, Dignan EF, Miura T: Extensive resection and reconstruction of mediastinal trachea without prosthesis or graft: an anatomical study in man. J Thorac Cardiov Surg 48:741-749, 1964.

6. Jackson TL, O'Brien EJ, Tuttle W, et al: The experimental use of homogenous tracheal transplants in the restoration of continuity of the tracheobronchial tree. J Thor Surg 20:598-612, 1950.

7. Michelson E, Solomon R, Maun L: Experiments in tracheal reconstruction. J Thor Cardiov Surg 41:748-759, 1961.

8. Poticha SM, Lewis FJ: Experimental replacement of trachea. J Thorac Cardiov Surg 52:61-67, 1966.

9. Pressman JJ, Simon MB: Tracheal stretching and metaplasia of the tracheal rings from cartilage to bone following the use of aortic homografts. Amer Surg 25:850-856, 1959.

10. Schilling JA, Shurley HM, Joel W, et al: Fibro-collagenous tubes structured in vivo. Arch Path 71:548-553, 1961.

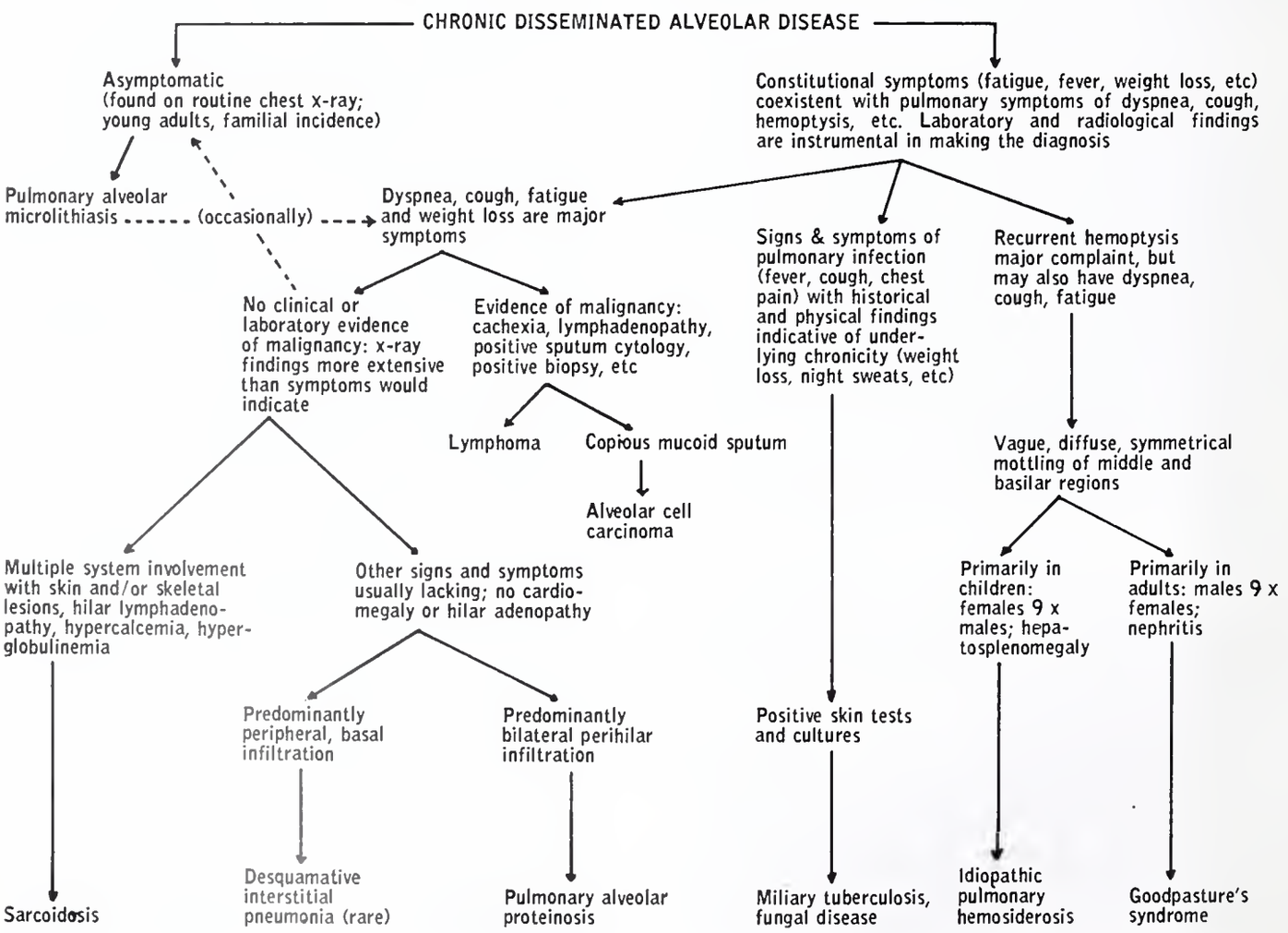
11. Som ML, Klein SH: Extensive segmental resection of the trachea with primary suture anastomosis. Surg Forum 9:353-356, 1958.

12. Worman LW, Starr C, Narodick BG: Tracheoplasty technics for reconstruction after extensive resection. Amer J Surg 111:819, 1966.

Dr. Bailey, Department of Otolaryngology, The University of Texas Medical Branch, Galveston, Tex 77550.

A Schema for Roentgenographic Diagnosis of Disseminated Alveolar Disease

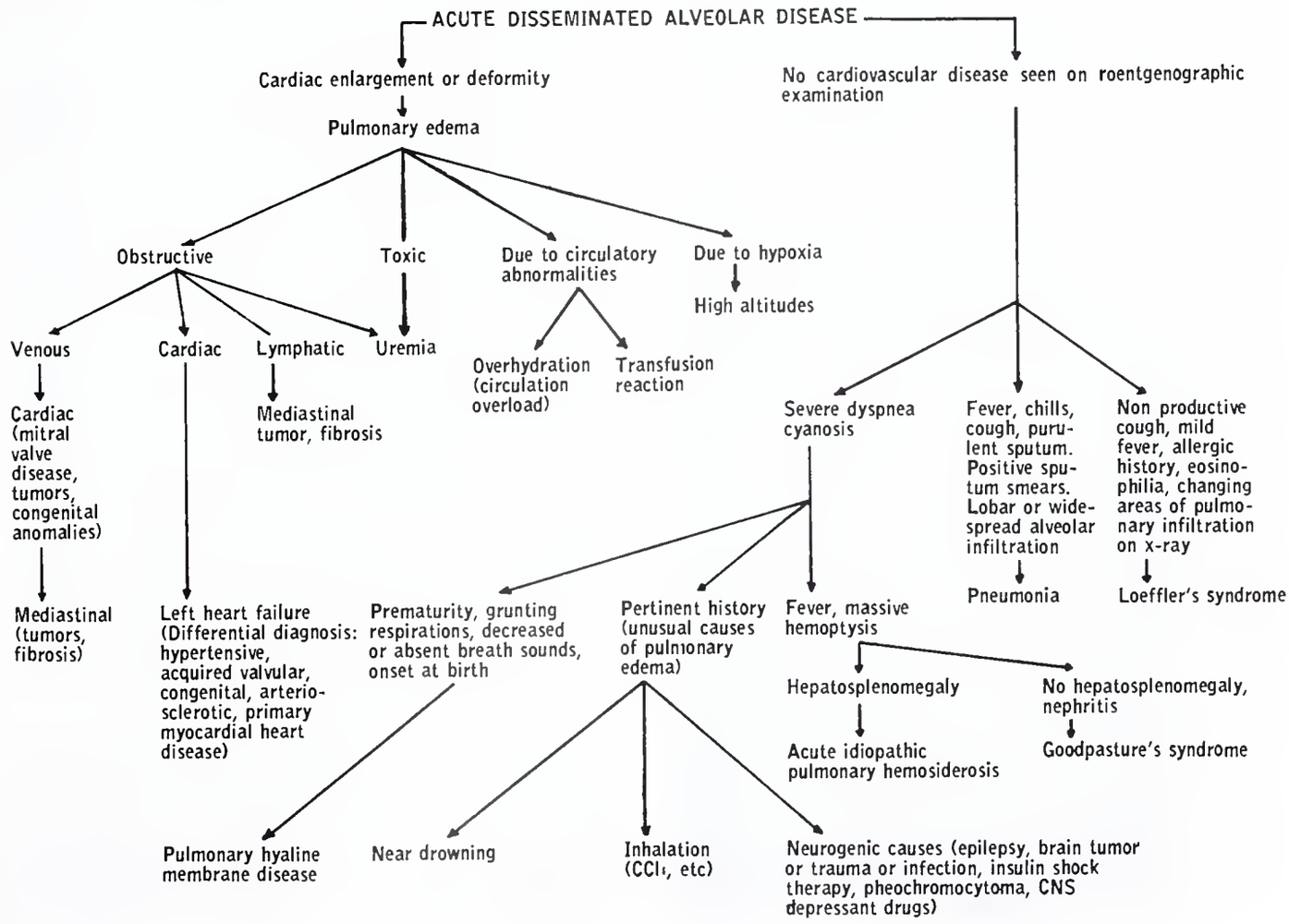
THOMAS N. WILLIAMS, MD
MELVYN H. SCHREIBER, MD



NUMEROUS CLINICAL ENTITIES produce disseminated alveolar disease—so many, indeed, that it is difficult to recall them all for a comprehensive differential diagnosis. Relatively few are responsible for most cases of alveolar disease, however, and these are included in this schema as an aid to memory.

Roentgenographically, alveolar infiltrations are characterized by (1) ill-defined, fluffy margins; (2) coalescence of lesions; (3) segmental or lobar distribution (at times); (4) bilateral symmetry, more prominent centrally and fading toward the periphery (at times); and (5) an air bronchogram (when the alveoli adjacent to air-containing bronchi are filled with exudate).

If the roentgenographic appearance is recognized and correlated with the patient's signs and symptoms, a specific diagnosis can often be suggested. Even when that is not possible, the differential considerations usually can be limited to a few likely possibilities, and the specific diagnosis may then be established by other means.



Football Injuries:

THOMAS D. MEEK, MD

Two cases of acute subdural hematoma resulting from injuries sustained in high school football games are reported. Neither player was rendered unconscious immediately, and both were allowed to continue play. In both cases, gradual impairment of the level of consciousness developed and the patients became comatose. Surgical treatment was successful. These cases illustrate the necessity of prompt evaluation and definitive treatment to prevent permanent neurological deficit or death.

DURING THE 1969 FOOTBALL season, two high school athletes were treated for subdural hematomas sustained during participation in high school football games. Both players were treated surgically with success and returned to school within a short time, one being completely normal from the neurological standpoint. The importance of early recognition and prompt action is emphasized in the following case reports. The two incidents occurred within a four-day period, and both patients were transported to the Odessa Medical Center Hospital from surrounding cities where initial evaluation and treatment was rendered by the family physician or team physician involved.

Case Reports: *Case 1:* A 15-year-old boy became confused during participation in a high school football game. No specific head injury was noticed during the game, nor was there any loss of consciousness. He complained of headache, became confused, drowsy, and finally, semicomatose. When the headache and confusion developed, he was removed from the game and was examined by his family physician shortly thereafter.

At physical examination the patient responded to pain and could be aroused to speak. He vomited several times. The right pupil appeared to be dilated as compared to the left. His pulse rate was slowed to 44/minute, and his blood pressure was 160/90 mm Hg.

During transfer to the Odessa Medical Center Hospital, his condition improved and he awakened and began to speak, although his level of consciousness still was impaired and he remained incoherent. His pupils became equal; the left plantar response was extensor; there was no change in the pulse rate or blood pressure.

Bilateral carotid arteriograms were carried out immediately and revealed a large subdural hematoma overlying the right hemisphere (Fig 1). Craniotomy and evacuation of the subdural hematoma were performed immediately.

The patient improved rapidly, and on the third postoperative day the neurological examination revealed no abnormalities. He was dismissed from the hospital on the sixth day following surgery, and returned to school on the tenth day. Results of follow-up examinations remain within normal limits.

Case 2: A 17-year-old boy became confused and amnesic during a high school football game, although he sustained no specific head injury and was not rendered unconscious. He was involved in several hard tackles prior to the onset of the confusion and amnesia, but was not injured seriously enough to be removed from the game. He complained of abnormal sensation in his right hand and apparently had difficulty controlling its movements. After the football game he was hospitalized for observation; his condition progressively deteriorated and he became stuporous, dysphasic, and vomited frequently. His pulse rate slowed to 52/minute and his blood pressure was 150/88 mm Hg. He never became completely unconscious and his condition did improve somewhat after 24 hours. The next day, however, he became harder to arouse and was transferred to the Odessa Medical Center Hospital approximately 40 hours after the injury.

At this time the patient was stuporous. He could be aroused, but he answered questions incorrectly and was dysphasic. His pulse rate was 56/minute and blood pressure 154/90 mm Hg. The right plantar response was extensor.

Bilateral carotid arteriograms disclosed a subdural hematoma on the left and surgical re-

ACUTE SUBDURAL HEMATOMA WITHOUT LOSS OF CONSCIOUSNESS

moval followed immediately (Fig 2). Rapid improvement ensued although the patient remained dysphasic and, at times, confused. He was dismissed on the tenth day after surgery, at which time he was intact neurologically except for poor concentration and memory and amnesia for the events immediately preceding and following the head injury. When he was reexamined one week later, his memory was improving but still was impaired. He returned to school 22 days after surgery.

Discussion: Both cases have several things in common. Both patients presented acutely ill from the neurological standpoint, but neither had been rendered unconscious by the injury that produced a subdural hematoma. Both seemed to improve somewhat while being observed and tested prior to surgery. In the second case, however, after an apparent improvement the patient's condition began to deteriorate, and at that point further consultation was obtained and the hematoma was diagnosed and treated. In case 1, less than three hours elapsed between the onset of symptoms following head injury and surgical removal of the acute subdural hematoma.

An important point in both of these cases is that although neither patient was rendered unconscious, both tended to lapse into coma or at least into an impaired level of consciousness following the injuries.

Prompt action and proper observation on the part of the medical personnel initially involved has been a key factor in the eventual outcome in both cases. Prolonged delay in obtaining definitive treatment would have resulted in prolonged convalescence and greater residual neurological deficit or even death. Both patients demonstrated deterioration of the conscious state deserving prompt evaluation for intracranial hematoma.

Head injuries resulting in immediate loss of consciousness and profound coma obviously are not in the same category with the cases reported here, and will not be discussed further although immediate and more urgent treatment is indicated.

Fig 1. Anteroposterior right carotid arteriogram shows a large subdural hematoma characterized by the separation of vessels of the right hemisphere from the inner table of the skull. Midline structures are not displaced to any extent, and the area of avascularity between the inner surfaces of the skull and vessels on the surface of the brain represents the acute subdural hematoma.

Fig 2. Anteroposterior left carotid arteriogram shows a subdural hematoma overlying the left hemisphere. The midline structures are displaced toward the right, and the area of avascularity between the inner surface of the skull and vessels on the surface of the brain is less than in Fig 1. This again represents an acute subdural hematoma. In both cases, bilateral carotid arteriography was carried out and only the pathological site is described.

GROUP THERAPIES in the problem habit, ALCOHOLISM

RONALD J. CATANZARO, MD

THEORETICAL FRAMEWORK of Problem Habits: My theoretical orientation regarding alcoholism is that it is one of a group of problem habits. The major problem habits in our American society today include alcohol dependency (alcoholism); opiate (heroin, morphine, etc) dependency; other deviate drug dependencies (LSD, dexedrine, marihuana, glue, and other organic vapors); other socially acceptable drug dependencies (nicotine, caffeine); compulsive eating (obesity); compulsive gambling; and other problem habits (certain types of promiscuity, homosexuality, kleptomania, and antisocial behavior).

Group therapy techniques play a central role in treatment of all of these disorders as indicated by the number of groups dealing with them, such as Alcoholics Anonymous, Narcotics Anonymous, Synanon, Daytop House, TOPS, and various other tailor-made groups. Problem habits are extremely prevalent in our society today, and the major effective treatment modality is group therapy.

Group Therapy—General Considerations: Early in development of group therapy techniques, the group process was regarded primarily as an economical method of treating a larger number of patients with fewer necessary therapists. But as the techniques developed it became clear that group therapy is much more than this, and is actually much more effective than individual therapy in helping such persons as alcoholics.

Alcoholics Anonymous really showed the world the effectiveness of the group process, specifically of a self-help type. Generally, group therapy is a learning process in which one's knowledge, feelings, and skills are changed positively. Some of its major advantages are: (1) It is economical both in cost to patients and use of staff time. (2) Sharing feelings and problems can offer the patient much support in solving them. (3) The patient can discuss alternate methods of solving problems with an interested group who will have a number of different viewpoints. (4) The group may examine a problem and arrive at a group opinion or consensus, thereby giving a measure of validity as to the true nature of the problem. "Several heads are better than one." (5) The group is able to face the patient directly with the reality of a situation in a convincing manner, whereas in the usual one patient-one therapist relation, the patient may consider remarks contrary to his own conceptions as simply being a difference of opinion. (6) A patient can be attacked much more directly concerning problems as the group will offer him support necessary to face these problems head-on. (7) The group can offer a learning experience in social skills, knowledge about a particular topic, and appreciation for the deep complexity of other human beings that is difficult to match in a one-to-one relationship.

Some of the major drawbacks of group therapy are: (1) In one-to-one therapy, the patient is always "in the center of the stage." In a group setting, often there are a few patients who talk little and give little to the group, and might be said to get lost in the group. (2) Some problem areas are so painful or unacceptable to the group that they may never arise in the group setting. (3) In a group, each patient may have relatively little time to talk about his own problems. (4) The diverse nature of people and problems in a group may cause any particular

Alcohol dependency is the most prevalent problem habit in America today, and Alcoholics Anonymous was a pioneer in using group processes to provide the support necessary for those who really wanted to help themselves. The advantages and disadvantages of group therapy are cited, and the various types of groups are explained, as are the basic elements of several group therapy techniques.

topic to seen unrewarding to a portion of the group. (5) The group must meet at a regular time, and it is difficult to arrange a mutually satisfactory time to meet and make the patients and therapist adhere to a rigid schedule in spite of occasional situations in which it would be desirable to change the time of a particular meeting.

Goals: Groups should be structured so as to accomplish certain goals. Some types of groups are more effective for specific goals than are others. When considering each goal, you should have some idea as to the type of group that would be the most effective. A list of the main goals of various types of group therapy follows: (1) learn didactic material; (2) learn social skills; (3) learn to understand, accept, and trust other people; (4) learn to understand, accept, and trust one's self; (5) learn to express and receive unpleasant feelings; (6) learn to perform relaxing skills, hobbies; (7) learn to perform vocational skills; (8) learn to understand what is reality and how to deal with it effectively; (9) learn to control one's behavior and impulses; (10) learn to set reasonable goals and make realistic plans to achieve them; (11) learn self identity. Thus it is clear that the group therapy process is essentially a specialized method of *learning* for the patient.

Types of Groups: Major types of groups are: (1) Didactic—a lecture method used to teach facts; little other interaction occurs. (2) Supportive—the group interacts on a positive, rather superficial, and practical level avoiding deep feelings and in-depth analysis of problems. (3) Nondirective—there are many variations of nondirective group techniques. Essentially, the group largely determines its own goals and topics of discussion with a minimum of direction from the therapist. The responsibility for success is placed squarely on members of the group, and usually intense reaction between group members develops. (4) Analytic—these groups are operated primarily with a freudian theoretical framework of interpretation, and are intended to uncover a patient's repression and improve his understanding of his own internal reality. (5) Transactional—this method is based upon the concepts of transactional analysis, "games people play." It is intended to clarify and improve interpersonal relationships between people.

Specialized Group Techniques: As therapists become more skilled in various group techniques, they tend to switch from one technique to another according to changing needs of the group. Thus, the line between different types of groups becomes blurred. Some of the more promising specialized techniques are these:

Psychodrama: This technique was popularized by Moreno and has been used for at least 40 years. Its basic tenet is that involvement of the total organism is necessary to analyze any individual. Therefore the patient is made to act out various situations in conjunction with other patient actors. The audience and actors then analyze what the play showed.

Role playing: Like psychodrama, this technique is the acting out of situations. Some believe that psychodrama is just a specialized type of role playing; others think that psychodrama is more than this.

Tape-a-Drama: With the advance of new technology, new dimensions to therapy can be added. I developed one technique, using a tape recorder in a specific formalized way. This

method enables the patient to have "feedback," that is, he can hear his own voice later in the therapy session and thus uncover many signals he was sending which others could see, but of which he was unaware.

Synanon: This technique, brutal verbal attacking of another group member, was developed by an organization of the same name, originally for opiate addicts. It seems particularly effective with that type of social deviant.

Encounter: Developed by staff members of a center called Esilon on the West Coast, this technique used some Synanon techniques and also various kinds of physical contacts to gain interpersonal communication, such as bathing nude together, hand-to-hand messages, piling all group members on top of one, etc. It appeals to the avant garde, hippie, and akin groups.

Marathon groups: This is basically using encounter or similar techniques in a prolonged group session which lasts for 8, 12, 16, 24, or more hours. The participant becomes so physically exhausted that his defenses drop and his real self becomes evident.

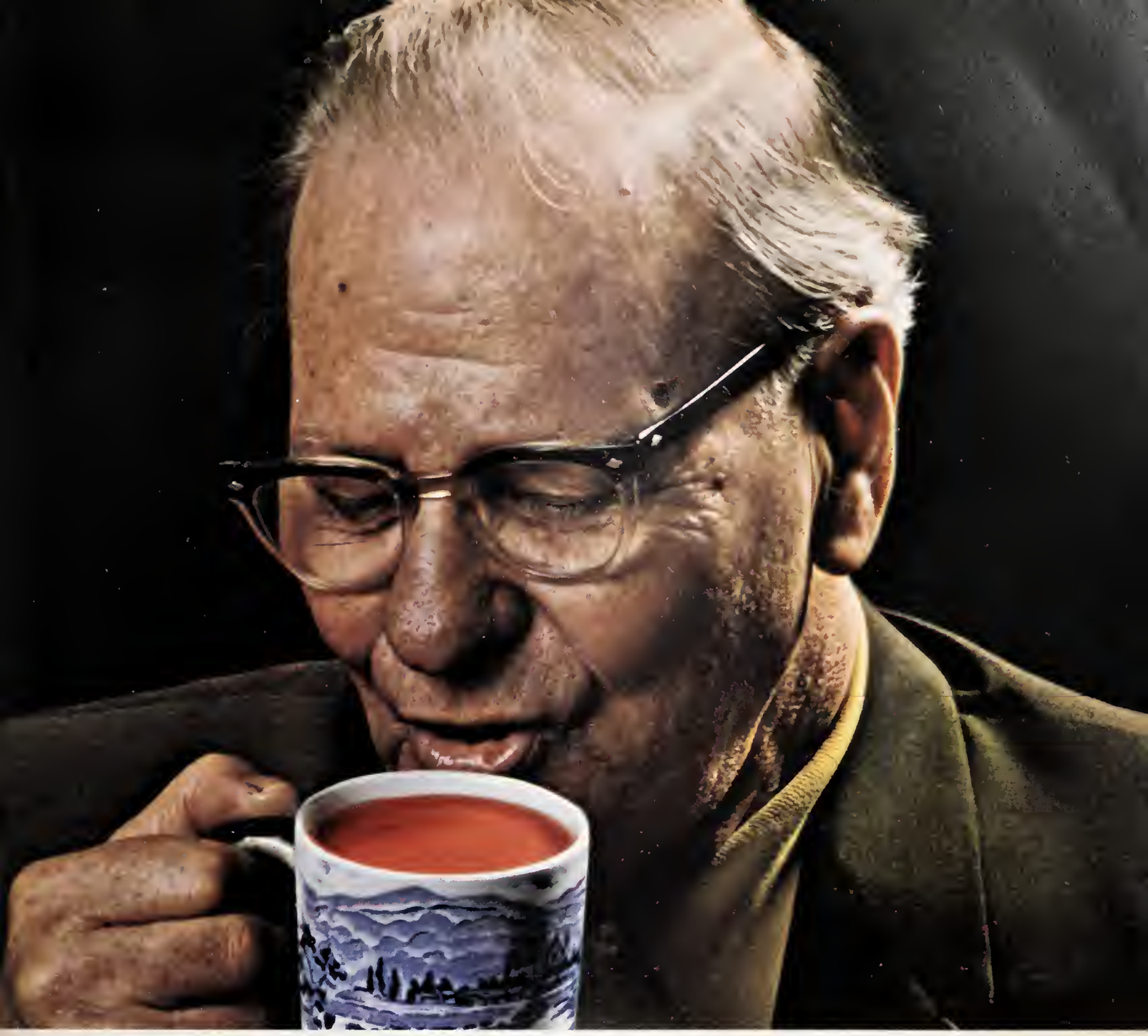
Buzz sessions: In a large group it may be desirable to divide the group and have each subgroup work on the same problem. Then, a spokesman from each subgroup summarizes that group discussion. This allows for maximum participation of each group member.

Brainstorming: This is a method especially designed to uncover new solutions to previously unsolved problems. The basic rule is "no negative thinking allowed." No matter how ridiculous the solution to any problem, it is explored positively.

Telephone therapy: Another new technique utilizing modern technology is conducting psychotherapy over the telephone, either with an individual or a group. I find that its major advantage is that it offers psychotherapy to individuals who find traveling to the therapist's office difficult.

Conclusions: Many other considerations, such as ideal size and composition of a group, frequency and length of meeting, role of cotherapists, lay therapists, no therapists, use of psychoactive drugs such as LSD during the group session, could be discussed, but in general the techniques outlined are helpful in treating alcoholism and other allied illnesses. In the future, we can expect many more new techniques such as brainwashing, group sensory deprivation, and other group stress techniques.

Dr. Catanzaro, 722 Jefferson St, Jefferson City, Mo 65101.



Campbell's Soups... wide variety...for limited appetites

Many people lose interest in food as they grow older. Some of them are fussy eaters—with only a few favorite foods. Others become indifferent to foods—because planning and preparing meals becomes a chore. Here Campbell's Soups can help —for these four very good reasons:

Appeal With a variety of tastes, textures, aromas, and colors, Campbell's Soups can add interest and appetite appeal. And they're easy to eat—ingredients are tender, bite-size. Even patients on special diets will find soups they can enjoy among the more than 50 different varieties available.

Nourishment Campbell's Soups contain selected meats and sea foods, best garden vegetables—carefully processed to help retain their natural flavors and nutritive values.

Convenience Within 4 minutes a bowl of delicious soup is heated and ready to eat.

Economy Campbell's Soups are inexpensive—an important consideration to those whose budgets are limited.

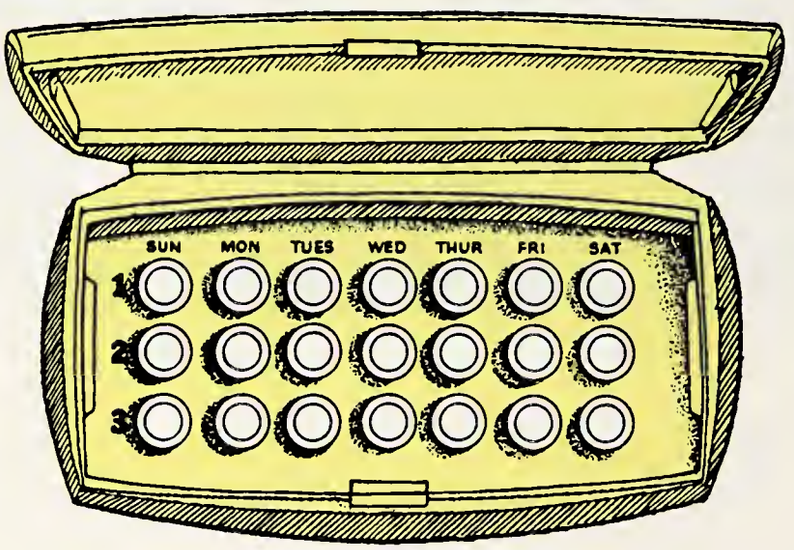
Recommend Campbell's Soups . . . and, of course, enjoy them yourself. Remember, *there's a soup for almost every patient and diet . . . and for every meal.*

Announcing the half-new p

Dem

What's new: 50 mcg. ethinyl estradiol

... Demulen offers added assurance in view of today's concern



What isn't: 1 mg. ethynodiol diacetate

... Demulen offers the distinctive Searle progestin proved in millions of women

Demulen—the one oral contraceptive that provides this new combination—offers • A full measure of confidence: Unsurpassed contraceptive effectiveness, and the low estrogen content—50 mcg.—is especially significant today • A full measure of comfort: A low incidence of breakthrough bleeding and other side effects.

Demulen continues the Searle tradition of unmatched convenience. • Sunday starting, cycle after cycle: Three weeks on, one week off. There is no simpler pill-taking schedule. • A package that helps keep her on schedule: The Demulen Compack® tablet dispenser is patient-proof. Day and week of cycle are clearly designated for each tablet.

ulen®

Each tablet contains 1 mg. ethynodiol diacetate/50 mcg. ethinyl estradiol

Actions—Demulen acts to prevent ovulation by inhibiting the output of gonadotropins from the pituitary gland. Demulen depresses the output of both the follicle-stimulating hormone (FSH) and the luteinizing hormone (LH).

Special note: Oral contraceptives have been marketed in the United States since 1960. Reported pregnancy rates vary from product to product. The effectiveness of the sequential products appears to be somewhat lower than that of the combination products. Both types provide almost completely effective contraception.

An increased risk of thromboembolic disease associated with the use of hormonal contraceptives has now been shown in studies conducted in both Great Britain and the United States. Other risks, such as those of elevated blood pressure, liver disease and reduced tolerance to carbohydrates, have not been quantitated with precision.

Long-term administration of both natural and synthetic estrogens in subprimate animal species in multiples of the human dose increases the frequency of some animal carcinomas. These data cannot be transposed directly to man. The possible carcinogenicity due to the estrogens can be neither affirmed nor refuted at this time. Close clinical surveillance of all women taking oral contraceptives must be continued.

Indication—Demulen is indicated for oral contraception.

Contraindications—Patients with thrombophlebitis, thromboembolic disorders, cerebral apoplexy or a past history of these conditions, markedly impaired liver function, known or suspected carcinoma of the breast, known or suspected estrogen-dependent neoplasia and undiagnosed abnormal genital bleeding.

Warnings—The physician should be alert to the earliest manifestations of thrombotic disorders (thrombophlebitis, cerebrovascular disorders, pulmonary embolism and retinal thrombosis). Should any of these occur or be suspected the drug should be discontinued immediately.

Retrospective studies of morbidity and mortality in Great Britain and studies of morbidity in the United States have shown a statistically significant association between thrombophlebitis, pulmonary embolism, and cerebral thrombosis and embolism and the use of oral contraceptives. There have been three principal studies in Britain[1-3] leading to this conclusion, and one[4] in this country. The estimate of the relative risk of thromboembolism in the study by Vessey and Doll[3] was about sevenfold, while Sartwell and associates[4] in the United States found a relative risk of 4.4, meaning that the users are several times as likely to undergo thromboembolic disease without evident cause as nonusers. The American study also indicated that the risk did not persist after discontinuation of administration, and that it was not enhanced by long-continued administration. The American study was not designed to evaluate a difference between products. However, the study suggested that there might be an increased risk of thromboembolic disease in users of sequential products. This risk cannot be quantitated, and further studies to confirm this finding are desirable.

Discontinue medication pending examination if there is sudden partial or complete loss of vision, or if there is a sudden onset of proptosis, diplopia or migraine. If examination reveals papilledema or retinal vascular lesions medication should be withdrawn.

Since the safety of Demulen in pregnancy has not been demonstrated, it is recommended that for any patient who has missed two consecutive periods pregnancy should be ruled out before continuing the contraceptive regimen. If the patient has not adhered to the prescribed schedule the possibility of pregnancy should be considered at the time of the first missed period.

A small fraction of the hormonal agents in oral contraceptives has been identified in the milk of mothers receiving these drugs. The long-range effect to the nursing infant cannot be determined at this time.

Precautions—The pretreatment and periodic physical examinations should include special reference to the breasts and pelvic organs, including a Papanicolaou smear, since estrogens have been known to produce tumors, some of them malignant, in five species of subprimate animals. Endocrine and possibly liver function tests may be affected by treatment with Demulen. Therefore, if such tests are abnormal in a patient taking Demulen, it is recommended that they be repeated after the drug has been withdrawn for two months. Under the influence of progestogen-estrogen preparations preexisting uterine fibromyomas may increase in size. Because these agents may cause some degree of fluid retention, conditions which might be influenced by this factor, such as epilepsy, migraine, asthma, cardiac or renal dysfunction, require careful observation. In breakthrough bleeding, and in all cases of irregular bleeding per vaginam, nonfunctional causes should be borne in mind. In undiagnosed bleeding per vaginam adequate diagnostic measures are indicated. Patients with a history of psychic depression should be carefully observed and the drug discontinued if the depression recurs to a serious degree. Any possible influence of prolonged Demulen therapy on pituitary, ovarian, adrenal, hepatic or uterine function awaits further study. A decrease in glucose tolerance has been observed in a significant percentage of patients on oral contraceptives. The mechanism of this decrease is obscure. For this reason, diabetic patients should be carefully observed while receiving Demulen therapy. The age of the patient constitutes no absolute limiting factor, although treatment with Demulen may mask the onset of the climacteric. The pathologist should be advised of Demulen therapy when relevant specimens are submitted. Susceptible women may experience an increase in blood pressure following administration of contraceptive steroids.

Adverse reactions observed in patients receiving oral contraceptives—A statistically significant association has been demonstrated between use of oral contraceptives and the following serious adverse reactions: thrombophlebitis, pulmonary embolism and cerebral thrombosis.

Although available evidence is suggestive of an association, such a relationship has been neither confirmed nor refuted for the following serious adverse reactions: neuro-ocular lesions, e.g., retinal thrombosis and optic neuritis.

The following adverse reactions are known to occur in patients receiving oral contraceptives: nausea, vomiting, gastrointestinal symptoms (such as abdominal cramps and bloating), breakthrough bleeding, spotting, change in menstrual flow, amenorrhea during and after treatment, edema, chloasma or melasma, breast changes (tenderness, enlargement and secretion), change in weight (increase or decrease), changes in cervical erosion and cervical secretions, suppression of lactation when given immediately post partum, cholestatic jaundice, migraine, rash (allergic), rise in blood pressure in susceptible individuals and mental depression.

Although the following adverse reactions have been reported in users of oral contraceptives, an association has been neither confirmed nor refuted: anovulation post treatment, premenstrual-like syndrome, changes in libido, changes in appetite, cystitis-like syndrome, headache, nervousness, dizziness, fatigue, backache, hirsutism, loss of scalp hair, erythema multiforme, erythema nodosum, hemorrhagic eruption and itching.

The following laboratory results may be altered by the use of oral contraceptives: hepatic function: increased sulfobromophthalein retention and other tests; coagulation tests: increase in prothrombin, Factors VII, VIII, IX and X; thyroid function: increase in PBI and butanol extractable protein bound iodine, and decrease in T^3 uptake values; metyrapone test and pregnanediol determination.

References: 1. Royal College of General Practitioners: Oral Contraception and Thrombo-Embolic Disease, J. Coll. Gen. Pract. *13*:267-279 (May) 1967. **2.** Inman, W. H. W., and Vessey, M. P.: Investigation of Deaths from Pulmonary, Coronary, and Cerebral Thrombosis and Embolism in Women of Child-Bearing Age, Brit. Med. J. 2:193-199 (April 27) 1968. **3.** Vessey, M. P., and Doll, R.: Investigation of Relation Between Use of Oral Contraceptives and Thromboembolic Disease. A Further Report, Brit. Med. J. 2:651-657 (June 14) 1969. **4.** Sartwell, P. E.; Masi, A. T.; Arthes, F. G.; Greene, G. R., and Smith, H. E.: Thromboembolism and Oral Contraceptives: An Epidemiologic Case-Control Study, Amer. J. Epidem. *90*:365-380 (Nov.) 1969.

OA1

SEARLE Where "The Pill" Began

G. D. Searle & Co., P.O. Box 5110, Chicago, Illinois 60680

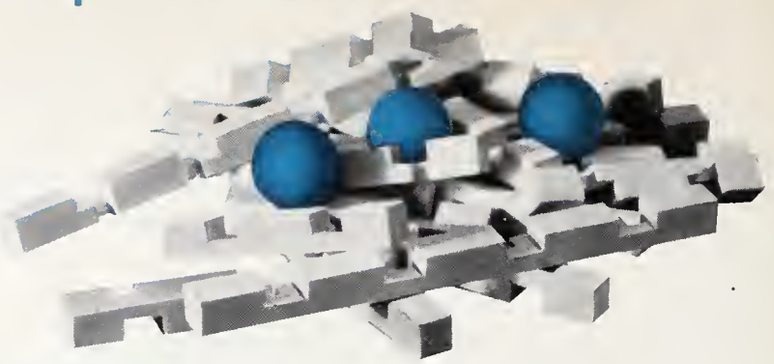
half-new

Dem/ulen®

Each tablet contains 1 mg. ethynodiol diacetate/50 mcg. ethinyl estradiol

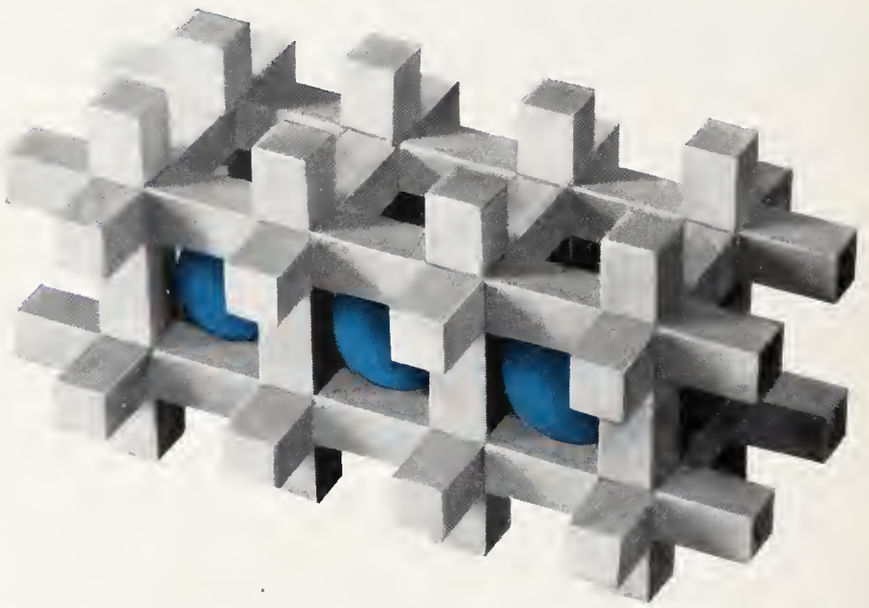
IN G.U. THERAPY

Does not create problems...



SOLVES THEM

WITH FIRST DOSE PAIN RELIEF



Urised is a problem solver; it brings patient comfort with first dose pain relief. Unlike newer antibiotics or sulfonamides, Urised does not create problems. It has a time tested record of minimal side effects. For over 50 years, Urised has created physician and patient confidence by providing effective therapy when needed.

FIRST DOSE PAIN RELIEF

URISED®

For G.U. Frequency–Urgency–Burning

Clinically effective for G.U. Therapy [1-5]

- **CYSTITIS**
- **PYELITIS**
- **TRIGONITIS**
- **URETHRITIS**

Each blue-coated tablet contains these active ingredients:

Atropine Sulfate	0.03 mg.	Methylene Blue	5.4 mg.
Hyoscyamine	0.03 mg.	Phenyl Salicylate	18.1 mg.
Methenamine	40.3 mg.	Benzoic Acid	4.5 mg.

Contraindications: Glaucoma, urinary bladder neck or pyloric obstruction, duodenal obstruction and cardiospasm. Hypersensitivity to any of the ingredients.

Warnings: Do not exceed recommended dosages.

Precautions: Administer with caution to persons with known idiosyncrasy to atropine and cardiac disease. While under this therapy the urine is blue; patients should be so advised to allay apprehension.

Adverse Reactions: Neither irritation nor untoward reactions have been reported; however, if pronounced dryness of the mouth, flushing, or difficulty in initiating micturition occurs, decrease dosage. If rapid pulse, dizziness or blurring of vision occurs, discontinue use immediately. Acute urinary retention may be precipitated in prostatic hypertrophy.

Dosage and Administration: Adults: Two tablets, orally, four times per day, followed by liberal fluid intake. Older children reduce dosage in proportion to age and weight.

How Supplied: Bottles of 100, 500 and 1,000 tablets.

References: (1) Sands, R.X.: New York St. J. Med. 61:2598-2602, 1961: (2) Renner, M.J., et al: Hosp. Topics 39:71-73, 1961: (3) Haas, Jr., J., and Kay L.L.: Southwest. Med. 42:30-32, 1961 (4) Marshall, W.: Clin. Med. 7:499-502, 1960: (5) Strauss, B.: Clin. Med. 4:307-310, 1957.

CONAL PHARMACEUTICALS, INC.
CHICAGO, ILLINOIS 60640

MANUFACTURERS OF URICEUTICAL® SPECIALTIES

MJ-GP-3

Achrocidin® Tablets and Syrup

Tetracycline HCl—Antihistamine—Analgesic Compound

Each tablet contains: ACHROMYCIN® Tetracycline HCl 125 mg.; Phenacetin 120 mg.; Caffeine 30 mg.; Salicylamide 150 mg.; Chlorothen Citrate 25 mg.

ACHROCIDIN Tetracycline HCl—Antihistamine—Analgesic Compound Tablets and Syrup are recommended for the treatment of tetracycline-sensitive bacterial infection which may complicate vasomotor rhinitis, sinusitis and other allergic diseases of the upper respiratory tract, and for the concomitant symptomatic relief of headache and nasal congestion. For children and elderly patients you may prefer caffeine-free ACHROCIDIN Syrup. Each 5 cc contains: ACHROMYCIN Tetracycline equivalent to Tetracycline HCl 125 mg.; Phenacetin 120 mg.; Salicylamide 150 mg.; Ascorbic Acid (C) 25 mg.; Pyrilamine Maleate 15 mg.

Contraindications: Hypersensitivity to any component.

Warning: In renal impairment, since liver toxicity is possible, lower doses are indicated; during prolonged therapy consider serum level determinations. Photodynamic reaction to sunlight may occur in hypersensitive persons. Photosensitive individuals should avoid exposure; discontinue treatment if skin discomfort occurs.

Precautions: Drowsiness, anorexia, slight gastric distress can occur. In excessive drowsiness, consider longer dosage intervals. Persons on full dosage should not operate vehicles. Nonsusceptible organisms may overgrow; treat superinfection appropriately. Treat beta-hemolytic streptococcal infections at least 10 days to help prevent rheumatic fever or acute glomerulonephritis. Tetracycline may form a stable calcium complex in bone-forming tissue and may cause dental staining during tooth development (last half of pregnancy, neonatal period, infancy, early childhood).

Adverse Reactions: *Gastrointestinal*—anorexia, nausea, vomiting, diarrhea, stomatitis, glossitis, enterocolitis, pruritus ani. *Skin*—maculopapular and erythematous rashes; exfoliative dermatitis; photosensitivity; onycholysis, nail discoloration. *Kidney*—dose-related rise in BUN. *Hypersensitivity reactions*—urticaria, angioneurotic edema, anaphylaxis. *Intracranial*—bulging fontanels in young infants. *Teeth*—yellow-brown staining; enamel hypoplasia. *Blood*—anemia, thrombocytopenic purpura, neutropenia, eosinophilia. *Liver*—cholestasis at high dosage.

Upon adverse reaction, stop medication and treat appropriately.

Lederle LEDERLE LABORATORIES, A Division of American Cyanamid Company, Pearl River, New York 10965

534-9

SYSTEMIC MANIFESTATIONS OF SJOGREN'S SYNDROME

A case of Sjogren's syndrome with widespread systemic manifestations is presented. The patient, a 56-year-old white man, had the classical triad of keratoconjunctivitis sicca, xerostomia with salivary gland swelling, and rheumatoid arthritis. There were pulmonary infiltrates, Raynaud's phenomenon, and a nonthrombocytopenic purpura. Protein abnormalities are described, with the usual finding of a low γ-globulin level. The patient was treated with methylcellulose eye drops, and small doses of thyroid and steroids.

HARRY RUCHELMAN, MD
FERENC GYÖRKEY, MD

SJöGREN'S SYNDROME is an uncommon disease characterized by keratoconjunctivitis sicca, xerostomia with or without swelling of the salivary glands, and rheumatoid arthritis. The diagnosis may be made when two of these three criteria are present.[1] It is apparent, however, that the syndrome can show widespread systemic involvement.

While exhibiting the classical features of Sjögren's syndrome, the following case is an interesting example of the extensive involvement of multiple organ systems sometimes seen in this disease; also, the patient is a man, and less than 10% of the cases of Sjögren's syndrome occur in males.[2]

Case Report: *History:* A 56-year-old white man, a teacher, was admitted to the Houston Veterans Administration Hospital on June 6, 1966, complaining of an exacerbation of his arthritis and of purpura.

The patient had noticed dryness of his eyes beginning in 1945. In 1953 he had bilateral swelling of the parotid glands, which persisted and was followed by swelling of the submaxillary glands. His first admission to the Houston VA Hospital was in October 1955 when chronic parotiditis was diagnosed. He was treated with antibiotics and with roentgen rays for a total of 450 R to the right parotid. He was readmitted in July 1956 at which time 300 R were administered to the left parotid. He returned in July 1960 for dryness of the eyes and mouth; again he was thought to have chronic parotiditis and was treated symptomatically. After leaving the hospital, the patient was seen by a private physician who prescribed 1 grain of desiccated thyroid daily which has been continued ever since.

In 1961, acute arthritis involving most of the peripheral joints, and Raynaud's phenomenon developed. The patient was hospitalized in another institution where a left parotidectomy was done. A study of the surgical specimen led to the diagnosis of Mikulicz's disease. Review of the microscopic sections showed that the usual architecture was extensively replaced by diffuse, mixed chronic inflammatory cell infiltrate in which lymphocytes and plasma cells predominated. Acinar cells and structures were not discernible; however, the ducts were present and showed squamous metaplasia and chronic inflammatory cell infiltration into the wall as well as in the lumina. The surrounding fibroadipose tissue showed infiltration with similar cells (Fig 1).

The patient was next hospitalized on Aug 11, 1964, because of arthritis and purpura. He complained of intermittent swelling and pain in the knees, ankles, and interphalangeal joints of the hands. A nonthrombocytopenic purpura was found, principally involving the lower extremities. He had low-grade fever and generalized lymphadenopathy. The latex agglutination test was positive. Three preparations for lupus erythematosus (LE) cells were negative. At this time the diagnosis of Sjögren's syndrome was first made. Treatment was symptomatic consisting of aspirin and bed rest.

He was next seen on Sept 28, 1964. At this time the chest x-ray showed bilateral lower lobe infiltrations extending towards the hila, and a mass on the left side (Fig 2). Skin tests with intermediate-strength PPD and fungal antigens were nonreactive. Cryoglobulins were present in the serum. Exploratory thoracotomy was done on Oct 30, 1964. A mass measuring 5 by 3 cm was found in the anterior segment of the left upper lobe. Additional smaller masses were palpable in the left lower lobe. Several mediastinal nodes also were palpable. Microscopic preparations from the lung biopsy revealed diffuse infiltration and partial replacement of the normal lung by dense, mixed inflammatory cell infiltrate in which the predominant cells were lymphocytes and plasma cells. The infiltrate was present in every bronchial and bronchiolar area in the biopsy specimen. In the intervening uninvolved lung tissue, the interalveolar septa were delicate. The medium-sized vessels in the uninvolved areas showed moderate hyperplasia of the media. The nodular infiltrate tended to become confluent and involved the vessels as well as the bronchi and bronchioles, and there was an increase in connective tissue elements and ground substance. Eosinophilic granulocytes were few. Special stains for microorganisms were not revealing (Fig 3).

The patient was admitted again on July 12, 1965, with the chief complaint of purpura which was treated with bed rest. However, after discharge the symptoms recurred and became more severe.

Other pertinent history included symptoms suggestive of hay fever, and occasional hoarseness. There was no history of drug reaction, nor of specific allergy. The family history was not pertinent.

Physical Examination: The patient was a middle-aged white man in no acute distress. The vital signs were normal. There was no alopecia. There was anhydrosis. The skin of the fingers was white and bloodless in a cool room. There were extensive small, discrete, purpuric lesions over the lower extremities. Rumple-Leede's test was negative. The conjunctivae were dry and Schirmer's test showed no evidence of lacrimation; the paper was completely dry at the end of five minutes. There was only superficial punctate keratitis at this time. The mucous membranes of the mouth, throat, and tongue were dry. The left parotid had been excised. The right parotid was not palpable. The submaxillary glands were slightly enlarged and not tender. The heart and lungs were within normal limits. The abdomen was soft and nontender. The liver and spleen were not palpable. There was soft-tissue swelling and tenderness with slight warmth and erythema over the right ankle. There was no inflammation of any other joint. Small, discrete, nontender cervical and axillary nodes about 2 cm in diameter were palpable bilaterally.

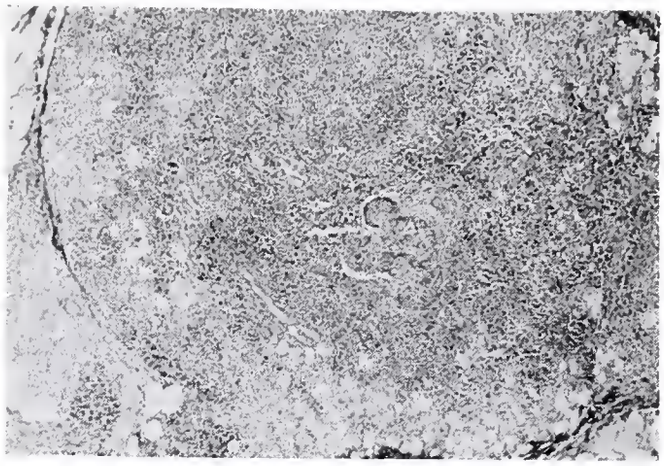


Fig 1. Fibroadipose tissue of the left parotid shows chronic inflammatory cell infiltration.

Laboratory: The electrocardiogram was normal. A roentgenogram of the chest showed progression of the dense bilateral infiltrate. Pyelograms were normal. The hemoglobin value was 15.2 gm/100 ml. There were 7,300 white blood cells/cu mm with 82% neutrophils, 9% lymphocytes, 7% monocytes, and 2% eosinophils. The sedimentation rate was 25 mm/hour. The platelet count was 213,000/cu mm. The urine was normal with a specific gravity of 1.025, and the blood urea nitrogen was 12 mg/100 ml. The bleeding and clotting times were normal and the Coombs' test was negative. The

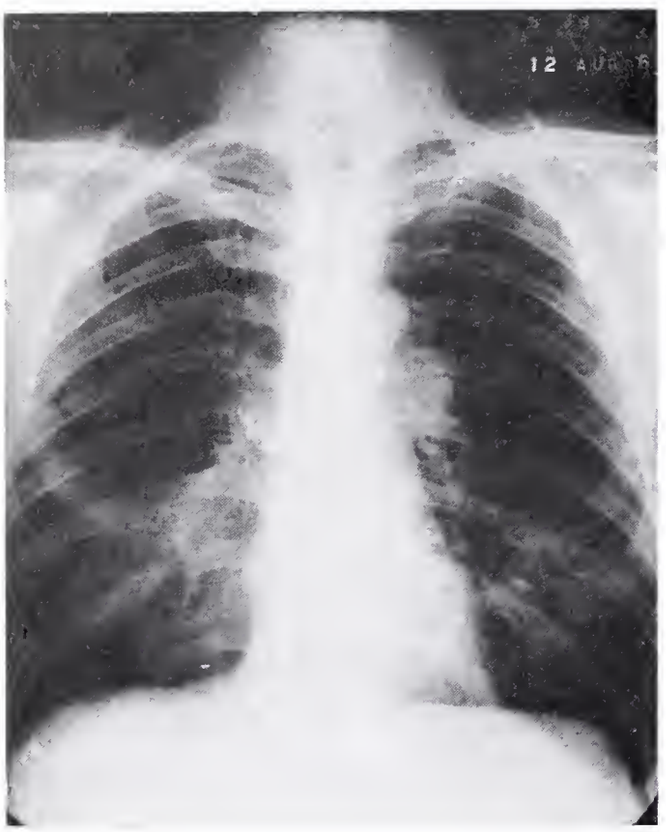
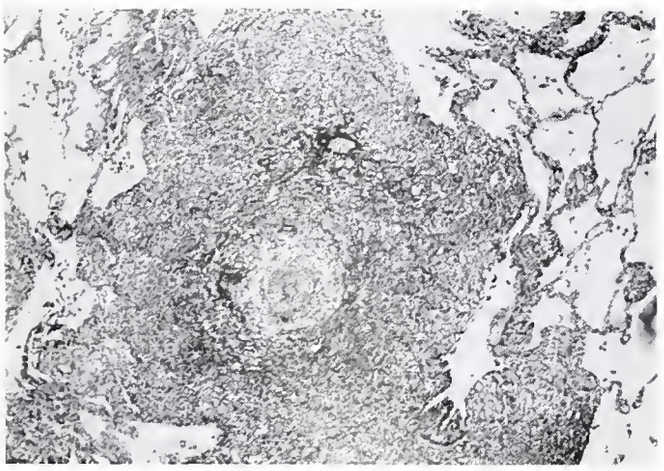


Fig 2. Roentgenogram of the chest (September 1964) shows infiltration in both lower lobes, and a mass on the left.

Fig 3. Lung biopsy specimen shows infiltration and partial replacement of normal lung by lymphocytes and plasma cells.



fasting gastric specimen showed no free hydrochloric acid, but there was 50 mEq HCl after histamine stimulation. The triiodothyronine sponge uptake was 34.3% (normal 28-37%). The 24-hour iodine 131 uptake was 10%, rising to 18% (normal 10-36%) after thyroid-stimulating hormone injection. Four preparations for LE cells were negative. The bentonite flocculation test for rheumatoid factor was positive with a titer of 1:256. The VDRL was nonreactive. The Sia test for macroglobulins was negative. Cryoglobulins were not found during this admission. The total protein (gm/100 ml) was 5.6, with albumin 2.8, α_1-globulin 0.3, α_2-globulin 1.0, β-globulin 0.8, and γ-globulin 0.7. Immunoelectrophoresis showed the following values (mg/100 ml): γG, 420 (normal 700-1,800); γM, 113 (normal 30-150); and γA, 270 (normal 50-500). A test for antinuclear antibodies was negative.

Hospital Course: The patient was treated with bed rest, methylcellulose eye drops, and 1 grain of thyroid daily. On June 16, 1966, prednisone 5 mg four times a day was added to the regimen. There was a complete remission of the signs and symptoms of arthritis. After a week of hormone therapy, the lymph nodes and the submaxillary glands were no longer enlarged. The patient then noted some slight return of sweating, and was pleased to announce that he could detect some body odor for the first time in 20 years. The pulmonary infiltrates diminished. The mucous membranes of the eyes and mouth remained dry. Raynaud's phenomenon persisted. The most persistent symptom at this time was purpura, but this too gradually and almost completely subsided. The steroid dosage then was decreased gradually until a maintenance dose of 2.5 mg of prednisone three times a day was established. The patient was able to return to full-time teaching on Sept 1, 1966.

Discussion: It is said of the systemic manifestations of Sjögren's syndrome that one may see purpura, Raynaud's phenomenon, achyla gastrica, alopecia, splenomegaly, leukopenia, and dryness of the skin and mucous membranes.[3] Methodical classification of the many observed systemic manifestations is attempted sometimes.[4] At present, most classifications do not specifically include pulmonary infiltrates, although a few excellent reports describing such lesions have been published.[1,5] These cases merit thoracotomy to rule out malignancy. Surgery was done in our case for this purpose, and

at the time of surgery there was no evidence of malignant lymphoma.

Nonthrombocytopenic purpura is accepted as the most common complication of this disease. The pathogenesis of the purpura is obscure, but is believed to be associated with hyperglobulinemia.[2,6] In our case there was severe purpura but the serum globulins were diminished.

Our patient had no free HCl in the fasting specimen, but free HCl did develop after histamine stimulation. Dryness of the skin and mucous membranes, lymphadenopathy, and Raynaud's phenomenon were present. There was no alopecia, splenomegaly, or leukopenia. Urinalysis, BUN, and pyelography gave no evidence of renal involvement, which usually takes the form of nephrogenic diabetes insipidus.[7] There was no obvious thyroid disease in our patient.

There is frequent comment on the pathological similarity between Hashimoto's thyroiditis and Sjögren's syndrome.[2] Antithyroglobulin antibodies have been found in both conditions, suggesting an autoimmune mechanism. Autoimmune antibodies presumably are formed by the γA fraction which was not altered quantitatively in our patient.

Sjögren's syndrome is a disorder related to the connective tissue. Occasionally, association with one of the connective tissue diseases other than rheumatoid arthritis is noted.[8-10] As in all connective tissue diseases, we may expect to find abnormalities in the protein fractions of the serum. This, to a degree, is well illustrated by the case presented. However, in some respects, our case is more remarkable for protein abnormalities which are absent than for those present. The presence of rheumatoid factor is accepted almost by definition.[8,11] Cryoglobulins were found in the serum in 1964, but none were present during his 1966 admission despite the persistence of Raynaud's phenomenon. The hypoproteinemia and particularly the striking depression of γ-globulins are most unusual in Sjögren's syndrome. Antinuclear antibody, present in 75% of the cases of Sjögren's syndrome, was not found.[2,8,12]

The presence of abnormal proteins may predispose to the development of lymphoma.[1,2] It has been suggested that malignancy is more likely to occur in those patients that show a low level of γ-globulin, and where radiotherapy has been administered.[5] In this regard our patient will require continued observation.

Following parotidectomy in 1961, pathological study of the parotid gland led to the diagnosis of Mikulicz's disease. There is no inconsistency here, inasmuch as Mikulicz's disease and Sjögren's syndrome are identical pathologically. Clinically, one may consider Mikulicz's disease as a forme fruste of Sjögren's syndrome.[13]

We obtained a good therapeutic response using steroids and thyroid in small doses. These results have been noted before, and we think that this regimen is indicated for the severe arthritic and systemic manifestations of Sjögren's syndrome.[14]

REFERENCES

1. Bunim JJ, Buchanan WW, Wertlake PT, et al: Clinical, pathologic, and serologic studies in Sjögren's syndrome, Ann Intern Med 61:509-530, 1964.

2. Talal N: Sjögren's syndrome. Bull Rheum Dis 16:404-407, 1966.

3. Vanselow NA, Dodson VN, Angell DC, et al: A clinical study of Sjögren's syndrome. Ann Intern Med 58:124-135, 1963.

4. Clinicopathologic conference. Sjögren's syndrome. Amer J Med 37:578-591, 1964.

5. Talal N, Bunim JJ: The development of malignant lymphoma in the course of Sjögren's syndrome. Amer J Med 36-529-540, 1964.

6. Strauss WG: Purpura hyperglobulinemia of Waldenstrom; report of a case and review of the literature. New Eng J Med 260:857-860, 1959.

7. Shearn MA, Wu-Hao T: Nephrogenic diabetes insipidus and other defects of renal tubular function in Sjögren's syndrome. Amer J Med 39:312-318, 1965.

8. Bunim JJ: Heberden oration. A broader spectrum of Sjögren's syndrome and its pathogenetic implications. Ann Rheum Dis 20:1-10, 1961.

9. Shearn MA: Sjögren's syndrome in association with scleroderma. Ann Intern Med 52:1352-1362, 1960.

10. Gahagen RB: Sjögren's syndrome and lupus erythematosus. A case report. Arch Intern Med 115:235-238, 1965.

11. Kunkel HG: Immunological aspects of connective tissue disorders. Fed Proc 23:623-626, 1964.

12. Bloch KJ, Wohl MJ, Ship JI, et al: Sjögren's syndrome. I. Serologic reactions in patients with Sjögren's syndrome with and without rheumatoid arthritis. Arthritis Rheum 3:287-297, 1960.

13. Hemenway WG: The parotid gland in Mikulicz disease and Sjögren's syndrome. Ann Otol 69:849-869, 1960.

14. Denko CW, Bergenstal DM: The sicca syndrome (Sjögren's syndrome). Arch Intern Med 105:849-858, 1960.

Dr. Ruchelman, 282 East 35th St, Brooklyn, NY 11203.

Dr. Györkey, Department of Pathology, Baylor College of Medicine, Houston, Tex 77025.

NEURO

AFTER YEARS OF CLINICAL practice, I realized that the only way to understand patients' feelings and behavior is to see them as a result of parental attitudes. I was impressed by how much it means whether a parent trusts or mistrusts, has confidence or doubt and disappointment in his child. For instance, I began to see that parental worry and insecurity lead to anxiety, parental blame to anger and guilt, parental doubt and dissatisfaction to an emotional paralysis and obsessiveness.

The following cases illustrate that we feel and see ourselves as our parents did, because we assimilate their attitudes until they become not only ours but us. It becomes the basic experience that we repeat and reexperience throughout life. I see neurosis as an assimilated negative parental attitude.

Since thousands of articles have been written on the general subject of mental illness,[1] I will not attempt to review the literature; a few good reviews have been published quite recently.[2,3] The prevalent approaches now are mostly biological, genetic,[4] or psychoanalytic instinct libido theory.[5,6] I will describe only my own observations leading to an assimilative view of neurosis, and present a few illustrative cases. The case reports are not in stereotype form; rather, the intention is to show what is meaningful for the patient—what he feels and experiences.

Case Reports: *Case 1:* Pat is a 32-year-old married woman; a hypochondriac since childhood, she lives in constant fright and dread of disease and death, looking for reassurance and not finding it.

Pat had surgery five times in seven years, innumerable x-rays, laboratory tests, physical examinations, consultations, and hospitalizations, without having anything discovered, proved, or solved. She married a physician to solve her problems and find reassurance, but he gave up treating her long ago. Her mother, age 62, is healthy but still worrying about herself and Pat.

Pat lives in a world of her own, almost detached, related to the outside world only through her anxiety and fear.

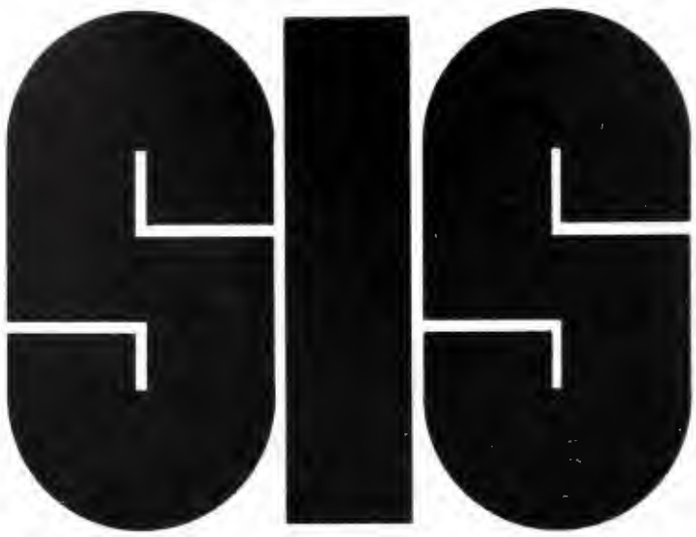
"I am lying on the bed; the window is open. It is almost dark now. I am afraid to move. I have been having these chest pains for two days, a kind of a steady, burning sensation on the left side. It gets worse when I move or take a breath. Then suddenly I run down to the street. It is only five o'clock yet already getting dark and raining. The wind blowing through my coat. My face, my hair, and my dress get soaking wet, but I just can't wait, I have to go to a doctor. I am standing in the crowded subway going to Manhattan. I am just as afraid of the doctor as of the disease, since everything depends on him. I am not thinking any more—sitting in a long, corridor-like, dark waiting room with a row of chairs filled with patients. I am so frightened that I am almost blinded. I can hardly see their faces, just blurred shapes, colors, and forms. I feel my heart beating. It isn't pain any more. I am sweating and shaking all over.

"He calls me in. I am mumbling, hearing my

J. EMERY BREITNER, MD

AN ASSIMILATIVE VIEW OF NEUROSIS

Assimilation of negative parental attitudes may be an important factor in the etiology of neurosis. Several case reports indicate a close relationship between such attitudes and emotional illness. For example, a child feels threatened if his parents are insecure and doubtful of their ability to take care of him, and assimilation of their attitudes can lead to extreme anxiety.



own voice, seeing his face, not even understanding what he is talking about. Then I am out again in the waiting room, sitting and waiting. It is getting darker and darker. I have to wait for the results. Finally he comes out and tells me I can go home; everything is all right.

"I go home relieved, tired, exhausted but happy, I am happy for a day and a new doubt comes up again and a new fear."

For Pat it is a way of life. When she has anxiety she goes to a doctor for reassurance. After the reassurance a new doubt, insecurity, and anxiety comes up. It is a reexperience of maternal attitudes.

"I remember the same feeling when I was a child taken to the hospital early in the morning—my mother holding my hand, dragging me along the street to the red brick building of the hospital and walking through the gate into the waiting hall, sitting on a white bench listening to children cry, waiting and waiting, being undressed, put on a white cold table and white walls, white shades, people dressed in white, smelling ether, alcohol and blood. And going again and again, waiting in anxiety; the doctor always telling my mother the same thing: Nothing wrong with her, take her home. But she just couldn't believe that, she needed reassurance twice a week."

Pat assimilated this maternal insecurity, doubt, and a threat. Mother just wasn't able to take care of her. Mother was never sure or confident of anything and, frightened herself, was looking for reassurance. The irony of neurosis is that no matter how painful it is, this is the only meaningful experience and relationship between Pat and her mother. This is the experience which has to be repeated, reexperienced over and over again. The negative parental attitude of threat produced neurosis in the form of excessive anxiety.

Case 2: Walter is 20 years old, a college student who lost interest in his studies and hope for the future.

"I don't hope or wait for anything. I just go to classes and sit upstairs in the auditorium close to the open window, looking out at the trees and at the radiant sunshine. It is so peaceful and detached. I sit there during the lecture not hearing a word any more, walking out, forgetting any goal or purpose. I sit on the terrace of the coffee shop on the plaza, letting the whole crowd go by. I had enough, not hoping anything, just walking to the park, sitting down on a bench, letting the sunshine warm up my face, gazing, seeing little children playing in the dust. I had no hope; nobody ever gave me any. When I was a baby mother went to work and left me with relatives. I saw her only on the weekends. I remember waking up in the crib, crawling out on the floor, crying, looking for my mother, and finding nobody. I felt so hopeless and lost. I remember her taking me to the hospital, sitting on a white bench, and her going out for cigarettes and Coke and never coming back. I didn't see her for weeks. Even at four when my parents separated, my mother took me down to the country to relatives, kissed me goodbye and left me there for months. I still remember the radiant

sunshine, the early June, the shady path in the woods, walking with other children up the hill, the tall grass, and climbing up to the rocks and feeling so abandoned and so utterly hopeless. I could never count on her and she saw no future or hope herself. A scared, small, helpless woman living alone in a furnished apartment, musty and dingy, sitting in the window talking about dying. I knew I felt she couldn't protect me; she couldn't protect herself, either."

This is not just a fleeting mood for Walter but a basic experience, a reexperience and assimilation of parental attitudes of insecurity, hopelessness, and abandonment.

Case 3: Carol, at 22, is paralyzed by fear, unable to move or act. She is married, has an infant daughter, and lives in a Long Island suburb near the airport.

'It's morning again and the sun breaks through the curtains. I close my eyes and turn around, throwing the cover over my head, trying to sleep, not wanting to get up and face another day. I close my eyes and try to forget the shopping, the laundry, the baby crying, the plumber hammering in the basement, and the gardener mowing the lawn in the back yard. The phone is ringing, ringing; I don't pick it up any more. I am confused, bewildered, not knowing what to do.

"I am always busy, driven ever since I can remember, driven to the point of madness.

"As a child I had to be busy all the time. Nothing was enough for my parents—going to school, coming home, taking piano lessons, playing tennis, doing my homework. At night Dad came home looking at me, doubting, asking: 'What did you do today?' It wasn't just a question but a doubt.

"Then came the examination of my homework, especially the math and English. He sat in an armchair, his face getting red, seething

with anger, trying to keep his voice down. 'You idiot, you moron, you don't start a sentence with an "and" or "because." When will you learn that? Write the whole page again.' So I sat down. I wrote it again, trying to concentrate, trying to write what would please him, but nothing pleased him. I was trying to wrack my brain out sweating sentences with shaky hand and hardly able to write down one sentence. He was there standing above me with fury and outrage when I made a mistake. I just sat there looking at the white paper, the letters whirling and blurred before my eyes, unable to concentrate, watching a patch of saffron-colored light resting on the corner, watching the window frame and the dark shadows of shrubs outside. I couldn't think, I couldn't concentrate or write any more.

"I could never please my parents, they always wanted more than I would give."

It is quite understandable that Carol couldn't move, can't act, because anyone meeting constant disapproval and dissatisfaction would get paralyzed. It is not the demand itself which is so harmful, but the excessiveness of the demand; the doubt and the dissatisfaction lead to an emotional paralysis, doubts, and an inability to do anything.

Discussion: I think these cases illustrate that there is a close connection, possibly a cause-effect relationship, between parental attitudes and emotional illness. I think we grossly underestimate the role of assimilation in favor of instinct theories. Since instincts are part of our life and we all have the same instincts, they will not explain the complex and specific differences in our feelings and behavior. The difference lies not in the instinct, but in the variety of parental attitudes and the way we assimilate them.

For instance, in Pat's case it was her mother's insecurity, inability to take care of her, and the constant threats and warning that led to anxiety. She could find no security in her mother.

Walter felt depressed and hopeless, but where could he find hope and confidence if mother always let him down, disappeared at the crucial moment, and abandoned him when he needed her most?

Carol couldn't move and stopped doing anything. It wasn't the parental demand that stopped her, but the dissatisfaction and the fact that the demand was excessive. It was excessive not by a realistic objective measure, but because the parents were never satisfied no matter what she did. Since she could never satisfy her parents or make them happy, there was no point in doing anything.

The role of parental attitudes is not a simple one, since a number of different and contradictory attitudes can effect a variety of symptoms. Of course other factors might enter into the picture, but the assimilated parental attitude still seems the most significant to me.

I believe that the assimilative view gives a better understanding of neurosis, and might also offer a more practical way to prevent it.

REFERENCES

1. Bellak L, ed: Schizophrenia, New York, Logos Press, 1958.
2. Grinker RR Sr.: An essay on schizophrenia and science. Arch Gen Psychiat 20:1-24, 1969.
3. Arieti S: The present status of psychiatric theory. Amer J Psychiat 124:1630-1639, 1968.
4. Kallmann FJ: Heredity in Health and Mental Disorder. New York, WW Norton, 1953.
5. Freud S: "New introductory lectures on psychoanalysis," in: The Complete Psychological Works of Sigmund Freud. London, Hogarth Press, 1964.
6. Fenichel O: The Psychoanalytic Theory of the Neuroses. New York, WW Norton & Company, Inc, 1945.

Dr. Breitner, 22 Pine Drive North, Roslyn, NY 11576.

"Mommy,
I don't feel
so good..."

Young heads and stomachs often can't manage the pace of hurry-up-and-stop for the light... or going up hill, down hill, and around the curve. All too quickly a pleasant drive can become an upsetting trip. *Motion sickness makes children—and their parents—absolutely miserable.*

You can help make young patients better passengers with

BONINE®

(MECLIZINE HCl)

Bonine protects most patients—young or old—against nausea and vomiting up to 24 hours with a single dose. Pleasant-tasting Bonine tablets are chewable. They can be taken anytime, anywhere, without water. In difficult cases, multiple daily doses may be necessary for maximum response.

Precautions: Although the incidence of drowsiness and atropine-like side effects such as dry mouth and blurring of vision is low, the physician should alert the patient to the need for due precautions when engaging in activities where alertness is mandatory. *Use in women of childbearing age:* In weighing potential benefits vs. risk in women of childbearing age, consider the fact that a review of available animal data reveals that meclizine exerts a teratogenic response in the rat. In one study a dose of 50 mg./kg./day (50 times the maximum recommended human dose) produced cleft palate in 2 of 87 fetuses when administered to the rat at critical times during the first 15 days of gestation. At doses of 125 mg./kg./day, meclizine will produce 100% incidence of cleft palate in the rat. At doses of 25 mg./kg./day, decreased calcification of the vertebrae and relative shortening of the limbs were also produced in the rat, but experts disagree as to whether this is a teratogenic response. While available clinical data are inconclusive, scientific experts are of the opinion that this drug may possess a potential for adverse effects on the human fetus. Consequently, consideration should be given to initial use of a nonphenothiazine agent that is not suspected of having a teratogenic potential. In any case, the dosage and duration of treatment should be kept to a minimum.

Supply: 25 mg. scored tablets.

More detailed professional information available on request.

Pfizer **LABORATORIES DIVISION**
New York, N.Y. 10017

CLINICOPATHOLOGIC CONFERENCE

The patient, a 12-year-old boy, complained of easy bruisability. As an infant he had β-streptococcus infection with omphalitis. At his latest admission, his serum haptoglobin level was low and he had evidence of intravascular hemolysis. Barium studies demonstrated a mass in the stomach. An operation was done.

PROTOCOL: *Dr. Friedewald:* The patient is a 12-year-old boy admitted on Oct. 15, 1967, with the chief complaint of easy bruisability. He was the product of a normal, term delivery, but septic arthritis developed about two weeks after birth. β-Hemolytic streptococci were cultured from the involved joint, blood, umbilical cord, and throat. He was treated with antibiotics and had an uneventful recovery, although his spleen was palpable 2 cm below the costal margin.

He did well until age 4 when he was seen at Texas Children's Hospital with an upper respiratory infection. Again the spleen was palpable, 1 cm below the costal margin. A blood smear showed a decreased number of platelets, but there was no further evaluation at that time.

At age 5 he returned to Texas Children's Hospital with the chief complaint of chronic fatigue and easy bruisability. His spleen was again palpable. His hemoglobin level was 14.7 gm/100 ml, white blood cell count (WBC) 6,200/cu mm with 51% segmented neutrophils, 42% lymphocytes, and 73,000 platelets/cu mm. Bleeding time was 2 minutes, 10 seconds; results of liver function tests were all normal. Serum electrophoresis showed a high normal γ-globulin level. Prothrombin time was normal. Bone marrow showed erythroid hyperplasia with an adequate number of megakaryocytes. No storage cells were seen in the marrow. An upper gastrointestinal series and intravenous pyelogram were normal.

He was discharged and was seen regularly by his family doctor until age 12, when he was referred to Methodist Hospital for evaluation of an enlarging spleen.

At the time of admission his only complaint was easy bruisability, especially over the lower legs. He denied any nose bleeds, hemoptysis, melena, or hematuria. He was never known to have been anemic. He denied any gastrointestinal symptoms except for a feeling of fullness after meals. There was no weight loss, easy fatigability, or abdominal pain. His growth and development had been normal. He had an excellent scholastic record and actively participated in sports, including football. He was taking no medications. Family history was significant in that his father, a grandfather, an aunt, and an uncle all had coronary artery disease. His mother died of carcinoma of the ovary at age 37 and both grandmothers, one of whom had died, had gastrointestinal malignancies. He had one brother and two sisters in good health.

Physical examination showed blood pressure 120/80 mm Hg, pulse 80/minute and regular, and respirations 12/minute. He appeared to be well developed and in no acute or chronic distress. Head, eyes, ears, nose, throat, and neck were normal. The chest was clear. The heart was not enlarged and there were no murmurs. The liver edge was just palpable below the right costal margin. The spleen was felt 10 cm below the left costal margin, was moderately firm and nontender. There was no ascites. There were numerous bruises over the lower extremities. There was no adenopathy.

Laboratory studies showed the following values: hemoglobin 12.9 gm/100 ml; hematocrit 37%, WBC 3,600/cu mm, with 42% segmented neutrophils, 52% lymphocytes, 2% monocytes, 4% eosinophils, and 1.3% reticulocytes; and platelets 58,000/cu mm. Urinalysis showed no abnormalities. Total serum bilirubin was 0.8 mg/100 ml; alkaline phosphatase 3.7 Bessey-Lowry units; serum glutamic oxaloacetic transaminase 19 units; thymol turbidity 9, bromsulphalein retention 1%; serum protein electro-

Vincent E. Friedewald, MD
Phil Davis, MD
John Roehm, Jr, MD
Robert E. Fechner, MD
Ethan A. Natelson, MD
Montague Lane, MD, Guest Editor
Harlan J. Spjut, MD, Guest Editor

phoresis normal; blood urea nitrogen 20 mg/100 ml; creatinine 1.1 mg/100 ml; cholesterol 180 mg/100 ml; lipids 427 mg/100 ml; prothrombin time 47%; and partial thromboplastin time 41 seconds (normal).

The thromboplastin generation time was as follows:

	2 min	4 min	6 min
Control	18.9	9	8.4
Patient	31.5	12	12.5
Patient AHF* + control PTC†	31.0	11	11.5
Control AHF + patient PTC	10.0	8.4	8.5

Other laboratory values included: serum iron 84 μg/100 ml; total iron-binding capacity 237 μg/100 ml; fibrinolysis negative; serum haptoglobin negative; fibrinogen 150 mg/100 ml. There was a trace of hemosiderin in the urine; Coombs' test was negative; bone marrow aspirate showed normoblastic hyperplasia and plentiful megakaryocytes. A peripheral smear was unremarkable except for decreased platelets.

A chest x-ray was normal except for some deformity of the right fourth rib posteriorly where it joins the spine; a roentgenogram of the kidneys, ureters, and bladder showed splenic enlargement. Studies of the upper gastrointestinal tract showed no esophageal varices, normal small bowel, and a large, irregular, lobulated mass in the gastric fundus near the cardia. An intravenous pyelogram was normal except for extrinsic pressure of the spleen on the left kidney.

The hospital course was uneventful and on the 15th day an exploratory laparotomy was performed.

Discussion: *Dr. Davis:* The story is essentially that of a 12-year-old boy admitted for evaluation of splenomegaly. His medical history goes back to the neonatal period when, two weeks after delivery, he had β-hemolytic streptococcal sepsis for which he was treated and apparently recovered. Splenomegaly was noticed at that time, with the spleen down some 2 cm. Each time he was seen after that, splenomegaly was present. When he was 4 years old, the peripheral blood film showed some decrease in the number of platelets. Throughout most of his life, apparently, his parents had noticed that he bruised rather easily. Sometime during childhood the spleen enlarged so that at age 12 the patient was admitted to the hospital for investigation of splenomegaly; at that time the spleen was palpable 10 cm below the costal margin and there also were some abnormalities in the peripheral blood. On this admission a lesion in the stomach was found; a gastrointestinal series done when the patient was 5 years old did not show this lesion.

I think there are a few things which we have to try to explain. First, I would like to try to explain some of the peripheral blood findings and then try to relate them to whatever pathological lesions might be present in the spleen, in the stomach, or in both. In brief, the findings were: platelet depression (apparently having been present since age 2); prolongation of prothrombin time (although not present at age 5); depression of fibrinogen; a slightly abnormal thromboplastin generation test; hemosiderinuria; absent serum haptoglobins; and leukopenia. We have to try to explain these findings and relate them, if possible, to the sepsis which he had during the neonatal period. In addition, there is familial history of coronary artery disease and gastrointestinal malignancies; we have to explore the possibility that this boy's disorder might be related to these.

The first thing which I would like to consider is his coagulation disorder. Although he did have a normal prothrombin time at 5 years of age, at the time of this admission, it was abnormal; we would assume that this probably is the result of prothrombin or blood-clotting factor V deficiency. Although his partial thrombo-

*Antihemophilic factor.
†Plasma thromboplastin component.

plastin time of 41 seconds was normal, he did have abnormal thromboplastin generation and this was corrected by supplying antihemophiliac globulin. In all probability he had a factor VIII or antihemophiliac globulin deficiency. In addition, the fibrinogen level was slightly low, and the platelets had been low throughout his life. Thus, there is evidence for deficiency of four or five factors. When I say five, I speak of the possibility of both prothrombin and factor V deficiency, as manifested by the prolongation of the prothrombin time. This combination of factor deficiencies leads me to believe that this boy had intravascular coagulation or consumption coagulopathy. This has been described in the past several years; the plasma factors are consumed in the process of intravascular coagulation. Testing will show an absence or a reduction of these factors in the affected individual. The bone marrow finding of adequate megakaryocytes is compatible with this, as the thrombocytopenia is a result of abnormal consumption of platelets and not a result of decreased production. Fibrinolysins were not present in this patient. Although abnormal fibrinolysis does take place in a considerable number of patients with consumption coagulopathy, it cannot be demonstrated in some and in some it probably does not take place. It would have been helpful to have a euglobulin clot-lysis test for breakdown products of fibrinogen. This might have demonstrated some fibrinolysis, but this is not essential to make the diagnosis of consumption coagulopathy. Therefore, I would say that at the last admission, this boy did have consumption coagulopathy.

What about the hemosiderinuria and the absent serum haptoglobins? Hemosiderinuria is a manifestation of chronic intravascular hemolysis. The process of removal of aged normal red cells is one in which the reticuloendothelial system takes up these cells and breaks them down and returns the iron to the body stores. Heme is broken down into iron and into bilirubin, and the globulin is returned to the amino acid pool. This process is called extravascular hemolysis. When red cells are destroyed within the circulating bloodstream, hemoglobin is released into the bloodstream and combines with serum haptoglobin which is taken up later by the reticuloendothelial system. There is a limit to the amount of serum haptoglobin available, and if red cell destruction within the vascular compartment exceeds this, free hemoglobin circulates and appears in the glomerular filtrate. This is reabsorbed by the proximal tubular cells where it is broken down and hemosiderin granules are formed. These granules are later excreted into the urine where they can be demonstrated. This process requires time; it does not appear immediately following an acute episode of intravascular hemolysis. Thus, hemosiderinuria is generally looked upon as a result of chronic or day-to-day intravascular breakdown of red cells. As there is a limit on the ability of the body to synthesize haptoglobins, the release of hemoglobin, if of sufficient quantity, may result in depressed or absent serum haptoglobin. A few cases of congenital ahaptoglobinemia have been described, but it is an extremely rare disorder, and I will dismiss it as a possible cause of this boy's ahaptoglobinemia or his depressed haptoglobin. Thus, it appears that some intravascular hemolysis was taking place. One might ask, if he had intravascular hemolysis, why was he not anemic? Why were the serum iron and the iron binding capacity normal? We know that if the rate of red cell destruction within the vascular compartment is twice normal, it is sufficient to combine with all the haptoglobin. Also, we know that most individuals are capable of adjusting or compensating for increased red cell destruction up to six times normal. Therefore, in this case red cells could have been destroyed at twice or three times the normal rate, with concomitant utilization of haptoglobin and without concomitant anemia. Now if the patient is excreting iron in the urine, why does he not have iron deficiency? As the urine hemosiderin was said to be a trace, I assume that he was excreting so little iron that he was able to keep up with the loss through his dietary intake of

iron. This accounts for a serum iron of 84 μg/100 ml with a normal iron binding capacity. The one reticulocyte count recorded was not elevated, but again if he were only destroying his red cells at two to three times the normal rate and we only have one or two reticulocyte counts, it is entirely possible that we might not find a significant elevation. So I think that this boy, in addition to having consumption coagulopathy, had intravascular hemolysis.

I believe these two phenomena can be related. A person who had intravascular coagulation has thrombi formed with red cells enmeshed in the thrombi; the red cells are damaged and destroyed, and their products released within the vascular compartment. This occurs in most cases of consumption coagulopathy. What about the depression of the WBC? He did not have this at 4 or 5 years of age, but did on the last admission. At this time his spleen was quite large and I suggest that the depression of the WBC was the result of hypersplenism. How are we going to relate the diagnosis of consumption coagulopathy and intravascular hemolysis with splenic enlargement and a tumor in the stomach? First, let us consider the spleen. Splenic enlargement brings to mind primary hematological disorders. But, we can dismiss such diseases as chronic myelocytic leukemia, myelofibrosis, polycythemia vera, chronic lymphocytic leukemia, or acute leukemia, as the boy did not have the peripheral blood findings to suggest these diseases. It seems unlikely that the patient had chronic granuloma involving the spleen for these several years. He apparently was healthy and developed well. Likewise, I do not think that he had some residual process here from his β-hemolytic streptococcal sepsis or some other type of chronic infectious involvement of the spleen.

What about reticuloendotheliosis? The one that we should consider most strongly is Gaucher's disease. However, the patients who have the onset of manifestations of Gaucher's disease early in life usually die early, and also on two bone marrow examinations there were no

Fig 1. This film, taken in October 1967, shows a lobulated sessile mass in the gastric fundus. It was considered to be intramural.

Gaucher's cells. So I think it is unlikely that he had Gaucher's disease.

What about tumors of the spleen? First, metastatic or secondary tumors of the spleen are uncommon, and it is difficult for me to conceive of this boy having a metastatic tumor of the spleen and surviving so long. If he did have a splenic tumor, one would have to consider the primary tumors. Of the primary tumors, the most frequent are lymphomas, hemangiomas, and angiosarcomas. Again, I think it is unlikely, given the duration of the complaints, that this boy had lymphoma involving the spleen. As I surveyed the literature I found it frequently stated that hemangioma is one of the more common tumors of the spleen. I found few if any descriptions defining hemangioma and its manifestations. But this could well account for the intravascular coagulation and hemolysis. It has been known for some time that thrombocytopenia is sometimes associated with cavernous hemangioma. This was described in 1940, by Kasabach and Merritt,[1] and the name Kasabach-Merritt has been attached to the syndrome of thrombocytopenia associated with giant hemangioma. Their cases did not have involvement of the spleen, but the term has been attached to the entity regardless of the location of the hemangioma. Since then it has been demonstrated that many of these patients in addition to thrombocytopenia have intravascular coagulation. I believe that we must consider hemangioma of the spleen with associated consumption coagulopathy and intravascular hemolysis. There are many things which are difficult for me to explain, but the finding that really confuses me, and which I imagine upset the physicians attending this patient when he was in the hospital, was the finding on the upper gastrointestinal series.

Dr. Roehm: Radiographic examination of the upper gastrointestinal tract and small bowel was performed. Examination of the esophagus with thick and thin barium revealed only displacement of jejunal loops by the moderately enlarged spleen. In the gastric fundus, a 5 by 6 cm mass was encountered (Fig 1). This was lobulated, sessile, and sharply marginated in appearance and was thought to be intramural in location. The usual intramural lesions such as leiomyoma, neurofibroma, lipoma, or gastric duplication usually are rounded and smooth in appearance, except for occasional small ulcerations. As viewed in many projections, this lobulated mass appeared to have vascular channels; the presence of a vascular lesion of the stomach was suspected. The possibility of a cavernous hemangioma, as suggested by Dr. Davis, was entertained. Other diagnostic considerations were an arteriovenous malformation, and isolated gastric varices. The presence of varices in the stomach without demonstrable esophageal varices is an uncommon entity, but is a strong possibility in this case.

Dr. Davis: Dr. Roehm, are there any flecks of calcium in the gastric mass?

Dr. Roehm: On the plain films of the abdomen, there was no evidence of calcification in or around the mass.

Dr. Hersh: Did you review the films from age 5?

Dr. Roehm: We had only outside films obtained approximately one week before admission, and there was no evidence of change in the appearance of the lobulated mass.

Dr. Davis: Thank you. In considering this mass in the stomach, there are several possibilities and I will simply go down the list of those which I considered and dismissed for various reasons, and not go into detail concerning my reasoning. I considered lymphoma, gastric carcinoma (which, of course, would be quite rare in this age group), aberrant pancreatic rest (usually these are adjacent to the pyloric outlet), bezoar (but this tumor seemed to be fixed in its location), carcinoid, enterogenous cyst, glomus tumor, leiomyoma, lipomas, and neurofibromas. There are a number of things against all of these, and there are some things against his having a hemangioma of the stomach. One is its rarity, but so are the other tumors in a boy this age. Another is that most patients with gastric tumors present with bleeding, and we do not have any evidence that he bled; but

again that does not entirely rule any of them out. One of the main things against diagnosing this as something other than hemangioma is that there was a great deal of evidence that he had a hemangioma involving the spleen, and I think that I would prefer to say that he had a single disorder rather than two. We know that hemangiomas frequently involve multiple sites.

In summary, I think that this boy had a benign disease because of its long duration, that he had intravascular coagulation and hemolysis, and this was related to cavernous hemangiomata and probably not related to his neonatal sepsis. I talked to a pediatrician about neonatal sepsis and was informed that any child 2 weeks old could have β-hemolytic streptococcal sepsis without predisposing cause. Whether the enlarged vascular channels in the spleen might have made this boy more susceptible to infection, I do not know, but I cannot relate this to his neonatal sepsis. Also, I cannot tie this in with the familial history of coronary artery disease or gastrointestinal malignancy. Perhaps Dr. Hersh would like to correct me or comment, but I am not aware of malignancies of the stomach that are familial. My diagnosis is giant hemangioma involving the spleen and stomach with resultant intravascular coagulation or consumption coagulopathy and with intravascular hemolysis. I am hard pressed for a second choice. I suppose that I would consider Gaucher's disease as a possibility. I believe the only answer is to see what this boy had in his abdomen, and that was what was done.

Dr. Eknoyan: Could the spleen be secondarily enlarged as a result of the hemangioma in the stomach?

Dr. Davis: I do not know, and I really did not consider that possibility. Dr. Roehm pointed out that at 5 years of age an upper gastrointestinal series did not demonstrate the tumor. We know that these vascular tumors grow, and I would assume that he did have a hemangioma in the stomach at age 5, but that it probably was not large enough to be seen on the roentgenograms.

Dr. Lidsky: Would you consider an intracorpuscular defect as the cause of the hemolysis?

Dr. Davis: No, I think it is extracorpuscular; this is the result of the intravascular coagulation, and this happens quite frequently.

Dr. Marrack: Do you have the slide of the peripheral blood? I find it difficult to believe that it was normal.

Dr. Davis: I should have asked for a slide, but I did not. Again, the degree of abnormality without his having enough destruction to cause anemia probably would be moderate, and it might well be overlooked by the technologists. I am not trying to get off the spot, but Dr. Alfrey may have seen this slide.

Dr. Alfrey: Part of the generation of all these theories about what this patient had was the fact that we thought there were a few fragments of platelets in the peripheral blood. There were some present.

Dr. Fechner: This is not a very satisfactory case for the pathologist because the basic abnormality in this patient still has never been visualized. Nonetheless, we can reconstruct events leading to the anatomic abnormality which was the basis for this boy's problems.

At the time of surgery, the spleen welled up through the incision and was removed. It weighed 500 gm, but apart from the size it was grossly and microscopically normal. There was neither vascular malformation nor storage disease. Having disposed of the spleen, the mass seen by x-ray in the stomach was examined. On palpation it was obvious that it was not a solid tumor but was formed by veins which collapsed when compressed by the surgeon's fingers. The distribution of the engorged veins was what one would expect with portal vein obstruction. There was enlargement of omental veins, the splenic vein, and the veins over the stomach, especially in the superior portion of the stomach. At this point the diagnosis of portal hypertension was made and no further exploration of the portal vein was done. A splenorenal shunt was completed.

In spite of the fact that the portal vein was not seen, I believe this patient had cavernous transformation of the portal vein. It is a rather poor term in that the portal vein is not trans-

Fig 2. This film was taken in June 1968, eight months after operation; the fundal mass has disappeared.

	Before	After		
	10-20-67	10-30-67	11-4-67	6-6-68
Prothrombin time (sec)	15.2		12.4	14.2
Plasma fibrinogen (mg/100 ml)	125	145	330	300
Platelet count (cu mm)	76,000	101,000	230,000	280,000

Table 1. Coagulation studies before and after splenectomy.

formed into "caverns." Rather, the portal vein is gradually occluded and the increased vascularity in the area of the portal vein actually is the development of the numerous small collateral vessels that normally surround the portal vein. In this patient I think that the cause for portal vein thrombosis can be attributed to sepsis in infancy and concomitant omphalitis. This probably resulted in thrombosis of the umbilical vein with retrograde extension to the portal vein. Omphalitis is the single most common cause of this condition.[2] As the portal vein gradually becomes occluded, the collaterals formed will sustain life, but will not fully replace the circulation of the intact portal vein. Portal hypertension results with secondary splenomegaly. The large vascular bed formed by the collaterals has a relatively sluggish circulation leading to the coagulopathy that has been discussed.

Dr. Brown: Was a liver biopsy taken?

Dr. Fechner: No. The liver was grossly normal.

Dr. Hersh: Dr. Brown's point is well taken, because eventually there is a decreased blood supply to the liver and there are secondary manifestations of liver disease.

Dr. Fechner: In those patients with this disease and without complicating liver diseases who have been autopsied, the liver has been normal. All of the obstruction and the subsequent portal hypertension is outside the liver.

Dr. Friedewald: I have asked Dr. Natelson to make a few comments.

Dr. Natelson: Table 1 indicates the effect of splenectomy and splenorenal shunt on this patient's blood coagulation studies. Just prior to surgery his prothrombin time was 15.2 seconds, plasma fibrinogen, 125 mg/100 ml, and platelet count, 76,000/cu mm. Several hours following the procedure these values had improved slightly, and five days later they were in the normal range. The platelet count, however, was not elevated as might be expected after splenectomy in a patient with a hypercellular bone marrow.

Although the patient lives in Kentucky, he

did return to Houston the next year for follow-up. His plasma fibrinogen concentration and platelet count remained normal but the prothrombin time was again prolonged. However, he had contracted hepatitis, presumably as a result of transfusions during surgery. The bromsulphalein retention, which had been 1% on the initial admission, was 12% and he also had mildly elevated serum transaminase values. Thus, the prothrombin time may have been prolonged on a different basis (for example, deficient production of prothrombin complex factors II, VII, and X rather than consumption of factor V). The serum haptoglobin level remained low at 25 mg/100 ml, and suggested continuing mild intravascular hemolysis within abnormal vascular spaces of the cavernous transformation.

The patient remains in good health and has had no abnormal bleeding or bruising since his surgery. Dr. Roehm will present the roentgenograms of his postoperative upper gastrointestinal examinations.

Dr. Roehm: Films of the upper gastrointestinal tract approximately two weeks postoperatively revealed the "mass" present in the gastric fundus, unchanged in appearance. Examination approximately eight months later revealed that the "mass" of gastric varices had disappeared completely (Fig 2). By the way, I think that in a CPC a great deal of the background flavor is lost, and this was a fascinating case for all involved. On the morning of surgery I came into the X-ray Department expecting to do a splenoportogram on this patient, because we had strongly considered the preoperative diagnosis of thrombosis and cavernous transformation of the portal vein. But, at the last moment, the vascular surgeon decided that he did not want this examination and the patient was taken to surgery instead.

Dr. Natelson: Abnormal bleeding, which frequently occurs in patients with cavernous transformation of the portal vein,[2,4] usually is attributed to easily ruptured varices or thrombocytopenia, or both, resulting from hypersplenism.[2] Our patient illustrates that the mechanism of consumption coagulopathy[5] may also contribute to the bleeding tendency.

The anatomical presence of a dense, almost hemangiomatous, network of vessels replacing the obliterated portal vein provides a setting conducive to local stasis of blood with subsequent activation of the intrinsic coagulation system. This would be similar to the Kasabach-Merritt syndrome of consumption coagulopathy in children with giant hemangiomas.

In our patient, the rise in fibrinogen concentration and platelet count with correction of the prolonged prothrombin time following surgery suggests reduced consumption of clotting factors. An obvious question is, "Why?" His cavernous transformation remains intact. Perhaps decreased blood flow into the portal system following splenectomy reduces perfusion of these abnormal vascular channels. In support of this assumption, splenectomy without shunt diminished consumption of clotting factors in another individual,[6] whose clinical findings were quite similar to those of our patient and likely also had cavernous transformation of the portal vein.

REFERENCES

1. Kasabach HH, Merritt KK: Capillary hemangioma with extensive purpura; report of case. Amer J Dis Child 59:1063-1070, 1940.

2. Clatworthy HW Jr, Boles ET Jr: Extrahepatic portal bed block in children: Pathogenesis and treatment. Ann Surg 150:371-383, 1959.

3. Klemperer P: Cavernomatous transformation of the portal vein; its relation to Banti's disease. Arch Path 6:353-377,1928.

4. van Creveld S, Levy WA: Cavernous malformation about the portal vein manifested clinically as a chronic thrombosis of the splenic vein. Amer J Dis Child 39:790-806, 1930.

5. Rodriguez-Erdmann F: Bleeding due to increased intravascular blood coagulation. Hemorrhagic syndromes caused by consumption of blood clotting factors (consumption-coagulopathies). New Eng J Med 273:1370-1378, 1965.

6. Fisher S: Cryptogenic congestive severe coagulopathy in splenomegaly. JAMA 205:111-112, 1968.

Drs. Friedewald, Davis, and Natelson, Department of Internal Medicine; Dr. Roehm, Department of Radiology; Drs. Fechner and Spjut, Department of Pathology; Dr. Lane, Department of Pharmacology, Baylor College of Medicine, 1200 Moursund Avenue, Houston, Tex 77025.

DISABILITY MAY HALT YOUR INCOME BUT YOUR OFFICE EXPENSES STILL GO ON

- RENT
- EMPLOYEES' SALARIES
- PROPERTY TAXES
- UTILITIES
- MAINTENANCE SERVICES

These Are Some Of The Major Costs You Must Still Pay When Disabled.

Write The Texas Medical Association For Information On The Broad Coverage Available Through The Association's Group Office Overhead Plan.

The TMA Office Is Located At 1801 North Lamar Blvd., Austin, Texas 78701.

Underwritten By

THE PRUDENTIAL
SOUTHWESTERN HOME OFFICE

INSURANCE COMPANY OF AMERICA
HOUSTON, TEXAS

NEWS

Poliomyelitis Declared Epidemic in Texas

Incidence of polio has been classified as epidemic in Texas, reports Dr. M. S. Dickerson, chief of Communicable Disease Services of the Texas State Department of Health.

The Advisory Committee on Immunization Practices of the United States Public Health Service has defined an epidemic of poliomyelitis as two or more cases caused by the same poliovirus type and occurring within a four-week period in a circumscribed population, such as that of a city, county, or a metropolitan area.

The State Department of Health began receiving reports of clinical cases of paralytic polio during mid-April. By June 14, nine cases were reported from Hidalgo and Cameron Counties; three cases from Cameron and six cases from Hidalgo.

Indicating either another focus or a possible spread from the Rio Grande Valley area, clinical cases of polio have been reported from Kleberg, San Patricio, and Jim Wells Counties during the month of June.

A single case has been reported from Jones County.

As of June 25, three Hidalgo County cases have been confirmed by virus isolations. All three are Type I polio. Stool specimens and serums are presently being processed in the Texas State Department of Health Laboratories.

Of a total of 14 cases presently under observation, ten patients are under one year of age, three between 1-1½ years of age, and a third, 18 years of age.

No patients had previous polio immunization.

This epidemic is being brought under control by house-to-house administration of oral polio vaccine in the lower socioeconomic areas of the counties involved. Vaccine is available from all physicians' offices, health department clinics, and neighborhood clinics.

The dosage schedule for oral polio trivalent vaccine suggested by the State Health Department is as follows: first dose at two months of age, second dose at four months, third dose at six months, fourth dose at 18 months, fifth dose just before school admission at six or seven years of age.

Confirmed cases of polio in Texas for the past four years are 66 cases in 1966; 9 cases in 1967; 20 cases in 1968; and 6 cases in 1969.

Have Hippies Found Missing Ingredient?

The first known medical record, the Ebers papyrus written about 1500 B.C., included a recipe for goop to correct baldness. Among other things, it contained fats of lion, hippopotamus, crocodile, goose, serpent, and ibex. But it didn't work; apparently the essential substance was left out.

TMA Fall Conference Scheduled Sept. 19

The Texas Medical Association's 1970 Conference on Medical Practice will be held on Saturday, Sept. 19, in Austin. Approximately 500 are expected to attend the Conference, including county medical society officers, TMA officers, members of the Association's Councils and Committees, and new members of Texas Medical Association.

Emphasis will be placed on such issues as public criticism against physicians, malpractice and professional liability, health care organization and delivery systems, health manpower, and physician-hospital relationships.

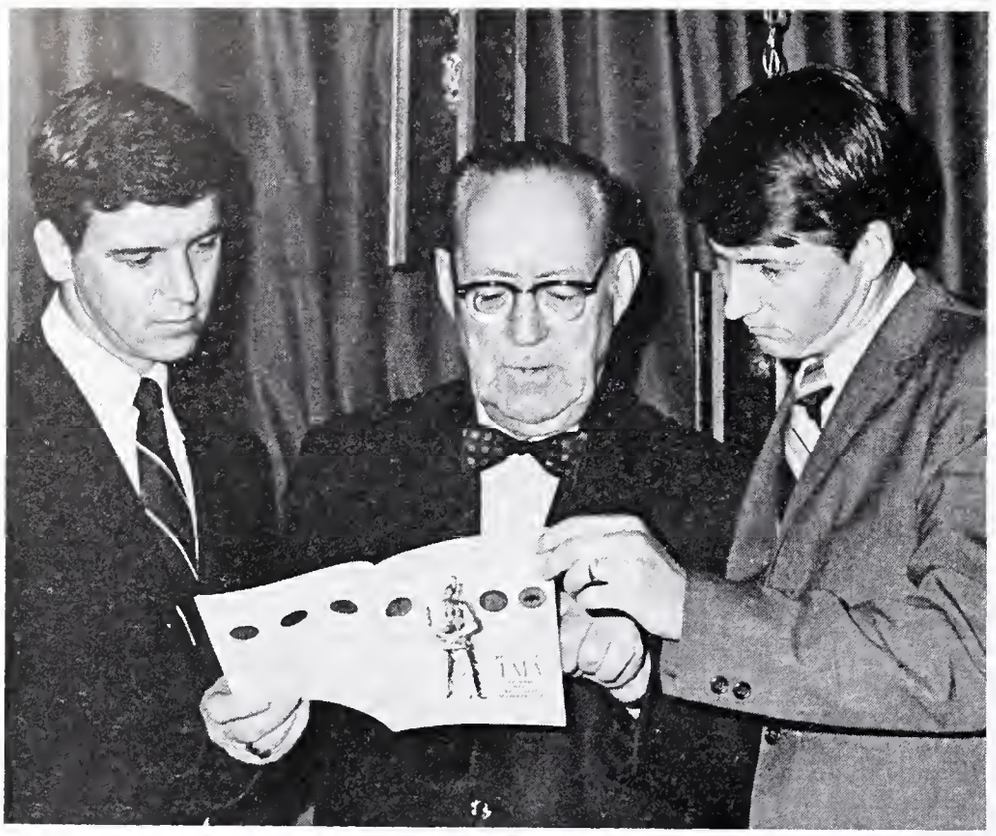
Physicians and guests may attend The University of Texas-University of California football game at 4 p.m. Saturday and are invited to the Association's party aboard the riverboat Commodore on Lake Austin that evening.

UNIT VALUES FOR TMA MEMBERS RETIREMENT PLAN AND TRUST

(As a service to participants in the TMA Members Retirement Plan and to physicians interested in enrolling in the program, comparative values for investment media are published regularly in *Texas Medicine*. Figures shown are the latest available at press deadline and are for comparison purposes only. Most daily newspapers list up-to-the-minute values on mutual funds.)

Investment Media	Original Price 9-30-68	Net Asset Value Per Share 5-31-70	Net Asset Value Per Share 5-31-70*
Mercantile National Bank Stock Fund	$10.25	$ 7.73	$ 7.73
Loomis-Sayles Capital Development Fund	14.20	8.45	12.37
T. Rowe Price Growth Stock Fund	25.93	19.72	21.77
Loomis-Sayles Mutual Fund	16.82	11.81	12.90
Stein Roe & Farnham Balanced Fund	23.34	15.81	17.03
Mercantile Bank Fixed Income Fund	10.00	8.67	8.67

*Adjusted to include dividends and distributions since 9-30-68.



UT Medical School at Galveston senior class president Leon Stone, left, and local Student American Medical Association chapter president Boyce Oliver, right, discuss the benefits of joining TMA as an intern member with Dr. E. Sinks McLarty of Galveston. Dr. McLarty is TMA liaison representative to the SAMA chapter at Galveston.

Students Learn Practical Aspects of Medical Practice

Jon R. Hornaday

TMA Director of Public Relations

When you were completing your four years of medical school, would it have been helpful if someone had taken a little time to tell you about medical ethics? Or legal aspects of medicine and how to avoid malpractice? Or the benefits of local, state, and national medical organizations? Do you wish you could have asked a knowledgeable group of physicians about some of the practical considerations of setting up an office or selecting a practice location?

These questions, and many more, were answered for the graduating seniors at Texas' medical schools this year, just as they have been for the past 17 years.

A Conference on Medical Practice, formerly called Medical Students Day, was presented this Spring by the Texas Medical Association in Dallas, Galveston, Houston, and San Antonio, in cooperation with the local county medical societies and the dean of each school.

The objective of the programs was to provide the soon-to-be physician with useful information which would make his introduction into the practice of medicine a little easier. TMA officers and staff presented practical aspects of medical practice which are not normally included in the school curriculum.

A new format was used for the programs presented this year. Presentations were limited to ten minutes each, followed by extended question-and-answer and discussion periods. The informal format was overwhelmingly approved by the students, according to questionnaires completed at the end of each program. Students not only had an opportunity to ask questions, they also were able to make comments and suggestions. The speakers also had greater opportunity to meet and visit with their future colleagues.

Although there is much talk these days of both generation and communications gaps, these terms did not seem to apply to the TMA-sponsored events this year. "I think the program was well rounded, informative and concise. Future programs such as this

TMA assistant general counsel Sam V. Stone, Jr., offers suggestions to senior students at The University of Texas Medical Branch at Galveston on the legal aspects of medical practice and how to avoid malpractice.

would be desirable. Rapidity and adherence to time limits helped maintain high interest," a student from The University of Texas Southwestern Medical School at Dallas observed.

"Enjoyed the talks and discussions very much" and "Worthwhile" were comments received from two seniors at Baylor College of Medicine.

A student at The University of Texas Medical Branch at Galveston said, "Thank you very much—appreciate all participants' time and work involved."

At The University of Texas Medical School at San Antonio, the program was given for the school's first graduating class, and one of the 33 seniors made this evaluation: "This was a very enjoyable program and I thank you for giving it."

Not all of the comments were favorable, of course, but most of the critical opinions expressed a desire for more information of the type presented and at an earlier time during their medical education. Study continues to be given to practical methods of implementing these suggestions.

One always popular feature of the meeting is a luncheon or dinner program where spouses or guests are also invited. The President of the Texas Medical Association presents a major address and a brief message to the wives is given by the president of the Woman's Auxiliary.

Although many problems of medical practice will confront the graduating medical student, TMA has hopefully made the step an easier one to take.

Nurse Examiners Board Issues Warning

The Board of Nurse Examiners for The State of Texas has issued a warning that two persons who have sought employment as registered nurses in Texas are not licensed to practice here.

One is Constance Vick Hill /Christan/ Dixon, Social Security number 537-22-6438; the other is Dorothy Corine/Catherine/Harrison/Mathews/ Matthews, no Social Security number.

FDA Tells Public That Relaxacizor Is Dangerous

The Food and Drug Administration has issued a public warning to stop using, except by prescription, the Relaxacizor, an electrical device sold for exercising and reducing the waist.

The device was declared to be dangerous to health in U.S. District Court in Los Angeles, and an injunction was issued against future interstate distribution. It prohibits future distribution of Relaxacizors except by prescription, and then only on condition that the manufacturer furnish physicians with information about the many ways which use of these may result in harm.

FDA reports that the device has serious potential for damage to the heart and other vital organs. Battery-powered and plug-in models operate by providing electrical shocks to the body causing muscle contraction. The court noted that otherwise dormant cancer cells may be activated and spread by sudden, violent, rapid, repetitive, and unnatural movements of internal organs and skin surfaces caused by the device.

According to the FDA, more than 400,000 units are in the hands of consumers.

Students Recognize Art of Teaching

Freshmen and sophomore students at The University of Texas (Southwestern) Medical School at Dallas presented the first annual Distinguished Teaching Awards to ten faculty members who, in the students' judgment, "most exemplify the art of teaching."

The freshmen selected Dr. John E. Meeks, associate professor of psychiatry; Dr. Ezio A. Moscatelli, former assistant professor of biochemistry and neurology; Dr. John C. Porter, professor of physiology; and Dr. William D. Willis, professor and chairman of anatomy and professor of physiology.

Sophomores' choices were Dr. Jack A. Barnett, professor of internal medicine and chairman of the Division of Preventive Medicine and Public Health; Dr. William R. Beavers, clinical associate professor of psychiatry; Dr. J. Richard Crout, associate professor of pharmacology and internal medicine and chairman of the Division of Clinical Pharmacology; Dr. Bruce D. Fallis, professor of pathology; Dr. Donald V. Moore, assistant professor of microbiology; and Dr. Robert R. Sexton, associate professor of ophthalmology.

EVERY WOMAN WHO'S LOVED...
will appreciate this advice from you
Many women find they occasionally have excessive discharge, spotting and increased mucus secretion, which can result in unpleasant odor. Douching with StomAseptine cleanses, deodorizes, soothes and relieves itching. . . and helps prevent embarrassment. Your recommendation of a regular program of StomAseptine douching will do wonders for a woman's self-assurance and peace of mind.
STOMASEPTINE®
DOUCHE POWDER
cleanses internally
deodorizes thoroughly
StomAseptine provides sodium perborate, sodium bicarbonate, sodium chloride, sodium borate, menthol, thymol, eucalyptol, methyl salicylate and aromatics.
HARCLIFFE LABORATORIES, Inc.
423 Atlantic Avenue, Brooklyn, N.Y. 11217

THE LEADING MANUFACTURER OF INSULIN SYRINGES

B-D

BECTON, DICKINSON AND COMPANY
RUTHERFORD, NEW JERSEY 07070

FREE CLINICAL SUPPLY

PLASTIPAK
INSULIN SYRINGE/NEEDLE UNITS

Send samples to:

Name _____
(Physician's Signature

Address _____

City _____ State _____ Zip _____

Clip out postcard on dotted line . . . no stamp required

Now you can lower the risk of insulin error when your patient is home . . . and alone

B-D

SINGLE-USE
PLASTIPAK
INSULIN SYRINGE/NEEDLE UNIT

8401 RED CAP u40

8406 GREEN CAP u80

as specific as insulin itself

Postage will be paid by Addressee

No postage stamp necessary if mailed in the United States

BUSINESS REPLY MAIL
First Class Permit No. 134, Fairview, N.J.

Becton-Dickinson and Company
Consumer Products Division
P.O. Box 183
Fairview, New Jersey 07022

THE LEADING MANUFACTURER OF INSULIN SYRINGES

B-D

BECTON, DICKINSON AND COMPANY
RUTHERFORD, NEW JERSEY 07070

Clip coupon on dotted line . . . fill out other side send for physician's free samples

color-coded caps and numbers—red for U40, green for U80

presterilized—consistently dependable, and sterility is assured until cap is opened

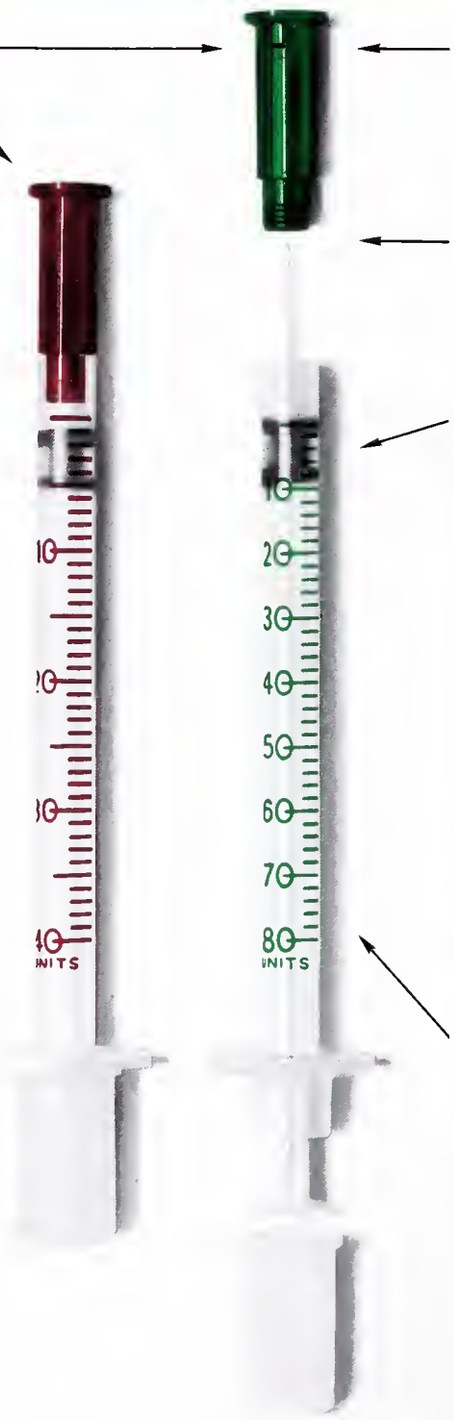
easy-to-hold, easy-to-handle—even for child diabetics with small hands or adults with stiff fingers

the sharpest needle your patient can buy—far sharper than any reusable needle

pocket-or-purse portable—sturdy from tip to top

integral cannula reduces air bubbles

single-scale PLASTIPAK insulin syringe needle units eliminate the hazard of reading the wrong scale



the first insulin syringe so low in cost your patient can use a new one every time

its single-scale—U40 or U80—minimizes the risk of measurement errors. Your patient *can't* read the wrong scale.

low cost—barely pennies higher than old-fashioned disposable needles without syringe . . . about as low as a cup of coffee

big numbers, wide spaces for easy reading

Supplied: in packages of 10—
PLASTIPAK syringe U-40 (red) or
PLASTIPAK syringe U-80 (green)
Prescription required in most states.

BECTON B-D DICKINSON
Consumer Products Division
Becton, Dickinson and Company
Rutherford, New Jersey 07070

U40 **U80**

107 Receive MD Degrees From Southwestern

The University of Texas (Southwestern) Medical School at Dallas awarded 107 doctor of medicine degrees, to 93 men and 14 women, during commencement exercises June 1.

The Ho Din award, highest recognition given by the Southwestern Medical Foundation, was presented to Dr. Hayden Lester Klaeveman of Dallas. Foundation trustee Cecil Green presented the award, which was a symbolic medallion, a scroll, and a check for $1,000; the recipient of this annual award is selected from the senior class not on the basis of academic standing, but for those inherent attributes embodied in all great physicians.

Dr. Franklin D. Murphy of Beverly Hills, Calif., chairman of the board and chief executive officer of The Times Mirror Company, publishers of *The Los Angeles Times*, was the commencement speaker. A physician by training and former dean of the School of Medicine and associate professor in internal medicine at the University of Kansas, he became chancellor of that institution in 1951 and later served as chancellor of the University of California at Los Angeles.

In addition to graduating 107 new physicians, Southwestern conferred seven doctor of philosophy degrees, three master of arts degrees, and one master of medical art degree. Dr. Charles C. Sprague, dean, presided and degrees were conferred by Dan Williams, a member of the Board of Regents of The University of Texas System.

Dallas Girl Awarded Top Science Fair Honor

Miss Beverly A. Fordham, a junior at Bryan Adams High School in Dallas, was one of the two students receiving the top honors of the AMA during the 21st International Science Fair in Baltimore. Her exhibit was "Determination of Alpha Vigilance Via Electroencephalography."

Sharing the highest award was Kevin J. Boran, a senior high school student from Pottsville, Pa., for his exhibit on "The Effects of Antidiuretic Hormone on Sweating Activity and Sweat Composition."

Members of the AMA Council on Scientific Assembly, chaired by Dr. Charles D. Bussey of Dallas, selected the winners from 402 exhibits from 45 states, the District of Columbia, Puerto Rico, Canada, Brazil, Japan, the Philippines, Sweden, and Switzerland.

Miss Fordham and Mr. Boran were invited to be honored guests and exhibitors at the AMA annual convention in Chicago June 21-25.

Regents Adopt Budget For Next Academic Year

The University of Texas System Board of Regents has adopted the following budgets for the 1970-1971 academic year. The first figure shows the educational and general funds appropriation; the second shows total approved funds including gifts, sponsored research, etc.; and the third shows the percent by which state-appropriated funds are increased over 1969-1970:

Dallas (Southwestern) Medical School, $8,131,278; $15,853,166 (9.6%).

San Antonio Medical School, $6,939,206; $9,767,476 (4.5%).

San Antonio Dental School, $700,000 (new institution).

Galveston Medical Branch, and Sealy and Smith Foundation Hospitals, $28,708,012; $39,677,413 (13.8%).

Houston Medical School, $3,737,117 (new institution).

Houston Dental Branch, $5,057,777; $6,109,300 (8.9%).

M.D. Anderson Hospital and Tumor Institute, $19,717,697; $28,092,095 (13.8%).

Graduate School of Biomedical Sciences, $867,778; $1,246,166 (13.2%).

School of Public Health, $1,056,094; $1,538,654 (15.9%).

UT System Nursing School, $1,304,253; $1,329,337 (11.5%).

The Medical Branch budget includes a 33.3% increase in room rates in University hospitals; even so, the rates will be less than those generally charged in the southern region. Regents also approved a 57.3% increase in the budget for the Medical Branch's Chronic Home Dialysis Center.

For M.D. Anderson Hospital and Tumor Institute, the new budget included a 53.3% rise in funds to be applied to faculty positions for teachers of residents, interns, and medical students from the Graduate School of Biomedical Sciences and the Medical Branch.

Southwestern's School of Allied Health Professions received an increase of more than 50% in its budget for training technical assistants; other substantial increases in Southwestern's budget were for its medical library and its kidney transplantation unit.

Douglas V. Horbelt Wins TEXAS MEDICINE Award

Recipient of the fifth annual *Texas Medicine* Award for excellence in scientific writing by a Texas medical student is Douglas V. Horbelt, a sophomore at The University of Texas Medical Branch, Galveston. He is the son of Mr. and Mrs. Vincent Horbelt of Pasadena, Texas.

Horbelt was born in Brooklyn, N.Y., in 1947. He is a member of the Student American Medical Association, Texas Society of Electron Microscopy, and Phi Chi medical fraternity. Prior to entering medical school, he was graduated from The University of Texas at Austin where he was a member of Phi Beta Kappa, Alpha Epsilon Delta honor society, and Phi Kappa Alpha.

Horbelt received a certificate and a $300 check at the Medical Branch's Honors and Awards Convocation in June. His winning article, "The Ultrastructural Changes in Fallopian Tube Epithelium at Term Gestation and During the Post Partum Period," will be published in *Texas Medicine*, which sponsors the award.

County Society Strikes At Accidental Poisoning

The Nueces County Medical Society has joined with the Nueces County Pharmaceutical Association and the Six Points Kiwanis Club to promote a program against accidental poisoning in the home.

Syrup of ipecac is being made available at cost through local pharmacies; however, the public has been advised that it should be administered only when recommended by a physician. Posters placed around pharmacies and in physicians' offices help explain and promote the program.

CASES OF MEASLES REPORTED IN THE UNITED STATES AND TEXAS 1963 - 1969

Year	Texas	United States
1963	19,761	385,156
1964	71,629	458,083
1965	30,771	261,904
1966	25,566	204,136
1967	13,411	62,705
1968	5,204	22,527
1969*	4,943	25,271

*Provisional

Senior Consultants
Perry C. Talkington, M.D.
Charles L. Bloss, M.D.

Psychiatrist-in-Chief
Howard M. Burkett, M.D.

Medical Director
James K. Peden, M.D.

Associate Psychiatrists
Jerry M. Lewis, M.D.
Claude L. Jackson, M.D.
Dode Mae Hanke, M.D.
Thomas H. Allison, M.D.
Maurice S. Green, M.D.
Doyle I. Carson, M.D.
Stanley L. Seaton, M.D.
Keith H. Johansen, M.D.
Charles G. Markward, M.D.
Joe W. King, M.D.
Claude R. Nichols, M.D.
Larry E. Tripp, M.D.
Aretta J. Rathmell, M.D.
Donald N. Offutt, M.D.

Clinical Psychology
David H. Lipsher, Ph.D.
John T. Gossett, Ph.D.
Dale R. Turner, Ph.D.
Robert W. Hagebak, Ph.D.

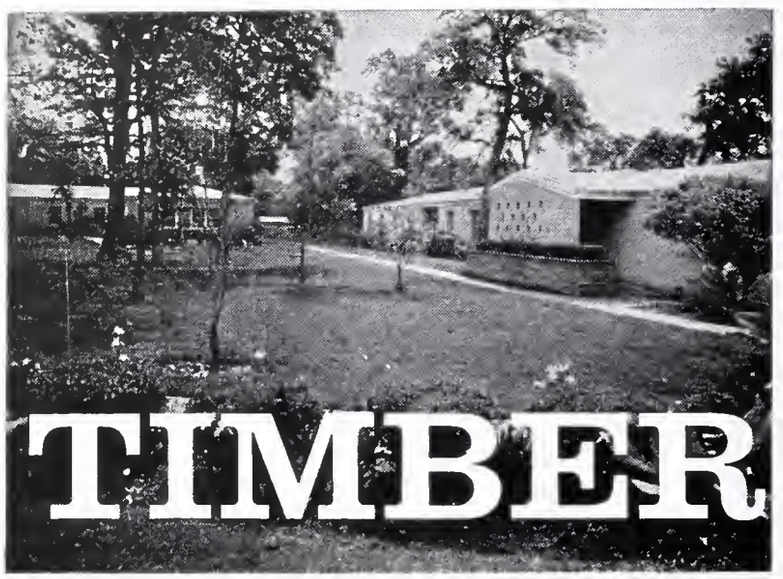
Social Work
Sally Stansfield, M.S.W.
Kathleen Wood, M.S.W.
Robert P. Stewart, M.S.S.W.
Margie W. Buell, M.S.S.W.
Cecilia Coffelt, M.S.S.W.
Lionel C. Landry, M.S.W.

Occupational Therapy
Geraldine Skinner, B.S., O.T.R., Director

Recreational Therapy
Lois Timmins, Ed.D., Director

Director of Nurses
Mae Belle James, R.N.

Administrator
Ralph M. Barnette, B.B.A.



PSYCHIATRIC HOSPITAL

DAY HOSPITAL

DEPARTMENT OF OUT PATIENT PSYCHIATRY

DEPARTMENT OF ADOLESCENT PSYCHIATRY

Narcotic Cases Not Admitted

TIMBERLAWN
PSYCHIATRIC HOSPITAL

381-7181 Dallas, Texas 75223 P. O. Box 11288

KELSEY-SEYBOLD CLINIC

6624 FANNIN STREET HOUSTON, TEXAS 77025

526-2671

INTERNAL MEDICINE

Endocrine and Metabolic Diseases
Mavis P. Kelsey M.D., F.A.C.P.
Alfred E. Leiser, M.D., F.A.C.P.

Pulmonary Diseases
Stanton P. Fischer, M.D., F.A.C.P.

Gastrointestinal Diseases, Gastroscopy
John R. Kelsey, M.D., F.A.C.P.
Philip S. Bentlif, M.D., F.A.C.P.
Ralph D. Eichhorn, M.D., F.A.C.P.
F. Scott O'Neil, M.D., F.A.C.P.
James W. McBee, M.D., F.A.C.P.

Heart Disease and Cardiac Catheterization
Earl F. Beard, M.D., F.A.C.P.
Efrain Garcia, M.D., F.A.C.P.

Arthritis and Rheumatic Diseases
James W. Kemper, M.D., F.A.C.P.
Martin S. Fischer, M.D.

Hypertension and Peripheral Vascular Diseases
Gene E. Burke, M.D.

Cancer Chemotherapy
Carlos F. Taboada, M.D.

Nephrology
Francis X. Schloeder, M.D., F.A.C.P.

Hematology
Jerome B. Bart, M.D.

Infectious Diseases
Stuart Riggs, M.D., F.A.C.P.

Occupational Health Services
Paul E. Wright, M.D., M.P.H., F.A.C.P.
Maurice B. Johnston, M.D., F.A.C.Pr.M.
Richard M. Fenno, M.D., M.P.H., F.A.C.P.
Cannon A. Owen, M.D., F.A.C.S.
Edward A. Anderson, M.D., F.A.C.Pr.M.
William E. Froemming, M.D., F.A.C.Pr.M.

GENERAL & THORACIC SURGERY
William D. Seybold, M.D., F.A.C.S.
James D. McMurrey, M.D., F.A.C.S.
Jerry L. Doggett, M.D.

OBSTETRICS & GYNECOLOGY
Melville L. Cody, M.D., F.A.C.S.
William A. Johnson, III, M.D.

PSYCHIATRY
Chester G. Cochran, M.D.
*Ricardo Daichman, M.D.
William H. Boylston, M.D.
Manuel C. Ramirez, M.D.

PEDIATRICS

Rheumatology
Earl J. Brewer, Jr., M.D., F.A.A.P.

Allergy
Charles W. Ewing, M.D., F.A.A.P.
George D. Ferry, M.D.

OTO-LARYNGOLOGY
J. Charles Dickson, M.D., F.A.C.S.
James L. Smith, M.D., F.A.C.S.

NEUROLOGY
Robert R. Pierce, M.D.

DERMATOLOGY
Wilson M. Fraser, M.D., F.A.A.P.
Donald W. Owens, M.D.

UROLOGY
Don W. Pranke, M.D., F.A.C.S.
J. David Wright, M.D.

ORTHOPEDIC SURGERY
W. Malcolm Granberry, M.D.
Jesse H. Dickson, M.D.

OPHTHALMOLOGY
Henry E. Wahlen, M.D., D.A.B.O.

RADIOLOGY
David M. Rulfs, M.D.

PATHOLOGY
Robert A. Jordan, M.D.

DENTISTRY
Eugene W. Gray, D.D.S.

PSYCHOLOGY
Mrs. Ruth Blackman, M.A.
Robert de von Flindt, Ph.D.
Cheryl Greathouse, M.A.

SPEECH PATHOLOGY AND AUDIOLOGY
Donna R. Fox Ph.D.
Carolyn C. Garcia, M.S.

CONSULTANTS

Maxillo Facial Surgery
Edward C. Hinds, M.D., D.D.S., F.A.C.S.

Psychiatry
Albert Owers, M.D.

Pulmonary Diseases
H. Irving Schweppe, Jr., M.D., F.A.C.P.

Nuclear Medicine
John A. Burdine, Jr., M.D.

Gastrointestinal Diseases, Gastroscopy
Theodore Hersh, M.D.

Occupational Medicine
Valliant C. Baird, M.D., F.A.C.Pr.M.

Podiatry
Levitt A. Peters, D.P.M.

SPECIAL FACILITIES
Radioisotope Laboratory
Registered Dietitian
Electroencephalography
Electrocardiography
Vectorcardiography
Registered Physiotherapist
Pulmonary Function Laboratory
Regional Immunization Center
FAA Examinations
Complete Endoscopy
Audiology Laboratory
Electrolysis

ADMINISTRATOR
James A. Bakken

*Military Service

Dr. John M. Smith, Jr., right, member of the Texas Medical Association's Board of Trustees, presents the 1,000th loan from the Association's Dr. S. E. Thompson Scholarship Fund to William J. Zwartjes, Jr., center, third year student at The University of Texas Medical School at San Antonio. Dr. F. C. Pannill, Jr., left, dean of the San Antonio school, extended congratulations to Zwartjes upon receipt of the $500 loan check.

1,000th Loan Presented From Thompson Fund

A third year student at The University of Texas Medical School at San Antonio has been presented the 1,000th loan from the Dr. S. E. Thompson Scholarship Fund of the Texas Medical Association.

William J. Zwartjes, Jr., was given the loan check in the amount of $500 by Dr. John M. Smith, Jr., of San Antonio, vice chairman of the Board of Trustees. Dr. F. C. Pannill, Jr., dean of the San Antonio school, was on hand to offer his congratulations to Zwartjes.

Zwartjes, who has five younger brothers, transferred to the new medical school after completing his first two years at The University of Texas Medical School at Galveston. He was on the dean's list at Galveston and was highly recommended by the faculty at that school.

Nearly $500,000 has been loaned by trustees of the Thompson Fund to deserving men and women medical students, as well as interns and residents, since the program was started in 1959.

"The availability of this loan program has made it possible for Mr. Zwartjes and many deserving students to continue their medical education," said Dr. C. P. Hardwicke of Austin, chairman of the Board of Trustees. "We are pleased that it is possible for any qualified young man or woman in this state who wishes to become a doctor of medicine to do so regardless of his financial needs." Students may borrow up to $3,000 during their medical education.

The loan program was established by the will of the late Dr. Sam E. Thompson of Kerrville, a TMA past president. The interest rate on loans is 4% and repayment does not have to start until four years after the student's date of graduation.

Bexar Charity Ball Group Helps Equip Pediatric Unit

The Charity Ball Association of San Antonio has granted funds of $19,420 to equip the Pediatric Intensive Care Unit at the Bexar County Teaching Hospital.

Acknowledging this generous gift, Dr. Stanley E. Crawford said, "The equipping of this unit will do much to help us as we care for critically ill children in this new establishment." Dr. Crawford is professor and chairman of the Department of Pediatrics, The University of Texas Medical School at San Antonio.

Relief Group Offers MDs Access to Remote Lands

The Direct Relief Foundation has launched a new project in which physicians who are going abroad may combine their travels with visits to overseas hospitals, including fascinating trips to bush areas and remote jungle clinics.

Actually, states Dennis G. Karzag, executive secretary of the nonprofit medical aid organization, the name of the new project is Doctors for Direct Relief Foundation Program; because the code initials are DR.-DR, staff members have dubbed it "Doctor Doctor" for short. It will assist the foundation's Medical Relief International, an organization which has shipped almost $38,000,000 worth of contributed pharmaceuticals to patients in 80 needy countries during the past five years.

Those who elect to assist Direct Relief will be asked to visit overseas hospitals and clinics which have already received or requested DR aid. Geographical areas of particular interest are Central and South America, the Far East, Southeast Asia, and Africa.

The visit of a Doctor Doctor will include an on-the-spot evaluation of the services offered by a hospital, its probable future needs, and suggestions on how to improve DR's services to meet its problems.

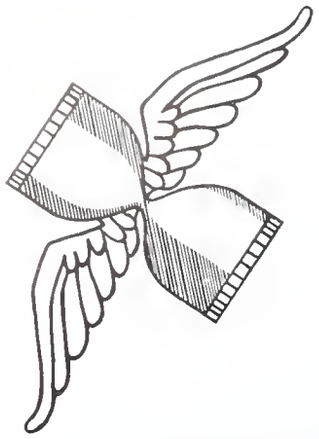
For photography and gadgetry fans, the trips should be especially interesting, since the foundation requests (when possible) photographs, movie films, and tape recordings to supplement written reports made by the doctors upon return.

"Just the facts, doc," states an organizational guideline, indicating that Pulitzer prose is not required—even reports in longhand will be accepted.

Inducements to serve include full access to faraway hospitals, armed with DR credentials, which will provide contacts with medical personnel from many lands, as well as certain tax deductions for expenditures incurred in charitable work.

Physicians' wives are welcome to accompany their husbands to any of the areas served, and they will find stimulating travel opportunities far off the ordinary tourist routes.

Full information is available from Direct Relief Foundation, 27 East Canon Perdido Street, Santa Barbara, Calif. 93101.



time flies, doctor . . .

Are you aware that, if there is indeed an "allergic generation," its vanguard members are nearing retirement? And of course you know what time and a generation of smokers have done to the incidence of emphysema. . . .

Be aware of Loma Vista, in Kerrville, Texas. Average temperature 65°. Average humidity 21%. No smog. In Kerrville, which has been a retirement mecca for decades, Loma Vista has 35 happy households, and room for 2000. Our lots start at $2550, which anyone can afford. Tell them about us.

Loma Vista P. O. Box 1347 Kerrville, Texas 78028

WICHITA FALLS CLINIC-HOSPITAL

GENERAL SURGERY
W. E. Crump, M.D., F.A.C.S.
James T. Lee, M.D.
Charles H. Wilson, M.D., F.A.C.S.

ORTHOPEDIC SURGERY
Jack E. Maxfield, M.D., F.A.C.S.
Clyde W. Parsons, M.D.
Mark E. Huff, Jr., M.D.
David G. Borman, M.D.

ORAL SURGERY
R. A. Mitchell, D.D.S.
Larry J. Cason, D.D.S.

RADIOACTIVE ISOTOPES
Claude D. Wilson, M.D., D.A.B.R.
Joe D. Steed, M.D., D.A.B.R.
Julian H. Acker, M.D.
David D. Salmon, M.D., D.A.B.R.

PEDIATRICS
George W. Slaughter, III, M.D., F.A.A.P.
Joseph Bilder, Jr., M.D.

LABORATORIES
Claude D. Wilson, M.D., D.A.B.R., Radiology
Joe D. Steed, M.D., D.A.B.R., Radiology
David D. Salmon, M.D., D.A.B.R., Radiology

MEDICINE
W. B. Whiting, M.D., Cardiology
R. F. Knox, M.D., Endocrinology
P. K. Smith, M.D., F.A.C.P., Diagnosis & Internal Medicine
I. L. Humphrey, Jr., M.D., Diagnosis & Internal Medicine
Julian H. Acker, M.D., Diagnosis & Internal Medicine
Preston McCall, M.D., Diagnosis & Internal Medicine
Julian C. Sleeper, M.D., Cardiology
Eugene Jackson, M.D., Diagnosis & Internal Medicine

GENERAL PRACTICE
J. B. Hathorn, Jr., M.D.
Melvin Horany, M.D.
John E. Worthen, Jr., M.D.

UROLOGY
Owen C. Berg, M.D., F.A.C.S.

OBSTETRICS AND GYNECOLOGY
W. L. Parker, M.D., F.A.C.S.
Warren T. Kable, M.D.
Frank J. Lee, M.D.

ADMINISTRATIVE OFFICER
Bertha McNeill, Administrator
Jesse E. Dobbs, Jr., Asst. Administrator

Brief Summary of Prescribing Information– 9-9/22/69. For complete information consult Official Package Circular.
Indications: Essential hypertension. Use cautiously in patients with renal insufficiency, particularly if they are digitalized.
Contraindications: Anuria, oliguria, active peptic ulceration, ulcerative colitis, severe depression or hypersensitivity to its components contraindicates the use of Salutensin.
Warnings: Small-bowel lesions (obstruction, hemorrhage, perforation and death) have occurred during therapy with enteric-coated formulations containing potassium, with or without thiazides. Such potassium formulations should be used with Salutensin only when indicated and should be discontinued immediately if abdominal pain, distension, nausea, vomiting or gastrointestinal bleeding occurs. Use cautiously, and only when deemed essential, in fertile, pregnant or lactating patients. *Use in Pregnancy:* Thiazides cross the placenta and can cause fetal or neonatal hyperbilirubinemia, thrombocytopenia, altered carbohydrate metabolism and possibly electrolyte disturbances. Fatal reactions may occur with reserpine during electroshock therapy; discontinue Salutensin 2 weeks before such therapy. Increased respiratory secretions, nasal congestion, cyanosis and anorexia may occur in infants born to reserpine-treated mothers.
Precautions: Azotemia, hypochloremia, hyponatremia, hypochloremic alkalosis and hypokaliemia (especially with hepatic cirrhosis and corticosteroid therapy) may occur, particularly with pre-existing vomiting and diarrhea. Potassium loss or protoveratrine A may cause digitalis intoxication. *Potassium loss responds to potassium-rich foods, potassium chloride or, if necessary, discontinuation of therapy. Stop therapy if protoveratrine A induces digitalis intoxication.* Serum ammonia elevation may precipitate coma in precomatose hepatic cirrhotics. Discontinue therapy 2 weeks before surgery or if myocardial irritability, progressive azotemia or severe depression occur. Exercise caution in patients with chronic uremia, angina pectoris, coronary thrombosis or extensive cerebral vascular disease *or bronchial asthma* and in those with a history of peptic ulceration or bronchial asthma; in post-sympathectomy patients; in patients on quinidine; and in patients with gallstones, in whom biliary colic may occur. Patients who have diabetes mellitus or who are suspected of being prediabetic should be kept under close observation if treated with this agent.
Adverse Reactions: Hydroflumethiazide: Skin rashes (including exfoliative dermatitis), skin photosensitivity, urticaria, necrotizing angiitis, xanthopsia, granulocytopenia, aplastic anemia, orthostatic hypotension (potentiated with alcohol, barbiturates or narcotics), allergic glomerulonephritis, acute pancreatitis, liver involvement (intrahepatic cholestatic jaundice), purpura plus or minus thrombocytopenia, hyperuricemia, hyperglycemia, glycosuria, malaise, weakness, dizziness, fatigue, paresthesias, muscle cramps, skin rash, epigastric distress, vomiting, diarrhea and constipation. *Reserpine:* Depression, peptic ulceration, diarrhea, Parkinsonism, nasal stuffiness, dryness of the mouth, weight gain, impotence or decreased libido, conjunctival injection, dull sensorium, deafness, glaucoma, uveitis, optic atrophy, and, with overdosage, agitation, insomnia and nightmares. *Protoveratrine A:* Nausea, vomiting, cardiac arrhythmia, prostration, blurring vision, mental confusion, excessive hypotension and bradycardia. (Treat bradycardia with atropine and hypotension with vasopressors.)
Usual Dose: 1 tablet b.i.d.
Supplied: Bottles of 60, 600, and 1000 scored 50 mg. tablets.

Salutensin®
hydroflumethiazide, 50 mg./reserpine, 0.125 mg. protoveratrine A, 0.2 mg.

BRISTOL BRISTOL LABORATORIES
Division of Bristol-Myers Company
Syracuse, New York 13201

The antihypertensive therapy that is easy to live with.*

When successive blood pressure readings confirm essential hypertension, consider Salutensin for:

Easy-to-live-with control. Gradual reduction of blood pressure leading to decisive, comfortable control is the common clinical response.

*Salutensin is usually well-tolerated (however, serious side effects can occur; see adjacent column for brief summary of prescribing information).

Easy-to-live with dosage. Two tablets a day usually achieves control. One to two tablets a day often maintains control without need for additional antihypertensive agents.

Easy-to-live with cost of therapy. The one to two tablets a day maintenance dose makes Salutensin economical to stay with. Important, because long-term control calls for long-term therapy.

Salutensin®

hydroflumethiazide, 50 mg./reserpine, 0.125 mg. protoveratrine A, 0.2 mg.

★

Specialized Service

IN

PROFESSIONAL LIABILITY INSURANCE

is a high mark of distinction

THE

MEDICAL PROTECTIVE COMPANY

FORT WAYNE, INDIANA

Professional Protection Exclusively since 1899

AUSTIN OFFICE: Robert F. Reiman, Representative
3201 Clearview, Austin 78703 Telephone: 512-472-9603
DALLAS OFFICE: Gayle Nelson and Arthur F. Ennis, Jr., Representatives
816 Medical Arts Building, Dallas 75201 Telephone: 214-742-4980
HOUSTON OFFICE: Richard B. Ross and William A. Orsburn, Representatives
525 Hermann Professional Bldg., Houston 77025 Telephone: 713-523-1127

Turner's Clinical & X-Ray Laboratories

Medical Center

El Paso, Texas

Telephone 532-4689

☆

SURGICAL PATHOLOGY
CLINICAL PATHOLOGY
RADIOLOGY

☆

GEORGE TURNER, M.D.
JEANNE TURNER BOWMAN, M.D.
DAVID LIBMAN, M.D.
DAVID STERCK, M.D.

The Martin X-Ray and Radium Clinic

3501 Gaston Ave. Dallas, Texas

ADJOINING
GASTON EPISCOPAL HOSPITAL

For X-ray diagnosis and the X-ray and radium treatment of cancer and other conditions suitable for radiation therapy.

Chas L. Martin, M.D. James A. Martin, M.D.

Galveston County Study Shows Tranquilizers Surpass Aspirin as Medicinal Poisoning Agents

Medicine is the chief culprit in most accidental poisonings in Galveston County, according to an in-depth survey by Dr. Don Micks, chief of the Department of Preventive Medicine and Community Health at The University of Texas Medical Branch.

Retrospective morbidity data have been compiled on all poisoning cases reported to the four major county hospitals during 1963-1968, and includes name, age, sex, date of poisoning, and general diagnosis. Data on age distribution go back to 1958, but more complete records on cases prior to 1963 are not available. From June 1969, however, far more comprehensive data have been accumulated by health professionals doing intensive interviews with the patient and his family. An IBM 1800 computer is used for analysis.

One surprising aspect of the results thus far is that tranquilizers surpass aspirin as the leading medicinal poisoner. This is in contrast to 1969 data from the National Clearing House for Poison Control Centers which indicates that nationally, aspirin is several times more frequently associated with poisoning than any other substance. Although it is not known whether the difference is due to geographic or other factors, Dr. Micks pointed out that the prospective portion of the study picked up many cases not likely to be reported to a poison control center.

The study showed that medicinal agents, prescribed or not, were involved in poisoning twice as often in 1968 as in 1963. Also, the rate of self-induced poisoning involving drugs is increasing rapidly, and is a particular problem in women during what should be their most productive years.

Accidental poisoning in the home accounts for 60% of the cases; attempted suicide is the next largest group, and accidental occupational poisoning accounts for the remaining 5%. Cases of animal and arthropod bites, food poisoning, and industrial poisoning are not included in the study since they are considered to be different types of problems.

In order of frequency, the leading categories of agents involved are medicinal agents (55% of the total cases), cleaning and polishing agents, pesticides, and gases and vapors. Drug poisonings increased sharply between 1963 and 1968, while the incidence in other categories remained about the same from year to year.

Tranquilizers are the most important agents, followed by aspirin, barbiturate sedatives, and nonbarbiturate sedatives. Cases involving the latter three remained at about the same level for the 1966-1968 period, but during the same time the rate of tranquilizer poisonings more than doubled.

In accidental poisoning, 2-year-olds make a sharp peak on the incidence chart; this is primarily a problem among youngsters, especially from 1-3 years old. Attempted suicide is more common in the 20-30 years age group, and from age 40 on the incidence declines. After age 50, most accidental poisoning involves drug overdose; probably a combination of multiple medications and forgetfulness are factors in some of these cases.

Dr. Micks reported that in every age group beginning at 13 years, there were from two to four times as many females as males involved in self-induced poisoning. "Typically," he said, "this is a problem in housewives, especially those who have a history of depression and who have medication readily at hand. Whereas the problem of accidental poisoning in children represents a failure on the part of adults, intentional drug overdose or poisoning in adults may in part represent shortcomings on the part of some physicians who may not be sufficiently discriminating in prescribing medications."

81.6% Pass First Exam Of Family Practice Board

Of the 2,078 physicians who took the first examination for certification by the American Board of Family Practice, 81.6% passed. Results of the two-day examination, held Feb. 28 and March 1 in 36 centers throughout the country, were announced in June by Dr. John G. Walsh, Sacramento, Calif., president of the Board.

Physicians graduated from United States or Canadian medical schools within the past 20 years were most successful; 95.5% of this group passed.

A second examination is being planned for February 1971, and Dr. Walsh said that candidates who pass it will be included in the Board's charter member group. Material used in the first examination will not be reused in the second.

Unique among specialty boards, the Board of Family Practice has no "grandfather clause;" thus, regardless of years of practice, no physician may become a diplomate without taking an examination. Unique also is the requirement that membership can be maintained only by recertification by examination at six-year intervals.

Dr. Walsh said that 99% of all examinees were members of the American Academy of General Practice. He gave the following composite of successful candidates:

He is a male member of AAGP, age 46; practices individually or in partnership; maintains membership in his local, state, and national AMA units; has taken an internship and some residency training; is engaged in active medical practice and holds at least one active appointment on a hospital medical staff; and includes internal medicine, surgery, obstetrics-gynecology, psychiatry, orthopedics, industrial medicine, and emergency room care in the services generally rendered.

San Antonio School Confers First MD Degrees

The University of Texas Medical School at San Antonio graduated its first class in June; 33 students received doctor of medicine degrees.

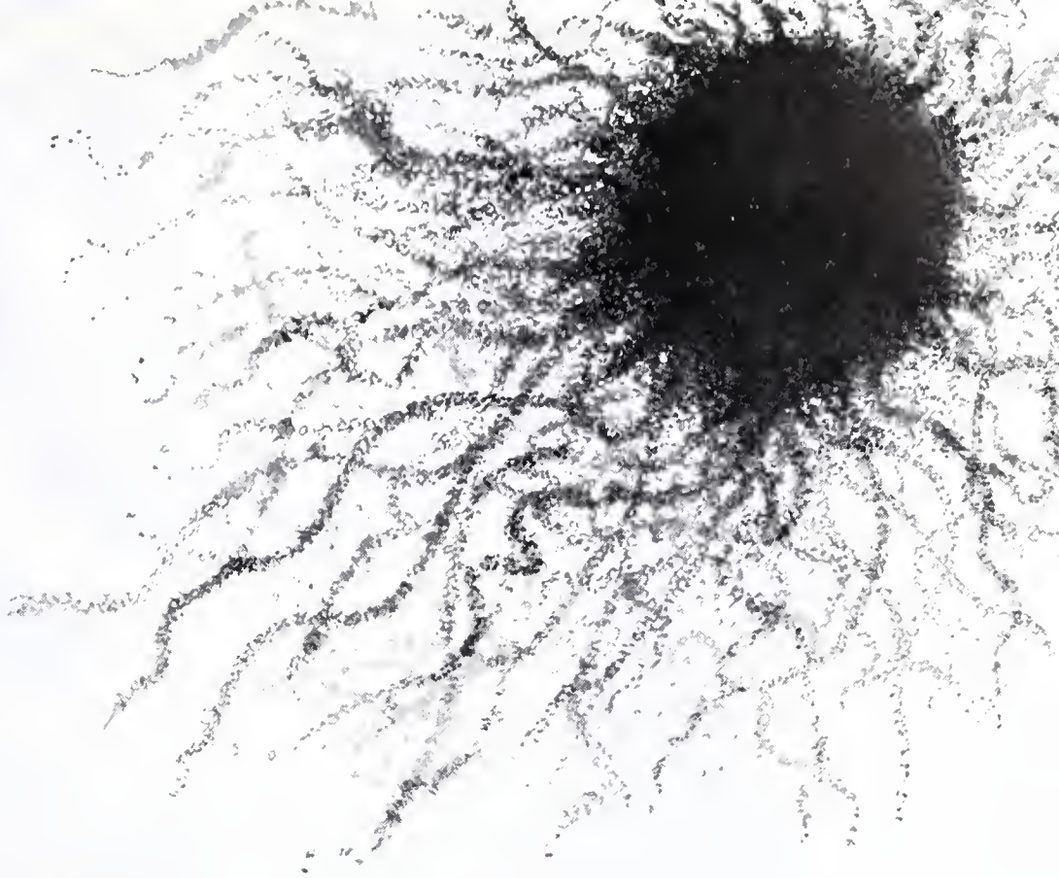
The commencement speaker was the Hon. Ralph W. Yarborough, U. S. Senator from Texas and chairman of the Senate Labor and Public Welfare Committee and Health Subcommittee.

Several activities were held to celebrate this first graduation. A month-long exhibition of paintings by Michael Frary, distinguished professor of art at The University of Texas at Austin, hung in the school's spacious auditorium foyer, and the exhibit was opened with a reception there.

The graduating class and their families were guests of The Wives Club for a "Fiesta Mexicana," an informal evening of Mexican food, mariachis, swimming, and dancing in the pool area of the former Lutcher Brown estate. Proceeds from a black-tie concert and supper were given to the Medical Students Scholarship Fund.

Dr. F. C. Pannill, dean, and Mrs. Pannill honored the class of 1970 at an afternoon reception preceding the evening commencement exercises.

ADVERTISING COUNCIL
SMOKEY
Only you can prevent forest fires.



Corticosteroid therapy week after week.

then antibiotic therapy last week.

and monilial overgrowth this week.

For many patients on long-term corticosteroid therapy, the addition of oral antibiotic therapy may trigger monilial overgrowth in the intestine. When you anticipate such a problem, take action with DECLOSTATIN 300. It combines the broad-spectrum potency of demethylchlortetracycline with the antifungal effectiveness of nystatin—it helps avoid monilial take-over. Experience has shown DECLOSTATIN to be highly useful for many women patients; individual culture studies will show exactly where this usefulness may best be applied.

it doesn't let monilia begin where bacteria end.

Declostatin® 300

Demethylchlortetracycline HCl 300 mg and Nystatin 500,000 units Capsule-Shaped Tablets Lederle

Effectiveness: Because its antibacterial component is DECLOMYCIN® Demethylchlortetracycline, DECLOSTATIN should be equally or more effective therapeutically than other tetracyclines in infections caused by tetracycline-sensitive organisms. The antifungal component, nystatin, protects against superinfection by antibiotic-resistant fungal overgrowth (particularly monilia) in the intestinal tract.

Contraindication: History of hypersensitivity to demethylchlortetracycline or nystatin.

Warning: In renal impairment, usual doses may lead to excessive accumulation and liver toxicity. Under such conditions, lower than usual doses are indicated and, if therapy is prolonged, serum level determinations may be advisable. A photodynamic reaction to natural or artificial sunlight has been observed. Small amounts of drug and short exposure may produce an exaggerated sunburn reaction which may range from erythema to severe skin manifestations. In a smaller proportion, photoallergic reactions have been reported. Patients should avoid direct exposure to sunlight and discontinue drug at the first evidence of skin discomfort. Necessary subsequent courses of treatment with tetracyclines should be carefully observed.

Precautions: Overgrowth of nonsusceptible organisms may occur. Constant observation is essential. If new infections appear, appropriate measures should be taken. In infants, increased intracranial pressure with bulging fontanels has been observed. All signs and symptoms have disappeared rapidly upon cessation of treatment.

Side Effects: Gastrointestinal system—anorexia, nausea, vomiting, diarrhea, stomatitis, glossitis, enterocolitis, pruritus ani. Skin—maculopapular and erythematous rashes; a rare case of exfoliative dermatitis has been reported. Photosensitivity; onycholysis and discoloration of the nails (rare). Kidney—rise in BUN, apparently dose-related. Transient, reversible, nephrogenic diabetes insipidus with excessive thirst and polyuria (rare). Hypersensitivity reactions—urticaria, angioneurotic edema, anaphylaxis. Teeth—dental staining (yellow-brown) in children of mothers given this drug during the latter half of pregnancy, and in children given the drug during the neonatal period, infancy and early childhood. Enamel hypoplasia has been seen in a few children. If adverse reaction or idiosyncrasy occurs, discontinue medication and institute appropriate therapy. Demethylchlortetracycline may form a stable calcium complex in any bone-forming tissue with no serious harmful effects reported thus far in humans.

Average Adult Daily Dosage. One tablet b.i.d. Should be given 1 hour before or 2 hours after meals, since absorption is impaired by the concomitant administration of high calcium content drugs, foods and some dairy products. Treatment of streptococcal infections should continue for 10 days, even though symptoms have subsided.

Lederle LEDERLE LABORATORIES, A Division of American Cyanamid Company, Pearl River, New York 448-9

EXPO'70

the year to see the ORIENT!

TEXAS MEDICAL ASSOCIATION

ORIENT ADVENTURE

Two fun-filled weeks in exotic and colorful Japan and Hong Kong. Our complete Orient Adventure costs much less than round trip tourist air fare, yet includes direct 707 private jet flights, deluxe hotels, gourmet meals, all the freedom of individual travel, plus many other exclusive features. The Orient Adventure is departing from Dallas and Houston on August 24 and August 30, 1970.

Space is strictly limited on this exciting adventure. To confirm reservations a $100 deposit per person is required. Join us. Send your deposit now to

Texas Medical Association
1801 North Lamar Blvd.
Austin, Texas 78701

$898.00

RETURN THIS COUPON NOW!

SEND TO: Texas Medical Association
1801 North Lamar Blvd.
Austin, Texas 78701

Enclosed is my check for $_____ ($100 per person)

NAME _____

ADDRESS _____

CITY _____ STATE _____

ZIP _____ PHONE _____

Selective Service Defers Induction of Physicians

The Department of Defense has informed the Selective Service System that there is no anticipated shortage of doctors of medicine, dentists, osteopaths, veterinarians, or optometrists. According to a Selective Service memorandum amendment May 11, registrants with such skills should not be inducted along with others in regular calls for induction; local boards are to postpone issuance of an Order to Report for Induction, or cancel the order if it has been issued.

Burkeville Girl Wins County Society Award

Miss Joanne Oxley, 1970 honor graduate of Burkeville High School, has been selected to receive the Jasper-Newton County Medical Society's first annual $500 scholarship to a student who plans to enter training in a medical or paramedical field.

The society decided to initiate the scholarship program after studying various ways by which physicians of the area might improve and benefit the community. Each year, the recipient will be chosen from among students nominated by principals of high schools in Jasper and Newton counties and in the neighboring towns of Hemphill and Pineland.

Dr. Eldon M. Draper of Jasper is chairman of the scholarship committee.

PERSONALS

Dr. Robert L. Stubblefield of The University of Texas (Southwestern) Medical School at Dallas has been named president-elect of the Association of Department of Psychiatry Chairmen. He will take office in May 1971.

New officers of the International College of Surgeons, Texas State Surgical Division, are **Dr. Robert B. Elliott** of Houston, president; **Dr. Marvin C. Overton, Jr.,** of Pampa, vice-president; **Dr. S. V. Figueroa** of Terrell, secretary; and **Dr. J. B. Stephens** of Bangs, treasurer.

Dr. John Stirling Meyer, chairman of the Department of Neurology at Baylor College of Medicine in Houston, has been named head of a group to set international guidelines for treatment of stroke; these guidelines will be used by all member nations of the World Health Organization.

Dr. Harris Busch, Houston, is one of 80 scientists from throughout the world invited to speak at the International Symposium on Structure and Functions of the Cell Nucleus to be held in Moscow in September. The symposium is being sponsored by the Institute of Developmental Biology and the Committee on Molecular Biology of the Academy of Sciences of the USSR, and the Soviet Biochemical Society. Dr. Busch is chairman of the Department of Pharmacology, Baylor College of Medicine, and director of the Cancer Research Center. He will discuss the biochemical and physiological role of histones and other proteins of the cell nucleus as well as ribonucleoproteins of the cell nucleus and their transport.

Dr. S. Edward Sulkin (Ph.D.) has been named consultant on laboratory safety to the National Safety Council. He will advise the council's research and development section on means of safeguarding medical researchers against the hazards inherent in handling virulent disease-producing materials. Dr. Sulkin is professor and chairman of the Department of Microbiology, The University of Texas (Southwestern) Medical School at Dallas.

During June commencement ceremonies of The University of Texas Medical Branch, Galveston, four alumni received Ashbel Smith Distinguished Alumni Awards in recognition of their contributions and services to medicine and mankind. Recipients were **Dr. Ray K. Daily** of Houston; **Dr. Rolla Eugene Dyer** of Atlanta, Ga.; **Dr. J. L. Jinkins, Sr.,** of Galveston; and **Dr. Paul Henry Streit** of Washington, D. C.

Dr. Robert Franks, associate professor of pediatrics, The University of Texas Medical School at San Antonio, has received a grant from the Research Project Fund of the Southern Medical Association for his work on diurnal cortisol variation in childhood.

Dr. Richard W. Williamson, Jr., a resident at Bexar County Hospital in San Antonio, was a semifinalist in the intern/resident division of the SAMA-Squibb Scientific Exhibit Program. He received a $500 award, a gold medal, and an invitation to display his exhibit on the "Fat Embolism Syndrome" at SAMA's annual convention.

Dr. Maynard S. Hart, El Paso pathologist, has been appointed by Gov. Preston Smith to serve a three-year term on the State Health Advisory Committee for Comprehensive Health Planning.

Taking office July 1 as director of the Austin-Travis County Health Department was **Dr. John V. Sessums, Jr.,** former director of public health for Mesa County, Colo. He succeeds **Dr. Benjamin M. Primer, Sr.,** who retired at the end of April after serving 25 years.

The Waco Civitan Club presented its annual citizenship award to **Dr. Aubrey L. Goodman** for his services to the City of Waco, where he has practiced since 1933.

PAMPHLETS

Arthritis—The Basic Facts is just that: A 40-page booklet that summarizes what is known and what can be done for that disease. It explains in lay terms what arthritis is—and isn't—and emphasizes the importance of diagnosis and proper treatment to avoid unnecessary disability. Rheumatoid arthritis, osteoarthritis, and other forms are described. Copies are available free from local chapters of The Arthritis Foundation or from its national headquarters, 1212 Avenue of the Americas, New York, N. Y. 10036.

For the first time, all of the concerned federal agencies and departments have pooled their knowledge to produce *A Federal Source Book: Answers to the most frequently asked questions about drug abuse.* It is divided into several question-and-answer sections including drug abuse in general, marihuana, hallucinogens, stimulants, sedatives, narcotics, and other substances. A drug glossary is included. Copies are 25 cents each or $18.75 per 100, and may be ordered from the Superintendent of Documents, Dept. D, Government Printing Office, Washington, D. C. 20402.

Child protective services must develop specialized techniques to meet treatment problems posed by neglecting parents. *Innovative Approaches in Child Protective Services* discusses some new and imaginative approaches contributing to better protection of neglected and abused children. Published by The American Humane Asso-

ciation, Children's Division, P. O. Box 1266, Denver, Colo. 80201, it is available at 35 cents per copy. Enclose payment with all orders under $2.

Most people don't have to suffer the ailments that old age sometimes brings, and *Better Health in Later Years* explains the basic rules of maintaining one's well-being while growing older. Periodic health supervision, continuing to learn and to grow mentally, attention to good nutrition, proper exercise and sufficient rest are emphasized. Copies, 25 cents each, are available from the Public Affairs Committee, 381 Park Avenue South, New York, N. Y., 10016.

Your Diabetic Food Exchange Plan differs from most other material on that subject because (1) large, readable type lets people with eyesight problems read it more easily, (2) it is printed on special paper that will withstand folding and unfolding thousands of times, and (3) if it gets dirty it can be wiped clean with a damp cloth. Directions for using the diet plan, diet exchanges for each meal, and the exchange lists are arranged on one 21 by 11-inch sheet; free foods and foods to avoid are on the back cover. The sheet folds to 5¼ by 11 inches. The pamphlet is published by the North Suburban Dietetic Association of Illinois, Box 329, Glenview, Ill. 60025, and copies are 75 cents each.

NEW BOOKS IN TMA LIBRARY

Babbie, E. R.: *Science and Morality in Medicine,* Berkeley and Los Angeles, University of California Press, 1970.

Bailey, C. P., ed.: *Therapeutic Advances in the Practice of Cardiology,* New York, Grune and Stratton, 1970.

Brim, O. G., Jr., et al.: *The Dying Patient,* New York, Russell Sage Foundation, 1970.

Bryant, J.: *Health and the Developing World,* Ithaca, N. Y., Cornell University Press, 1969.

Campbell, M. F. and Harrison, J. H.: *Urology,* ed. 3, 3 vols., Philadelphia, W. B. Saunders Co., 1970.

Criep, L. H.: *Clinical Immunology and Allergy,* ed. 2, New York, Grune and Stratton, 1969.

Curran, R. C.: *Color Atlas of Histopathology,* New York, Oxford University Press, 1966.

Forer, L. K.: *Birth Order and Life Roles,* Springfield, Ill., Charles C Thomas, Publisher, 1969.

Frazier, C. A.: *Insect Allergy,* St. Louis, Warren H. Green Co., 1969.

Gardner, L. I.: *Endocrine and Genetic Diseases of Childhood,* Philadelphia, W. B. Saunders Co., 1969.

Gompel, C., and Silverberg, S.: *Pathology in Gynecology and Obstetrics,* Philadelphia, J. B. Lippincott Co., 1969.

Jasper, H. H., Ward, A. A., Pope, A., eds.: *Basic Mechanisms of the Epilepsies,* Boston, Little, Brown & Co., 1969.

Kaplan, H. A. and Ford, D. H.: *The Brain Vascular System,* Amsterdam, Elsevier Publishing Co., 1966.

Kiev, A.: *Curanderismo, Mexican-American Folk Psychiatry,* New York, The Free Press, 1968.

Kyle, R. A., and Shampo, M. A., eds.: *Medicine and Stamps,* Chicago, Ill., American Medical Association, 1970.

Laguens, R. P., and Gomez Dumm, C. L. A.: *Atlas of Human Electron Microscopy,* St. Louis, The C. V. Mosby Co., 1969.

Lichtenstein, L. : *Diseases of Bone and Joints,* St. Louis, The C. V. Mosby Co., 1970.

Love, H. D.: *Parental Attitudes Toward Exceptional Children,* Springfield, Ill., Charles C Thomas, Publisher, 1970.

McGovern, J. P., and Roland, C. G.: *William Osler, The Continuing Education,* Springfield, Ill., Charles C Thomas, Publisher, 1969.

Moore, C.: *Synopsis of Clinical Cancer,* ed. 2, St. Louis, The C. V. Mosby Co., 1970.

de Neef, J. C.: *Clinical Endocrine Cytology,* New York, Hoeber Medical Division, Harper & Row, 1965.

New York Heart Association: *Membrane Proteins,* Boston, Little, Brown & Co., 1969.

Pick, J.: *The Autonomic Nervous System,* Philadelphia, J. B. Lippincott, 1970.

Rand, R. W. and Rand, C. W.: *Intraspinal Tumors of Childhood,* Springfield, Ill., Charles C Thomas, Publisher, 1960.

Stewart, G. T., and McGovern, J. P.: *Penicillin Allergy, Clinical and Immunologic Aspects,* Springfield, Ill., Charles C Thomas, Publisher, 1970.

TeLinde, R. W., and Mattingly, R. F.: *Operative Gynecology,* ed. 4, Philadelphia, J. B. Lippincott, 1970.

Thalen, H. J. T.: *The Artificial Cardiac Pacemaker,* Springfield, Ill., Charles C Thomas, Publisher, 1969.

Thorek, P.: *Atlas of Surgical Techniques,* Philadelphia, J. B. Lippincott, 1970.

Recent Deaths

Dr. R. B. Rodarte

Dr. Ruben Beta Rodarte, 63, died May 16, 1970, in El Paso where he had been a resident for 50 years. He was a general practitioner.

Dr. Rodarte, the son of Dr. D. Rodarte and Ana Torres Rodarte, was born July 2, 1906, in Ciudad Juarez, Chihuahua, Mexico. After attending The University of Texas at Austin from 1926-1927, Dr. Rodarte obtained a BS degree in 1929 and an MD degree in 1931 from The University of Texas Medical Branch at Galveston. His internship was served at El Paso City-County Hospital. Brief postgraduate study in surgery was done at Chicago, Ill., and Galveston, and postgraduate study was done in neuropsychiatry at Galveston and Houston. From 1932-1942, Dr. Rodarte practiced medicine in El Paso. After serving as a major in the US Army for almost four years, Dr. Rodarte returned to El Paso where he practiced until his death.

A member of El Paso County Medical Society, Texas Medical Association, and American Medical Association, Dr. Rodarte was also an honorary member of the Mexican Medical Association of Juarez. He was a member of St. Joseph's Catholic Church and had served as secretary of the Catholic Guild.

Dr. Rodarte is survived by his wife, the former Carmen Zozaya of El Paso; three sons, Lt. Ruben J. Rodarte who is stationed at Moody AFB, Ga., and Jaime and Rene Rodarte, both of El Paso; one sister, Mrs. Bradley Roe of El Paso; and two brothers, Dr. J. G. Rodarte of Temple and Delta Rodarte of El Paso.

DR. EDWARDS

Dr. M. L. Edwards

Pioneer East Texas physician Dr. Martin Luther Edwards, 70, died in a Tyler hospital April 22, 1970. He had practiced in Hawkins, Tex., since Sept. 18, 1932.

Born Jan. 1, 1900, in Columbus, Miss., Dr. Edwards was the son of Simon and Jemima Williams Edwards. He was graduated from Clark College in Atlanta, Ga., in 1926 with a bachelor of science degree; and he received a master of science degree from Northwestern University at Evanston, Ill., in 1927. He was graduated from Meharry Medical College at Nashville, Tenn., in 1931 with an MD degree; and he interned at Prairie View Agricultural and Mechanical Hospital in Prairie View, Tex., from 1931 to 1932. In 1932 he began his practice in Hawkins. In that year, Dr. Edwards also became college physician at Jarvis Christian College at Hawkins; serving without salary for more than 15 years, he initiated the school's first health program and administered to the needs of the students, faculty, staff, and community residents. During World War II and to April 1970, he was a medical examiner for his local Selective Service board.

The first black physician to hold full staff privileges at Tyler's Medical Center Hospital and the author of several scientific articles, Dr. Edwards was a member of Smith County Medical Society, Texas Medical Association, and American Medical Association. He was elected to honorary membership in TMA in 1966. He served as secretary to the board of Texas Southern University; was a former secretary and president of the Lone Star State Medical, Dental and Pharmaceutical Association; was a past president of East Texas Medical, Dental, and Pharmaceutical Association; and was a former vice-president and member for several years of the House of Delegates of the National Medical Association. Also a member of Bethlehem United Methodist Church and an associate member of Jarvis Christian College Church, he was a member of the Eastern Star Masonic Lodge and for more than 48 years belonged to Omega Psi Phi fraternity. In the late 1940's he was selected by Texas Governor Beauford H. Jester as a member of the state's first bi-racial committee to seek solutions to diverse racial problems; and he received similar appointments from Governors Allan Shivers and Price Daniel. He was recipient of the Omega Achievement Award in 1955.

Surviving Dr. Edwards are his wife (the former Arzelia Jones of Kansas City, Kan.) of Hawkins; a daughter, Adah Duane Edwards of Knoxville, Tenn.; two sons, Dr. Martin L. Edwards, Jr., of Tyler and Simon Edwards of Hawkins; a sister, Mrs. Evelyn Sparks of Tucson, Ariz.; a brother, Orlando Edwards of Chicago; a daughter-in-law, Dorothy Patton Edwards of Tyler; and two grandsons, Martin, III, and Perry Austin Garfield Edwards. A younger daughter, Theresa, was killed in an accident in 1965.

Dr. R. G. Farris

Dr. Robert Grantland Farris, 42, Austin neurosurgeon, died April 22, 1970, in the crash of a private plane near the Austin municipal airport. His wife, the former Charlotte Swanson, and his two daughters, Judith Anne and Marilyn Jean, were also killed in the plane crash.

The son of Chester A. and Berniece Thompson Farris, Dr. Farris was born Oct. 14, 1927, in Fort Worth. He attended public schools in Arlington, what is now The University of Texas at Arlington, North Texas State University at Denton, and was graduated from the UT Southwestern Medical School at Dallas with an MD degree in 1949. He interned, was assistant resident and resident in general surgery, and was junior and senior clinical instructor in neurosurgery at the University of Michigan, University Hospital at Ann Arbor from 1949 to 1954. Entering the US Army, he became a captain and chief of the neurosurgical service at the US Army hospital in Tokyo, Japan, from 1954 to 1956, finishing his service at Brooke General Hospital, Brooke Army Medical Center, in San Antonio.

DR. FARRIS

Dr. Farris was a diplomate of the American Board of Neurological Surgery and a member of the American Association of Neurological Surgeons, Cushing Society, and the Rocky Mountain Neurosurgical Society. He was on the staffs of all Austin Hospitals, served on the medical education committee at Brackenridge, was a former chief of surgical service at Holy Cross, and was a consultant to Austin State Hospital and Bergstrom Air Force Base Hospital. Dr. Farris was a member of the Travis County Medical Society and the Texas and American Medical Associations; recently, he had completed extensive postgraduate training in micro-neurosurgery. He was a member of Alpha Omega Alpha honorary medical society; Sigma Xi, honorary scientific society; the J. K. G. Silvey Honorary Biological Society, and Phi Chi medical fraternity.

Active in civic affairs, he was president of the Arlington chapter of the Sons of the American Revolution, had served four years as chairman of the Travis County Republican Party, was a member of the Covenant Presbyterian Church of Austin, and was listed in *Who's Who in the South and Southwest*. He was a life master in the American Contract Bridge Association.

Dr. Farris is survived by his parents of Arlington and Dallas; and a brother, Dr. Edward T. Farris (DDS) of Dallas. Another brother, Chester A. Farris, Jr., M.D., died in May, 1969.

Dr. E. F. Wallace

Arlington physician and attending physician at The University of Texas at Arlington health center Dr. E. Frank Wallace, 47, was found dead at his home May 2, 1970.

Recipient of the Citizen of the Year Award, given by the Arlington Chamber of Commerce, in 1962, Dr. Wallace

had served two terms on the Arlington city council. He was the UTA team physician belonging to the Texas Society of Athletic Team Physicians and received the Pop Warner Award for service to athletics in the early 1960's. He served two terms as president of the UTA football booster club and was an active member and served on the board of directors of the UTA Alumni Association. A member of Phi Beta Kappa and Theta Kappa Psi medical fraternity, he also held memberships in Tarrant County Medical Society, Texas Medical Association, and American Medical Association. He was a past president of Arlington Lions Club, a member of Arlington Rotary Club, and a member of the board of directors and the staff of Arlington Memorial Hospital.

Born in Arlington on May 19, 1922, Dr. Wallace was the son of T. B. and Kathryn McBride Wallace. He attended what is now The University of Texas at Arlington and was graduated with a BA degree in 1943 from UT at Austin. He received his MD degree from the UT Medical Branch at Galveston in 1945 and interned at St. Paul Hospital in Dallas from 1945 to 1946. He then practiced medicine for a year in Winters, Tex., before returning to Arlington in 1947.

Surviving Dr. Wallace are his wife, the former Nancy Bibb; three daughters, Mrs. Nancy Cartwright of Mineral Wells, Tex., Mrs. Kathryn Ford, and Wendy Wallace, both of Arlington; his mother of Arlington; two brothers, T. B. Wallace, Jr., of Richardson, Tex., and George Wallace of Dallas; two sisters, Mrs. Elo Hedtke of Arlington, and Mrs. Fred Buehring of Dallas; and a granddaughter.

DR. CROSS

Dr. T. J. Cross

Fort Worth general practitioner since 1928 Dr. Thomas Jefferson Cross died May 15, 1970, in a Fort Worth hospital.

The son of M. O. and Kinchalo West Cross, Dr. Cross was born July 8, 1897, in Tolar, Tex. He was graduated in 1918 from Hardin-Simmons University at Abilene with a BA degree. He attended Baylor College of Medicine, then located in Dallas; and he received his MD degree in 1925 from the University of Tennessee College of Medicine at Memphis. He interned at Baptist Memorial Hospital in Memphis in 1925-1926, and was a member of the Faculty at the UT College of Medicine at Memphis. He served a residency at Baptist Hospital in Fort Worth in 1926-1927; and he later took postgraduate courses in New York, Chicago, Dallas, and Galveston. During World War II he served as a captain in the Texas Defense Guard. He retired in 1968.

Dr. Cross was among the first 10 aviation medical examiners appointed in 1927 to serve what later expanded into the current Federal Aviation Agency medical certification program. He was the first president of Texas Air-Medics, and he was a past president also of Aerospace Medical Association and of the International Civil Aviation Medical Association. A Mason and a Shriner, he was also a member of University Christian Church, the church's men's club, the Fort Worth Chamber of Commerce, and Sons of the Republic of Texas. A hog farmer by avocation, he was the first president of Southwestern Hereford Hog Association, and was a member of the National Hereford Hog Record Association. He belonged to Tarrant County Medical Society, Texas Medical Association, American Medical Association, American Academy of General Practice, and Fort Worth Academy of Medicine. The author of articles on the medical aspects of aviation, he also served on several local hospital staffs.

Surviving Dr. Cross are his wife of Fort Worth, the former Frances Massey; three daughters, Mrs. Charles V. Chenault of Houston, Mrs. Lloyd C. Russell of Irving, and Mrs. Phil W. Bradbury of Fort Worth, and eight grandchildren.

Dr. G. M. Schlenker

Dr. George M. Schlenker, El Paso psychiatrist, died May 4, 1970. He was 51.

The son of George H. and Alma Schlenker, Dr. Schlenker was born in Jackson, Mich., on June 21, 1918. He attended St. Olaf College in Northfield, Minn. from 1936-1937 and received an AB degree from Carroll College in Waukesha, Wis., in 1940. Dr. Schlenker received his MD degree in 1943 from Creighton University School of Medicine in Omaha, Neb. After serving in the US Army from 1944-1946, he was in general practice in Amherst, Wis., until 1948, when he served a residency at University of Wisconsin Hospital in Madison until 1951. Dr. Schlenker then practiced in Albuquerque, N.M., from 1951-1953, when he moved to El Paso.

A member of El Paso County Medical Society, Dr. Schlenker also belonged to Texas Medical Association and American Medical Association. He had served as El Paso County psychiatrist since 1960 and was a member of the El Paso Sheriff's Posse. Dr. Schlenker was a member of St. Patrick's Cathedral.

Dr. Schlenker is survived by his wife, the former Constance MacArthur, and a daughter, Terry Schlenker, both of El Paso; his mother, of Waupaca, Wis., and a sister, Mrs. Nancy Oberhofer, of Milwaukee, Wis.

Dr. T. D. Watson

Houston physician Dr. Thomas Douglas Watson, Jr., died April 17, 1970, in Houston. He was 46.

Born April 27, 1923, in Center, Tex., Dr. Watson was the son of Thomas D. and Minnie Shillings Watson. He attended Stephen F. Austin State College at Nacogdoches and The University of Texas at Austin, and he was graduated in 1946 with an MD degree from Baylor College of Medicine at Houston. He interned at Jefferson Davis Hospital in Houston in 1946-1947; and he was chief of surgical service and later chief of professional services at 26th Station Hospital, Schofield Barracks, Hawaii, from 1947 to 1949.

A Houston resident for 30 years, Dr. Watson was a member of Harris County Medical Society, Texas Medical Association, and American Medical Association. He belonged to Central Church of Christ in Houston.

Surviving Dr. Watson are his wife, the former Joyce Karbach; two daughters, Margie Watson and Judy Watson, both of Houston; two sons, Stephen Watson of Houston and Thomas D. Watson, III, of Dallas; his parents of Houston; four sisters, Mrs. Seldon Hampton, Mrs. Eleanor Harrison, Mrs. Ruth Smith, and Mrs. Billie Jean Byrnes, all of Center; a brother, Clyde E. Watson of Center; and a grandson of Dallas.

BEVERLY HILLS HOSPITAL
BEVERLY HILLS CLINIC

PSYCHIATRY
INPATIENT – OUTPATIENT

Multiple-approach treatment of thinking disorders. Established diagnostic procedures available. Secluded in-town location convenient to the medical community.

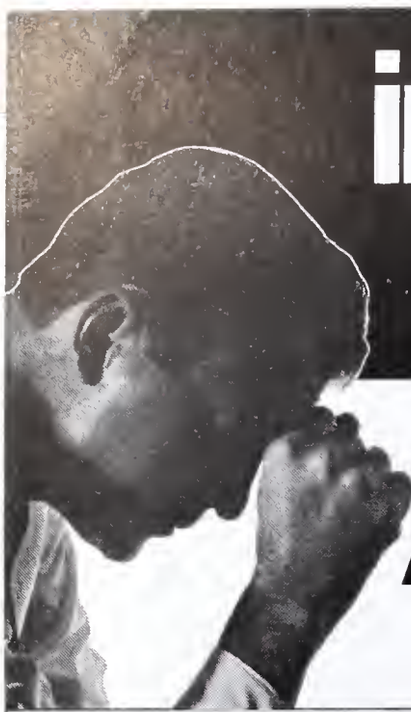
Psychiatry

Joseph L. Knapp, M.D.
Fred H. Jardan, M.D.
Jacksan H. Speegle, M.D.
Joseph H. Lindsay, M.D.
Jack R. Tomlinsan, M.D.

Psychology

Traudl E. Jordan-Diener, Ph.D.
R. A. Mitchell, M.S.
David K. Faashee, M.S.

1353 North Westmoreland Avenue Dallas, Texas 75211 214 331-8331



The treatment of

impotence

in the American male is complex. The concept of chemotherapy plus the physician's psychological support is confirmed as effective therapy.

NEW CLINICAL STUDY

The Treatment of Impotence with Methyltestosterone Thyroid (100 patients—Double Blind Study) T. Jakobovits Fertility and Sterility, January 1970 Official Journal of the American Fertility Society

Android®

(thyroid-androgen) tablets

Double-Blind Study and Type of Patient: 100 patients suffering from undifferentiated impotence. Examination revealed the patients were within the average range of 17-Keto-steroid excretion and protein bound iodine. Except for fatigue in some patients all were in good health. Study was for one month in duration. Each patient received one tablet 3 times daily.

Results: Of the patients receiving the active medication (Android) a favourable response was seen in 78%. This compares with 40% with those on placebo. 80% of the patients treated with the active ingredients showed relief in fatigue compared with 42% of those receiving the placebo. Although psychotherapy is indicated in patients suffering from functional impotence the concomitant role of chemotherapy (Android) cannot be disputed.

Choice of 4 strengths:

Android

Each yellow tablet contains:
Methyl Testosterone ..2.5 mg.
Thyroid Ext. (1/6 gr.) ..10 mg.
Glutamic Acid .....50 mg.
Thiamine HCL .....10 mg.
Dose: 1 tablet 3 times daily.
Available:
Bottles of 100, 500, 1000.

Android-HP
HIGH POTENCY

Each red tablet contains:
Methyl Testosterone ..5.0 mg.
Thyroid Ext. (½ gr.) ...30 mg.
Glutamic Acid .....50 mg.
Thiamine HCL .....10 mg.
Dose: 1 tablet 3 times daily.
Available:
Bottles of 100, 500, 1000.

Android-X
EXTRA HIGH POTENCY

Each orange tablet contains:
Methyl Testosterone .12.5 mg.
Thyroid Ext. (1 gr.) ....64 mg.
Glutamic Acid .....50 mg.
Thiamine HCL .....10 mg.
Dose: 1 or 2 tablets daily.
Available:
Bottles of 60, 500.

Android-Plus
WITH HIGH POTENCY B-COMPLEX AND VITAMIN C

Each white tablet contains:
Methyl Testosterone ..2.5 mg.
Thyroid Ext. (¼ gr.) ...15 mg.
Ascorbic Acid (Vit. C) .250 mg.
Thiamine HCL .....25 mg.
Glutamic Acid .....100 mg.
Pyridoxine HCL .....5 mg.
Niacinamide .....75 mg.
Calcium Pantothenate .10 mg.
Vitamin B-12 .....2.5 mcg.
Riboflavin .....5 mg.
Dose: 2 tablets daily.
Available: Bottles of 60, 500.

Contraindications—Methyltestosterone is not to be used in malignancy of reproductive organs in male, coronary heart disease. Thyroid is not to be used in heart disease, hypertension unless the metabolic rate is low.

References: 1. **Montesano, P., and Evangelisle, I.** Methyltestosterone-thyroid treatment of sexual impotence. Clin Med 12:69, 1966. 2. **Dublin, M. F.** Treatment of impotence with methyltestosterone-thyroid compound. West Med 5:67, 1964. 3. **Titeff, A. S.** Methyltestosterone-thyroid in treating impotence. Gen Prac 25:6, 1962. 4. **Heilman, L., Bradlow, H. L., Zumoff, B., Fukushima, D. K., and Gallagher, T. F.** Thyroid-androgen interrelations and the hypocholesteremic effect of androsterone. J Clin Endocr 19:936, 1959. 5. **Farris, E. J., and Colton, S. W.** Effects of L-thyroxine and liothyronine on spermatogenesis. J Urol 79:863, 1958. 6. **Dsot, A., and Farrar, G. E.** United States Dispensatory (ed. 25). Lippincott, Philadelphia, 1955, p. 1432. 7. **Wershub, L. P.** Sexual Impotence in the Male. Thomas, Springfield, Ill., 1959, pp. 79-99.

REFER TO PDR

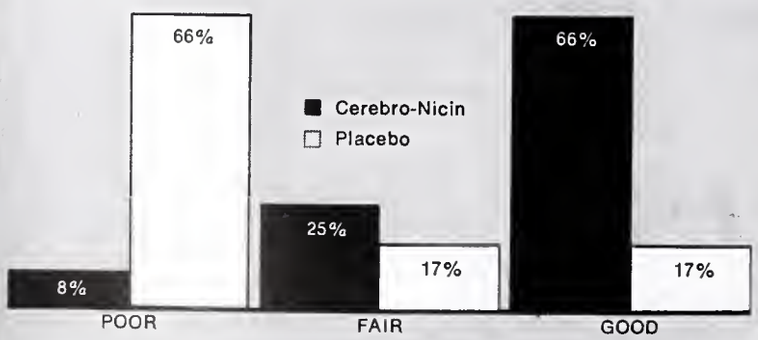
Write for literature and samples: BROWN **THE BROWN PHARMACEUTICAL CO., INC.** 2500 West 6th Street, Los Angeles, California 90057
A SUBSIDIARY OF ASSOCIATED CARE ENTERPRISES, INC.

For the treatment of the aging patient

Cerebro-Nicin®

capsules/elixir

A Gentle Cerebral Stimulant and Vasodilator



CEREBRO-NICIN® New double-blind study* shows how effectively senility can be forestalled. Four times as many aging patients showed striking improvement.

*A Double-Blind Study of Cerebro-Nicin, Therapy for the Geriatric Patient, R. Goldberg Jrnl,. of the Amer. Ger. Soc. June, 1964

Available in a tasty wine base elixir and capsules

Each Cerebro-Nicin capsule contains:

Pentylenetetrazole	100 mg.
Nicotinic Acid	100 mg.
Ascorbic Acid	100 mg.
Thiamine HCl	25 mg.
l-Glutamic Acid	50 mg.
Niacinamide	5 mg.
Riboflavin	2 mg.
Pyridoxine	3 mg.

DOSAGE: One capsule t.i.d. or as prescribed by physician.
AVAILABLE: Bottles of 100, 500, 1000 capsules.
Also elixir 8 oz. bottles.
CONTRAINDICATIONS: There are no known contraindications to Pentylenetetrazole although caution should be exercised when treating patients with a low convulsive threshold.
Most persons experience a flushing or tingling sensation after taking a higher potency niacin-containing compound. As a secondary reaction some will complain of nausea and other sensations of discomfort. This reaction is transient and is rarely a cause of discontinuance of the drug if the patient is forewarned to expect the reaction.

REFER TO PDR

Write for literature and samples...

BROWN **THE BROWN PHARMACEUTICAL CO.**
2500 W. 6th St., Los Angeles, Calif. 90057
Write for Product Catalog

Treating vaginitis is as easy as AVC

Trichomonads...Monilia...Bacteria

You can depend on AVC—the comprehensive therapy that acts against all three major vaginal pathogens.

Monilia emerging as a major therapeutic problem—
recent studies report increased incidence, attributed in part to the use of oral contraceptives,[1-4] broad-spectrum antibiotics[5-9] and prolonged use of corticosteroids.[7]
recent evidence establishes high rate of microbiological and clinical cure with AVC.[9-11]

Comprehensive—Effective

The published record and more than two decades of clinical experience clearly establish the therapeutic value of AVC in vaginitis/cervicitis and vaginal surgery.

Easy as AVC

Contraindications: Known sensitivity to sulfonomides.
Precautions/Adverse Reactions: The usuol precoutions for topicol ond systemic sulfonomides should be observed becouse of the possibility of obsorption. Burning, increosed locol discomfort, skin rosh, urticorio or other manifestotions of sulfonomide toxicity ore reosons to discontinue treotment.
Dosage: One opplicotorful or one suppository introvoginolly once or twice doily.
Supplied: Creom—Four-ounce tube with or without opplicotor. Suppositories—Box of 12 with opplicotor.

References: 1. Gordner, H. L.: J. Miss. M.A. 8:529, 1967. 2. Porter, P. S., ond Lyle, J. S.: Arch. Dermot. 93:402, 1966. 3. Wolsh, H.; Hildebrondt, R. J., ond Prystowsky, H.: Am. J. Obst. & Gynec. 93:904, 1965. 4. Voginitis ond the Pill: J.A.M.A. 196:731, 1966. 5. Guerriero, W. F.: South. M.J. 56:390, 1963. 6. Seelig, M. S.: Am. J. Med. 40:887, 1966. 7. Ta-doy's Drugs, New York, Grune & Strotton, Inc., 1965, p. 316. 8. Groy, L. A., ond Bornes, M. L.: Am. J. Obst. & Gynec. 92:125, 1965. 9. Solerno, L. J.; Ortiz, G., ond Turkel, V.: Voginitis: A Diognostic ond Theropeutic Approoch, Scientific Exhibit, presented ot the 115th Annuol A.M.A. Convention, Chicogo, Illinois, June 1966. 10. Wolsh, J. C.; Sheffery, J. B., ond Wilson, T. A.: Med. Ann. D.C. 37:358, 1968. 11. Nugent, F. B., ond Myers, J. E.: Pennsylvonio Med. 69:44, 1966.

THE NATIONAL DRUG COMPANY
DIVISION OF RICHARDSON MERRELL INC.
PHILADELPHIA, PENNSYLVANIA 19144

AVC CREAM (ominocrine hydrochloride 0.2%, sulfonilomide 15.0%, ollontoin 2.0%)

AVC SUPPOSITORIES (ominocrine hydrochloride 0.014 Gm., sulfonilomide 1.05 Gm., ollontoin 0.014 Gm.)

TRADEMARK: A V C

AV-9104 7/69

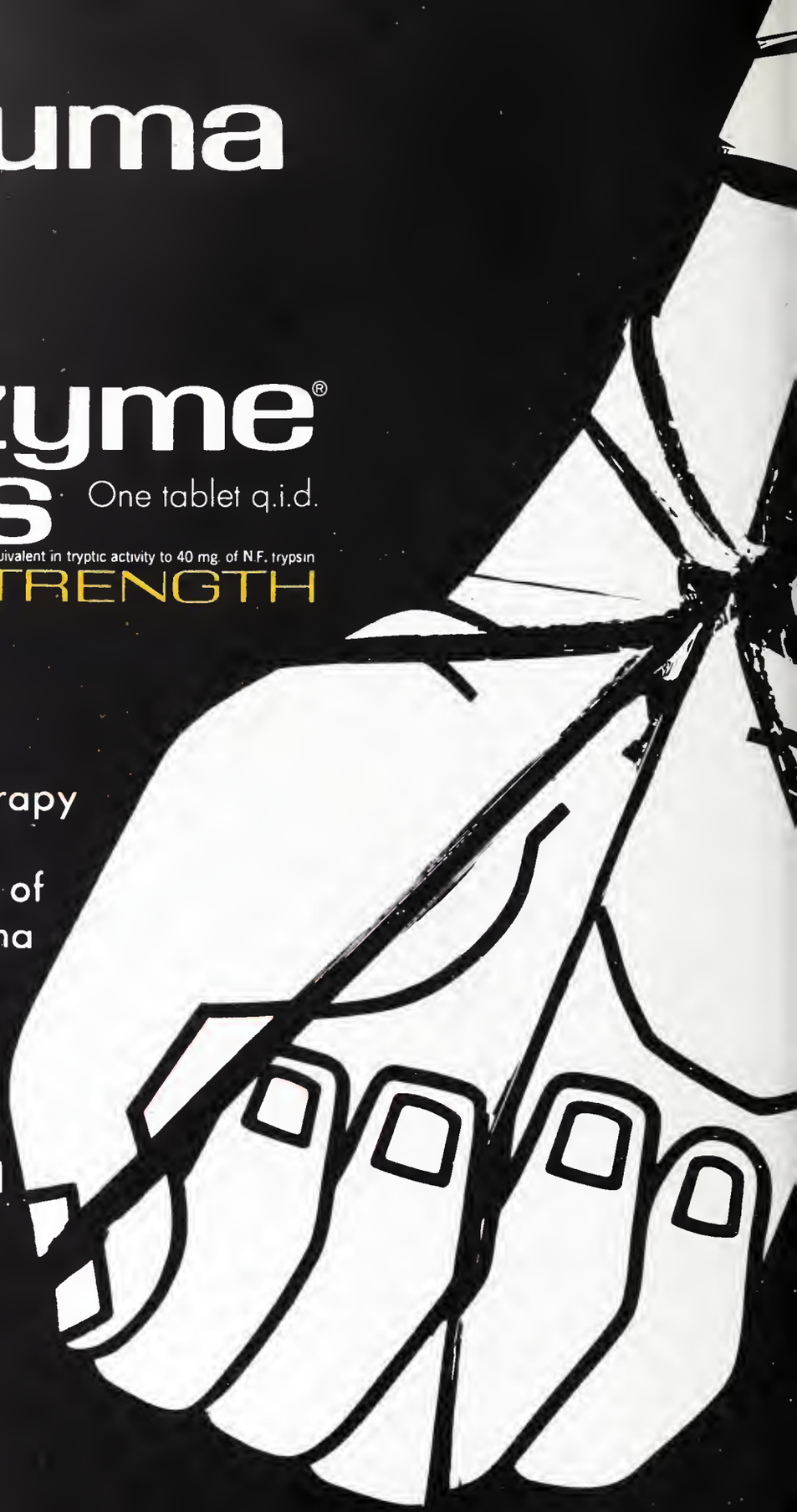
in trauma

new Orenzyme® Bitabs

One tablet q.i.d.

Trypsin: 100,000 N.F. Units, Chymotrypsin: 8,000 N.F. Units.; equivalent in tryptic activity to 40 mg. of N.F. trypsin

DOUBLE STRENGTH



Proteolytic enzyme therapy specifically indicated for the rapid resolution of inflammation and edema as adjunctive therapy in accidental and surgical trauma.

1 tablet q.i.d. provides recommended therapeutic dose at lower cost.

Description: ORENZYME BITABS offers the therapeutic effects of trypsin in an oral form as adjunctive therapy for the rapid resolution of inflammation and edema. ORENZYME BITABS is convenient to use, promotes patient cooperation and is ideally suited for maintenance therapy following parenteral trypsin.

Indications: When used as adjunctive therapy for the rapid resolution of inflammation and edema, good results have been obtained in:

- ☐ Accidental Trauma
- ☐ Postoperative Tissue Reactions.

Other conventional measures of treatment should be used as indicated. In infection, appropriate anti-infective therapy should be given.

Contraindications: ORENZYME BITABS should not be given to patients with a known sensitivity to trypsin or chymotrypsin.

Precautions: It should be used with caution in patients with abnormality of the blood clotting mechanism such as hemophilia, or with severe hepatic or renal disease. Safe use in pregnancy has not been established.

Adverse Reactions: Adverse reactions with ORENZYME have been reported infrequently. Reports include allergic manifestations (rash, urticaria, itching), gastrointestinal upset and increased speed of dissolution of animal-origin surgical sutures. There have been isolated reports of anaphylactic shock, albuminuria and hematuria. Increased tendency to bleed has also been reported but, in controlled studies, it has been seen with equal incidence in placebo-treated groups. (See Precautions.) It is recommended that if side effects occur medication be discontinued.

Dosage: One tablet q.i.d.

THE NATIONAL DRUG COMPANY
DIVISION OF RICHARDSON-MERRELL INC.
PHILADELPHIA, PENNSYLVANIA 19144

TRADEMARK: BITABS U.S. PATENT NO. 3,004,893 4/69 0-821A

LACTINEX®

LACTINEX®

LACTINEX®

TABLETS &
GRANULES

■ to help restore and stabilize the intestinal flora

■ for fever blisters and canker sores of herpetic origin

Introduced to help reestablish the normal physiology of the intestinal tract in gastrointestinal disturbances[1], particularly diarrheas (including those resulting from antibiotic therapy), Lactinex is also useful for reestablishing the flora following bowel surgery, infant colic, mucous colitis, foul-smelling stools, pruritus ani, flatulence and hives.[2,3,4,5,6]

Lactinex contains a viable mixed culture of both *Lactobacillus acidophilus* and *L. bulgaricus* with the naturally occurring metabolic products produced by these organisms.

No untoward side effects have been reported to date.

Literature on indications and dosage available on request.

HYNSON, WESTCOTT & DUNNING, INC.

Baltimore, Maryland 21201

(#LX06)

LX

References:
(1) Siver, R. H.: CMD, 21:109, September 1954. (2) Frykman, H. H.: Minn. Med., 38:19-27, January 1955. (3) McGivney, J.: Tex. State Jour. Med., 51:16-18, January 1955. (4) Quehl, T. M.: Jour. of Florida Acad. Gen. Prac., 15:15-16, October 1965. (5) Weekes, D. J.: NY State Jour. Med., 58:2672-2673, August 1958. (6) Ellis, S. and Spratt, J. S.: JOUR. AMER. GER. SOC., 18:410-415, May 1970.

Starlite Village Clinic

Center Point, Texas

Ph.: ME 4-2426

- - - A specialized clinic dedicated to the physical, mental, and spiritual treatment of men and women suffering from alcoholic and similar disturbances.

F. E. Seale, M.D.
Medical Director

Bland Seale
Administrator

RADIOLOGY ASSOCIATES OF FORT WORTH

John S. Alexander, M.D., M.A.C.R.
Robert J. Atcheson, M.D., M.A.C.R.
Douglas E. Bibby, M.D., F.A.C.R.
James W. Buice, M.D., F.A.C.R.
Richard C. Gasser, M.D., M.A.C.R.
James A. Holland, M.D., M.A.C.R.
Paul W. Mathews, Jr., M.D., M.A.C.R.
Preston W. Nash, M.D., M.A.C.R.
Rolland F. Oakes, M.D., M.A.C.R.
Norman L. Presley, M.D., M.A.C.R.
Sanford Reitman, M.D., M.A.C.R.
Gomer W. Roberts, M.D., M.A.C.R.
Herman C. Sehested, M.D., F.A.C.R.
Glenn A. Stokdyk, M.D., M.A.C.R.
C. H. Tseng, M.D., M.A.C.R.
Claude Williams, M.D., M.A.C.R.
J. Thomas Telle, M.D., D.A.B.R.

DIPLOMATES OF THE AMERICAN BOARD OF RADIOLOGY

Offices:

100 Medical Tower Bldg. — 336-8681
1217 West Cannon — 336-8627
900 W. Randol Mill Rd., Arlington, Texas 76010 — 277-7681

TRAVIS CLINIC ASSOCIATION AND THE NAN TRAVIS MEMORIAL HOSPITAL

JACKSONVILLE, TEXAS

STAFF

General Surgery:
L. L. Travis, M.D.
J. S. O'Hare, M.D.
R. K. Willms, M.D.

Orthopedic Surgery:
E. L. Mahon, Jr., M.D.

Urology:
H. F. Rives, M.D.

Pathology:
Harbert Davenport, Jr., M.D.

Internal Medicine:
J. T. Boyd, M.D.
F. H. Verheyden, M.D.
J. T. Scogin, M.D.
J. H. Pesnell, M.D.
Mary A. Bone, M.D.

Obstetrics and Gynecology:
J. C. Rucker, M.D.
J. D. Crawford, M.D.

Ophthalmology:
Fred Haberle, M.D.

Pediatrics:
M. L. Gray, M.D.

Radiology and Radioactive Isotopes:
L. W. Ralston, M.D.

William J. Fowler
Administrator of Nan Travis Memorial Hospital

J. G. Casey
Business Manager of Travis Clinic

MEDICAL ARTS CLINIC

Box 841
Corsicana, Texas

PEDIATRICS
JOHN W. GRIFFIN, M.D., F.A.A.P.*
JAMES E. SPEIER, M.D.

INTERNAL MEDICINE
ROBERT D. BONE, M.D., F.A.C.P.*
JAMES F. WITTEN, M.D., F.A.C.P.*
CHARLES I. BILTZ., M.D.*

OBSTETRICS & GYNECOLOGY
KELLY PAUL BURKHART, M.D., F.A.C.O.G.*

DERMATOLOGY
JOSEPH M. GLICKSMAN, M.D.

BUSINESS MANAGER
OWEN G. ELLIOTT, M.G.M.A.

SURGERY
LOUIS E. GIBSON, M.D., F.A.C.S.*
E. SCOTT MIDDLETON, M.D.

OPHTHALMOLOGY
ROBERT D. MERTZ, M.D., F.A.A.O.O.*

EAR, NOSE, THROAT
PHILLIP M. AWTREY, M.D.,* F.A.A.O.O.

DENTISTRY
ROBERT A. LANG, D.D.S.

*Diplomate of the American Board

PHYSICIANS' DIRECTORY

Allergy

DRS. FEIN AND KAMIN
Allergy and Immunology

Bernard T. Fein, M.D., F.A.C.A.
Fellow
American Academy of Allergy
216 Medical Prof. Bldg.
CA 6-7671

Peter B. Kamin, M.D., F.A.A.P.
Diplomate
Sub-Board Pediatric Allergy
San Antonio, Texas
CA 7-6331

HOUSTON ALLERGY CLINIC
CLINICAL ALLERGY AND IMMUNOLOGY
RICHARD L. ETTER, M.D., F.A.C.A., F.A.A.A.
RICHARD H. JACKSON, M.D., F.A.C.A.
WARREN J. RAYMER, M.D., F.A.C.A.
RAMON GARRIDO, M.D.
(Certified American Board of Pediatrics)
Suite 156, Hermann Professional Building
6410 Fannin St., Houston, Texas 77025
JA 6-3281

V. E. FRIEDEWALD, M.D., F.A.C.P.
Diplomate American Boards of Internal Medicine and Allergy
ALLERGY
2203 West Tennessee Midland, Texas 79701
MU 2-5385

McGOVERN ALLERGY CLINIC
Diagnosis and Treatment of Allergic Diseases
John P. McGovern, M.D. Theodore J. Haywood, M.D.
Orville C. Thomas, M.D. Joseph T. Queng, M.D.
Charles D. Haunschild, M.D. James A. Murray, M.D.
*Hermann Gregory, M.D.
Certified American Boards of Pediatrics and Allergy
6655 Travis Street Houston, Texas 77025 JA 8-5591
*Military Leave of Absence

HARRIS HOSEN, M.D., F.A.A.Pd.
Clinical Allergy and Immunology
2649 Procter Street Port Arthur, Texas

ALLERGY CLINIC
Saul Grossman, M.D., F.A.C.A.
Allergy-Dermatology
W. A. Crozier, M.D., F.A.C.A.
Allergy-Immunology
TU 2-3487
2530 Morgan Corpus Christi, Texas

STUART A. MASON, M.D.
Allergic Diseases
921 Eighth Avenue Fort Worth, Texas 76104
Phone: 336-1574 If no answer: 924-4231

Cardiovascular Disease

GUS SCHREIBER, M.D., F.A.C.P.
Fellow American College of Cardiology

Elective cardioversions for the tachycardias and for auricular fibrillation performed at your hospital with my personal synchronized defibrillator.

For the heart blocks temporary placement at your hospital of my bipolar electrode cardiac catheter and external pacemaker.

Reception and consultative interpretation of telephoned electrocardiographs from any system 24 hours per day.

Rental-maintenance of matching FM Transmitter-Tape Recording equipment which permits the taping of tracings from any bed, compression of the coded data, and later transmission of the tracing when desired.

Office ECG Telephone and Relay Station: 214-748-4118
Home ECG Telephone and Relay Station: 214-352-5504
1430 Medical Arts Building Dallas, Texas 75201

DIRECTORY RATES & DATA: Space is available to TMA members at $8.00 per column inch and must run six months. New listings are limited to those specialties recognized by the American Medical Association. A discount of 5% is allowed for six months' advance payment. Mail copy to Advertising Assistant, TEXAS MEDICINE, 1801 North Lamar Blvd., Austin, Texas 78701. Deadline is 20th of the month preceding publication month.

Clinics

THE CLINIC-HOSPITAL OF SAN ANGELO
224-234 West Beauregard Avenue
SAN ANGELO, TEXAS

R. M. Finks, M.D., Pediatrics
M. D. Knight, M.D., Surgery
W. H. Brauns, M.D., Internal Medicine
Roy E. Moon, M.D., Obstetrics and Gynecology
Chas. F. Engelking, M.D., Ear, Nose and Throat
R. A. Morse, M.D., Internal Medicine
Ralph R. Chase, M.D., Pediatrics
Tom R. Hunter, M.D., Surgery
Dale W. Hayter, M.D., Ophthalmology
O. Sterling Gillis III, M.D., Obstetrics and Gynecology
Consultant in Pathology—Lloyd R. Hershberger, M.D.
Consultants in Radiology—John E. Ballard, M.D., John G. Bolen, M.D., William T. Gordon, M.D.
Robert P. Gordon, C.P.A., Administrator

THE FORT WORTH CLINIC
1221 West Lancaster Avenue
Fort Worth, Texas

John M. Church, M.D.
T. J. Coleman, M.D.
O. M. Phillips, M.D.
Robert L. Sewell, M.D.
John H. Sewell, M.D.
C. K. Holsapple, M.D.
Wm. L. Asper, Bus. Mgr.

FIFTH AVENUE CLINIC
650 Fifth Avenue
Fort Worth, Texas

MEDICINE
Sidney E. Stout, M.D.
Frank L. Bynum, M.D.
Ed Etier, Jr., M.D.

GENERAL PRACTICE
Donald S. Gibbs, M.D.

RADIOLOGY
Otto H. Grunow, M.D.

THOMAS-SPANN CLINIC AND HOSPITAL
1546 South Brownlee Corpus Christi, Texas 78404
Telephone 884-3861

SURGERY
R. Gayle Spann, M.D., F.A.C.S. (Deceased)
S. T. Coleman, M.D., F.A.C.S. (Consultant)
Donald E. Jackson, M.D., F.A.C.S. (Consultant)

OPHTHALMOLOGY
L. David Wright, M.D., F.A.C.S.

GENERAL PRACTICE
Travis B. Phelps, M.D.
T. D. Harvey, M.D.
H. R. Rose, M.D.
C. L. Vernor, M.D.

ORTHOPEDICS
Carlos M. Yanez, M.D., F.A.C.S.

GYNECOLOGY
J. H. Thomas, M.D.

INTERNAL MEDICINE
William E. Morris, M.D.
Gerald A. Reeves, M.D.
Pruett Moore, Jr., M.D.

RADIOLOGY
Crysup Sory, M.D.

ADMINISTRATOR
B. J. Clark

DIRECTOR OF NURSES
Clinic - Pat Parker
Hospital - Mrs. Joyce Pettit

RUGELEY AND BLASINGAME CLINIC
Wharton, Texas

2100 North Fulton Street 713 LE 2-1700

INTERNAL MEDICINE
R. D. Little, M.D.
D. W. Samuelson, M.D.

GENERAL PRACTICE
C. E. Woodson, M.D.

PEDIATRICS
F. W. Kolle, M.D.

NEUROPSYCHIATRY
R. R. Gleason, Jr., M.D.

DERMATOLOGY & SKIN CANCER
J. S. Stell, M.D.

GENERAL & THORACIC SURGERY
R. E. Goelzer, M.D.

GENERAL SURGERY
R. B. Caraway, Jr., M.D.

UROLOGY
H. Z. Fretz, M.D.
C. M. Collins, M.D.

OBSTETRICS & GYNECOLOGY
D. M. Voulgaris, M.D.
H. E. Secor, M.D.

OPHTHALMOLOGY
V.A. Black, M.D.

OTOLARYNGOLOGY
J. L. Holcomb, M.D.

DENTISTRY
C. J. Shumbera, D.D.S.
J. R. Kieler, Jr., D.D.S.

PATHOLOGY—CONSULTANT
H. M. Perches, M.D.

ANESTHESIOLOGY—CONSULTANT
C. G. Spears, M.D.

RADIOLOGY—CONSULTANT
L. D. O'Gorman, M.D.

ADMINISTRATION
C. H. "Ham" Rugeley
Malcolm D. Rugeley

THE CHESTER CLINIC & THE JOHN BUIST CHESTER HOSPITAL
3330 S. Lancaster Rd., Dallas, Texas
376-5411

John B. Chester, M.D., F.A.C.S., Orthopedic Surgery
Gene W. Rogers, M.D., General Surgery
Douglas M. Hardy, M.D., Obstetrics & Gynecology
Ervin R. Miller, M.D., Cardiovascular Diseases
Ralph C. Disch, M.D., F.A.C.S., D.A.B.S., General Surgery
Catherine P. Chester, M.D., Infants and Children
Doyle L. Sharp, M.D., General Surgery
R. M. Flasdick, M.D., Diagnosis and Internal Medicine
Ben E. Moore, B.S., M.D., Pediatrics
A. P. Larson, B.S., M.S., M.D., F.A.C.S., A.A.O.S.
Garrett, W. Maxwell, M.D., General Practice
Amado E. Dominquez, M.D., Diagnosis & Internal Medicine
H. A. Mueller, M.D., Consultant in Radiology
Gerard Noteboom, M.D., Consultant in Pathology
Geneva Bratton, R.N., Superintendent of Nurses
E. B. Morgan, Administrator

LANCASTER OFFICE – LANCASTER, TEXAS
Phone 227-2151

David E. Krebs, M.D., Pediatrics & Medicine
Charles W. Waldrop, M.D., General Practice
Miles W. Davis, M.D., General Practice

COUNTRY CLUB CORNERS OFFICE
7140 Baytree 224-1181

R. B. Curry, M.D., General Practice
Herbert M. Hinckley, M.D., General Practice

BEELER-MANSKE CLINIC
9th Avenue N. at 5th Street N.
Texas City, Texas 77590
AC 713, WI 8-8521

Obstetrics & Gynecology
G. W. Beeler, M.D.

Internal Medicine
W. T. Matlage, M.D.
C. M. Maruri, M.D.

General Surgery
B. W. Hink, M.D., F.A.C.S.

General Practice
J. H. Cochrane, M.D.
J. W. O'Bryant, M.D.
O. O. Smith, M.D.

Clinic Manager
Stan M. Sheppard

Complete X-ray, Physical Therapy and Laboratory Facilities

MALONE and HOGAN CLINIC
901 Main Street Phone 267-6361
Big Spring, Texas 79720

Ophthalmology and Otolaryngology
P. W. Malone, M.D., F.A.C.S.
J. W. Tipton, M.D.

General Surgery
J. E. Hogan, M.D., F.A.C.S.
C. B. Marcum, Jr., M.D., F.A.C.S.

Orthopedic Surgery
P. H. Rhymes, M.D.

Internal Medicine
J. H. Burnett, Jr., M.D.
W. A. Riley, M.D.
R. S. Griffin, M.D.
R. T. Torp, M.D.

Obstetrics and Gynecology
M. A. Porter, M.D.

Pediatrics
J. M. Woodall, M.D.
M. W. Talbot, Jr., M.D., F.A.A.P

Radiology
W. R. Cashion, M.D.

Urology
G. F. Dillon, M.D.

Consultants in Pathology
Jarrett E. Williams, M.D.
B. B. Trotter, M.D.

Business Manager
R. L. Heith

DIAGNOSTIC CLINIC OF HOUSTON
6448 Fannin, Houston, Texas 77025 (713) 526-2051

Internal Medicine and Diagnosis

Cardiovascular Disease
Thomas J. Fatheree, M.D.
Hugh F. Arnold, M.D.
Hugh H. Hanson, M.D
Michael B. Raine, M.D.
Michael A. Modelski, M.D.
Sigmund W. Friedland, M.D.

Endocrinology and Metabolic Diseases
H. Leland Kaplan, M.D.
Thomas G. Vandivier, M.D.
Charles H. Gregory, M.D.
R. Frederick Gregory, M.D.

Endocrinology, Metabolic Diseases and Director of Clinical Research
Raymond L. Gregory, M.D.

Geriatrics
Frederick G. Dorsey, M.D.

Gastroenterology
Dolph L. Curb, M.D.
W. Tom Arnold, M.D.
Belton G. Griffin, M.D.
Frederick R. Lummis, Jr., M.D.
Dean C. Solcher, M.D.

Hematology
Edmund N. Gouldin, M.D.
George W. Conrad, Jr., M.D.

Hypertension and Renal Diseases
K. Ronald Bingman, M.D.
R. Robert Durrett, M.D.

Infectious Diseases
Lewie L. Travis, Jr., M.D.
Jack L. Reddin, M.D.

Internal Medicine
Jeffrey Zatorski, M.D.

Neurology
Donald J. Russell, M.D.

Oncology
Lester L. Hoaglin, Jr., M.D.
Peter Sullivan, M.D.

Pathology
Jack P. Abbott, M.D.
Paul B. Radelat, M.D.

Pulmonary Disease
William M. Donohue, M.D.
Joel E. Reed, M.D.
Gene R. Lindley, M.D.

Radiology and Nuclear Medicine
William L. Hinds, M.D.
Charles P. Eldridge, Jr., M.D.
David D. Lawrence, M.D.
Charles A. Spain, M.D.

Rheumatology
John E. Norris, M.D.

Administration
C. G. Mercy, Administrator
Robert B. Hall, Assistant Administrator

Laboratory:
Clinical Pathology
Cytology

Nuclear Medicine
Isotope uptake, Gammagram and Therapy

Roentgenology

PROCEDURES:

Bronchoscopy:
Pulmonary Functions

Cardiac Catheterization

Electrocardiography-Phonocardiography

Esophagoscopy

Gastroscopy

Proctosigmoidoscopy

CONSULTATION BY APPOINTMENT

THE LORIMER CLINIC
901 West Leuda Street
Fort Worth, Texas 76104
335-4333

SURGERY
W. S. Lorimer, Jr., M.D., F.A.C.S.
R. J. Turner, III, M.D., F.A.C.S.

INTERNAL MEDICINE
W. W. Moorman, M.D., F.A.C.P.
D. W. Johnston, M.D. F.A.C.P.
Stephen Eppstein, M.D.
A. R. Daniell, M.D.

Mrs. Evelyn Farr, Business Manager

CLINIC OF THE SOUTHWEST
6437 High Star at Hillcroft
Houston, Texas 77036 PR 4-7671

INTERNAL MEDICINE
William C. Franklin, M.D.
Arthur B. Conde, M.D.

OBSTETRICS & GYNECOLOGY
Joy L. Deere, M.D.
Loren B. Goss, M.D.

PEDIATRICS
John R. Dunn, Jr., M.D.
Blanca S. Azios, M.D.

PHYSICAL THERAPY
Richard D. Tinsley, R.P.T.

GENERAL SURGERY
Harvey B. Koch, M.D.

UROLOGY
Glen E. Lewis, M.D.

DENTISTRY
Burley G. Ingram, D.D.S.

RADIOLOGY
Neil B. Longley, M.D.
Richard E. Schuette, M.D.

BUSINESS MANAGER
C. C. Walker

AS NEAR AS YOUR MAILBOX OR TELEPHONE!

TMA MEMORIAL LIBRARY

1801 North Lamar Blvd.
Austin, Texas 78701
512 477-6704

Colon and Rectal Surgery

ALVIN BALDWIN, JR., M.D., F.A.C.S.
Practice Limited to
Diseases and Surgery of the Colon and Rectum
714 Doctors Building — 3707 Gaston Avenue
Dallas, Texas
Off. Tel. 824-2573 — Res. Tel. 361-4500

HUGH C. WELSH, M.D.
Proctology and Abdominal Surgery
2715 Fannin Street — Houston, Texas

J. WADE HARRIS, M.D., F.A.C.S.
JOHN E. COGAN, M.D., F.A.C.S.
Surgery of the Rectum and Colon
406 Hermann Professional Bldg.
Houston, Texas

C. D. L. CROMAR, M.D.
Surgery of the Rectum and Colon
617 South Tatar Street
Pasadena, Texas 77502

Dermatology

ROGER W. MANAR, M.D.
DERMATOLOGY
SUPERFICIAL X-RAY THERAPY
1400 Eighth Street — Wichita Falls, Texas

BEDFORD SHELMIRE, M.D.
BEDFORD SHELMIRE, JR., M.D.
DAVID S. SHELMIRE, M.D.
Dermatology
1410 Medical Arts Bldg. — Dallas, Texas

DRS. PIPKIN, RESSMANN & RICHARDSON
J. LEWIS PIPKIN, M.D.
ARTHUR C. RESSMANN, M.D.
A. W. RICHARDSON, M.D.
DERMATOLOGY
X-Ray and Radium in The Treatment of Skin Malignancies
714 Medical Arts Bldg. — San Antonio, Texas

EVERETT R. SEALE, M.D.
Dermatology
Treatment of Skin Malignancies
1217 Hermann Professional Bldg. — Houston, Texas

J. GILMORE BRAU, M.D.
DERMATOLOGY—SYPHILOLOGY
X-RAY and RADIUM THERAPY
Hours 9 to 1 — 3 to 5
3817 Brown Street — Dallas, Texas

J. FRANKLIN CAMPBELL, M.D.
EDMUND N. WALSH, M.D.
Dermatology and Syphilology, and Treatment of Skin Cancer
Radium and X-Ray Therapy
1410 Pruitt Street — Fort Worth, Texas

Leslie M. Smith, M.D. — H. D. Garrett, M.D.
John C. Wilkinson, M.D.
DRS. SMITH, GARRETT & WILKINSON
Dermatology and Syphilology
X-Ray and Radium in the Treatment of Skin Malignancies
Medical Center, 1501 Arizona — El Paso, Texas

WALTER B. MANTOOTH, JR., M.D.
JOE M. LEHMAN, M.D.
ROBERT LEHMAN, M.D.
Dermatology, Syphilology, and Cancer of the Skin
3801 19th St., Suite 500 — Lubbock, Texas

MARVIN E. CHERNOSKY, M.D.
DERMATOLOGY AND SYPHILOLOGY
703 Hermann Professional Building
Phone JA 6-3733 — Houston, Texas

THOMAS L. SHIELDS, M.D.
Dermatology and Syphilology
X-Ray Therapy in the
Treatment of Skin Malignancies
Hours 9 to 1 — 3 to 5
800 Fifth Ave. — Fort Worth, Texas

DAVID R. WEAKLEY, M.D., F.A.C.P.
Dermatology
Treatment of Skin Malignancies
8548 Northwest Plaza Drive — Dallas, Texas
315 North Shiloh Road — Garland, Texas

M. A. (Mac) HAIRSTON, JR., M.D.
DERMATOLOGY
HAIR TRANSPLANTATION & DERMOPLANING
Memorial City Professional Bldg., 902 Frostwood, Suite 184
(Between Memorial & Katy Fwy.)
Phone: 464-6369 — Houston, Texas 77024

JOHN B. McMASTER, JR., M.D.
Dermatology
222-2147
Dermabrasion & Chemosurgery
416 M & S Tower — San Antonio, Texas 78205

Conference on Medical Practice

Austin — September 19, 1970

Eye, Ear, Nose, Throat

Drs. Canon, Watkins, Anderson, Nalle and Ellsasser
Eye, Ear, Nose and Throat, Broncho-Esophagology and Allergy
R. T. Canon, M.D., F.A.C.S. — M. D. Watkins, M.D., F.A.C.S., A.I.C.S.
Wm. F. Anderson, M.D., DAB Oph., F.A.C.S. — Ernest Nalle, Jr., M.D. DAB Oto., F.A.C.S., F.I.C.S.
M. G. Ellsasser, M.D., DAB Oph.
West Texas Clinic 1312 Main Lubbock, Texas

W. HUBERT SEALE, M.D.
Eye, Ear, Nose & Throat
HUBERT JAMES SEALE, M.D.
Disease & Surgery of the Eye
OR 3-3751
1321 Hickory St. Abilene, Texas

Gastroenterology

JAMES J. GORMAN, M.D., F.A.C.P.
Gastroenterology
Diagnosis Gastroscopy
1111 El Paso National Bank Bldg.
El Paso, Texas 79901

MILFORD O. ROUSE, M.D.
announces limitation of practice to consultation in hospitals. His office is now at Dallas Chamber of Commerce in Community Health Focus program. Records of his patients are with Cecil O. Patterson, M.D., and Daniel Polter, M.D., 1414 Medical Arts Building, Dallas, 742-6144.

CECIL O. PATTERSON, M.D.
GASTROENTEROLOGY, GASTROSCOPY
ESOPHAGOSCOPY
1414 Medical Arts Building
Dallas, Texas
742-6141

DRS. BAILEY, DOUGLAS AND FISHER ASSOCIATION
3434 Swiss Avenue, Suite 303, Dallas, Texas
Diseases of the Digestive System
Herbert A. Bailey, M.D. F. Clark Douglas, M.D.
John W. Fisher, M.D.

W. CROCKETT CHEARS, JR., M.D.
GASTROENTEROLOGY
GASTROSCOPY & ESOPHAGOSCOPY
1027 Medical Arts Building
Telephone 748-4975 Dallas, Texas

General Surgery

J. PEYTON BARNES, M.D., F.A.C.S.
Surgery
1000 St. Joseph Professional Bldg.
Houston, Texas 77002

L. GONZALEZ CIGARROA, M.D., F.A.C.S.
Diplomate American Board of Surgery
Practice limited to
SURGERY
1502 Logan Ave. Laredo, Texas

BURT B. SMITH, M.D.
SURGERY
Emphasizing Breast, Thyroid and Gastro-Intestinal Surgery
728 Hermann Professional Building
Phone 523-8323 Houston, Texas 77025

ADOLPH F. KAUFFMANN, M.D., F.A.C.S.
Diplomate American Board of Surgery
GENERAL SURGERY
707 Fifth Ave. Fort Worth, Texas
Phone 332-7597

BRYAN V. WILLIAMS, M.D., F.A.C.S.
Diplomate American Board of Surgery
GENERAL SURGERY
1506 St. Joseph Professional Bldg.
Houston, Texas 77002
227-5505

PAUL CARRILLO-RIVERA, M.D., F.A.C.S.
General, Pulmonary, Cardiovascular Surgery
105 University Towers
915-533-2508
1900 N. Oregon St. El Paso, Texas 79902

Internal Medicine

JOHN A. WIGGINS, JR., M.D.
Diseases of the Chest
Bronchoscopy
1105 Pennsylvania Ave. Fort Worth, Texas

HENRY N. GEMOETS, M.D., F.A.C.P., F.C.C.P.
Internal Medicine and Diseases of the Chest and Heart
THOMAS H. GEMOETS, M.D.
Internal Medicine and Diagnosis
1003 Memorial Professional Building
1010 Louisiana Houston, Texas 77002 222-7224

Neurology/Psychiatry

STEPHEN WEISZ, M.D.
Practice Limited to
NEUROLOGY and PSYCHIATRY
1637 Medical Arts Bldg. Dallas, Texas
747-5183

ALEX K. MUNSON, M.D.
Child Psychiatry
KERBEY LANE EVALUATION AND TREATMENT CENTER
3400 Kerbey Lane Austin, Texas 78703
Office Hours by Appointment
AC 512-454-8718

HAUSER CLINIC

Psychiatry, Neurology, and Electroencephalography

Section of Psychiatry
*Abe Hauser, M.D.
*Robert I. Hauser, M.D.
Barry M. Brown, M.D.
*Harris M. Hauser, M.D.

Section of Neurology
*Harris M. Hauser, M.D.
*Gerald Ratinov, M.D.
Robert M. Gordon, M.D.
*Abe Hauser, M.D.

Section of Social Work
Ethel Feinsilver, M.S.

Section of Psychology
Robert Langston, Ph.D.
Consultant
Joanne Borba, M.A.

Administrator
Gordon D. Keller

808 Memorial Professional Building
Houston, Texas 77002
224-5041

*Diplomate, American Board of Psychiatry and Neurology

Perry C. Talkington, M.D.
Charles L. Bloss, M.D.
Howard M. Burkett, M.D.
Jerry M. Lewis, M.D.
James K. Peden, M.D.
Claude L. Jackson, M.D.
Dode M. Hanke, M.D.
Doyle I. Carson, M.D.
Thomas H. Allison, M.D.
Stanley L. Seaton, M.D.
Maurice S. Green, M.D.
Joe W. King, M.D.
Keith H. Johansen, M.D.
Charles G. Markward, M.D.
Aretta J. Rathmell, M.D.
Donald N. Offutt, M.D.

practice limited to
PSYCHIATRY

4645 Samuell Blvd., Dallas, Texas
Timberlawn Psychiatric Hospital
4600 Samuell Blvd., Dallas, Texas
381-7181

CHAPMAN ISHAM, M.D.
Diplomate American Board of Psychiatry
Child Psychiatry and Marriage Counseling
Hypnotherapy for Smoking and Obesity
3701 21st Street Lubbock, Texas 79410
795-4023

MEDICAL NEUROLOGY AND
ELECTROENCEPHALOGRAPHY
205 Swiss Avenue Medical Building
3434 Swiss
Dallas, Texas 75204 827-3610
Sheff D. Olinger, M.D. Joseph S. Jenike, M.D.
Charles W. Barrier, M.D.
Hours by Appointment Only

THE FORT WORTH
NEUROPSYCHIATRIC CENTER
*Bernard J. Dolenz, M.D. *Herbert G. Rush, M.D.
1066 W. Magnolia Avenue 336-5469
Fort Worth, Texas 76104
*Diplomates American Board of Psychiatry and Neurology

HOUSTON ASSOCIATES
IN
PSYCHIATRY AND NEUROLOGY
Houston, Texas

C. A. Iannucci, M.D.
Joe C. A. Eckhardt, Jr., M.D.
Alfred H. Vogt, M.D.
George M. Stevens, M.D.
Jules Bohnn, M.D.
Leroy Androes, M.D.
A. R. Martinez, Ph.D.
Ruth Searls, M.S.W.
Diana Sheer, M.S.W.
Dan DeShazo, M.S.W.
Beth Bowman, M.A.

Comprehensive Neuropsychiatric
Evaluation and Treatment
Electroencephalography
1021 Hermann Prof. Bldg. 529-5721
6812 Staffordshire 748-3780

Pasadena Neuropsychiatric Clinic Association
Robert E. Hazlewood, M.D. Richard M. Orr, M.D.
Practice Limited
to
Neurology and Psychiatry
Office Hours by Appointment
First Pasadena State Bank Building
1001 E. Southmore, Suite 1103
Pasadena, Texas 77502 Telephone 473-7646

LABORATORY OF ELECTROENCEPHALOGRAPHY
Jean M. B. Moure, M.D.
Diplomate American Board of Electroencephalography
522-1037
275 Hermann Prof. Bldg. Houston, Tex. 77025

Neurological Surgery

JAMES GREENWOOD, JR., M.D.
Neurosurgery
718 Hermann Professional Bldg., Houston, Texas 77025
Office: 528-5373 Residence: 528-4038

Morris Sanders, M.D. Jack I. Woolf, M.D.
DRS. WOOLF AND SANDERS
Diplomate American Board of Neurological Surgery
Locke Medical Building, 6011 Harry Hines Blvd.
Dallas, Texas 631-1500

JACK STERN, M.D.
GARY C. HUTCHISON, M.D.
CLARK WATTS, M.D.
Neurological Surgery
8226 Douglas, Suite 609
Dallas, Texas 75225
363-8524

Casey E. Patterson, M.D. Tom M. Nash, M.D.
Charles W. Simpson, M.D. James E. Bland, M.D.
DRS. NASH, PATTERSON & SIMPSON, ASSN.
Neurological Surgery
637-0420
Suite 557 - Locke Medical Building, 6011 Harry Hines Blvd.
Dallas, Texas 75235

ALBERT D'ERRICO, M.D.
Neurological Surgery
3707 Gaston Avenue Dallas, Texas 75246
Telephone 824-2543

RONALD SMITH, M.D.
Neurological Surgery
901 South Lake Fort Worth, Texas
Telephone 336-0551

GLENN R. CHERRY, M.D., F.A.C.S.
R. GORDON LONG, M.D.
Diplomate American Board of Neurological Surgery
712 North Washington
826-7060 Dallas, Texas

ROBT. C. L. ROBERTSON, M.D., F.A.C.S.
JOSEPH W. ROBERTSON, M.D.
Neurological Surgery
2210 Maroneal Houston, Texas 77025
523-3684

WILLIAM J. NELSON, M.D.
Certified by the American Board of Neurological Surgery
Suite 300
University Towers
915-542-0643
1900 N. Oregon St. El Paso, Texas 79902

CHARLES A. BORNE, JR., M.D.
Neurological Surgery
Suite 834, Sealy-Smith Professional Building
Galveston, Texas 77550
200 University Boulevard 713-763-1688

PRESENT A PAPER, SCIENTIFIC
EXHIBIT OR ART EXHIBIT!
TMA ANNUAL SESSION
MAY 6-9, 1971 HOUSTON

Nuclear Medicine

HERBERT C. ALLEN, JR., M.D.
Practice Limited to
NUCLEAR MEDICINE
526-1501
100 Hermann Professional Bldg.
Houston, Texas 77025

Ophthalmology

HOUSTON EYE ASSOCIATES
1121 Hermann Professional Building
Houston, Texas 77025
Phone 526-7261
(AC 713)
Richard S. Ruiz, M.D., F.A.C.S.
Charles E. Russo, M.D. Robert H. Stewart, M.D.
Malcolm L. Mazow, M.D. Robert B. Wilkins, M.D.

DRS. MURPHY, ALPAR, TAYLOR & HOWELL
OPHTHALMOLOGY
Weldon O. Murphy, M.D.
John J. Alpar, M.D.
Coleman Taylor, M.D.
J. Franklin Howell, Jr., M.D.
Diplomates of the American Board of Ophthalmology
2300 West 7th Avenue Amarillo, Texas

ALBERT VAISER, M.D.
WILLIAM B. SNYDER, M.D.
Diseases and Surgery of the Retina
318 Medical Arts Building
Dallas, Texas 748-0958

LIEVEN J. VAN RIET, M.D.
OPHTHALMOLOGY
Medical Surgical
224-0654
Saint Joseph Professional Building
Houston, Texas 77002

W. REX HAWKINS, M.D.
Detachment of the Retina
Diabetic Retinopathy
250 Hermann Professional Building
Houston, Texas 529-6727

OPHTHALMOLOGY ASSOCIATES
Harold E. Caplan, M.D. Jed Lee Howard, M.D.
R. Larry Brenner, M.D.
Special interest in corneal, ophthalmic plastic & retinal surgery
3320 Plainview
Pasadena, Texas 77504
713-944-5700
2622 NASA Road 1
Seabrook, Texas 77586
713-877-2571

DAVID R. STAGER, M.D.
PEDIATRIC OPHTHALMOLOGY
8226 Douglas Ave.
Dallas, Texas 75225

ARTHUR M. CLEMENTS, M.D.
Surgery and Diseases of the Eye
(214) 341-3407
Northlake Professional Building
8535 Ferndale Road Dallas, Texas 75238

Orthopedic Surgery

H. H. Beckering, M.D. George Truett James, M.D.
L. Ray Lawson, M.D. Robert D. Vandermeer, M.D.

W. B. CARRELL MEMORIAL CLINIC
2828 Lemmon Ave. Dallas, Texas

FORT WORTH BONE & JOINT CLINIC
918 8th Avenue — Fort Worth, Texas

Louis J. Levy, M.D. Cuvier P. Lipscomb, M.D.
Henry C. McDonald, Jr., M.D. Fred W. Sanders, M.D.

Ralph E. Donnell, M.D. F. Carlton Hodges, M.D.
ORTHOPEDIC ASSOCIATES
Diplomates American Board of Orthopedic Surgery

1133 N. 19th St. Abilene, Texas 79601

HOUSTON ORTHOPEDIC CLINIC
Joseph Barnhart, M.D. Donald T. Lazarz, M.D.
1817 Dryden Road Phone: 529-4389
Houston, Texas

LUBBOCK ORTHOPEDIC SURGERY CLINIC
ROYCE C. LEWIS, JR., M.D.
KENNETH C. SCHOLZ, D.D.S., M.D.
RAY E. SANTOS, M.D.
3702 21st St., Suite 9 806-763-8281
Lubbock, Texas 79410

THE EL PASO
ORTHOPEDIC SURGERY GROUP
Diplomates American Board of Orthopaedic Surgery

Louis W. Breck, M.D. Oren H. Ellis, M.D.
W. Compere Basom, M.D. Wellington J. Pindar, M.D.
Morton H. Leonard, M.D.* Donald A. Shearer, Admstr.
**Special attention to surgery of the hand*

1220 N. Stanton St. El Paso, Texas 79902
Tel. 533-7465

B. C. HALLEY, JR., M.D.
DAVID R. WEBB, JR., M.D.
Orthopaedic Surgery
3909 Worth at Washington 821-1417
Dallas, Texas 75246

RUSS B. GRAHAM, M.D., F.A.C.S.
ORTHOPEDIC SURGERY
306 Presbyterian Professional Building
8210 Walnut Hill Lane, Dallas, Texas 75231
Telephone
824-7883

THE ORTHOPEDIC GROUP OF RICHARDSON
Charles E. Graham, M.D.
M. Gayle Glidewell, M.D.
812 S. Central Expressway
Richardson, Texas 75080
ORTHOPEDIC SURGERY
231-6396

L. LEE LANKFORD, M.D.
Diplomate American Board of Orthopedic Surgery
HAND SURGERY AND
UPPER EXTREMITY RECONSTRUCTIVE
SURGERY
3707 Gaston Ave. Area Code 214
Dallas, Texas 75246 823-5351

THE ARLINGTON ORTHOPEDIC GROUP
H. W. Bendel, Jr., M.D. E. E. Rising, Jr., M.D.
C. Poindexter, M.D.
Diplomates American Board of Orthopaedic Surgery
801 West Randol Mill Road 817 - 261-8284
Arlington, Texas 76010

THE BOSWELL-EVANS ORTHOPAEDIC CLINIC
George M. Boswell, Jr., M.D., F.A.C.S. James P. Evans, M.D.
Lewis R. Thompson, M.D.
Gerald W. Schofield, M.D.
4849 W. Lawther Dr. 348-8300 Dallas, Texas 75218

Otolaryngology

TOM BARR, M.D.
Ear, Nose, and Throat,
Diseases of Larynx, and
Laryngeal Surgery
Medical Arts Building Dallas, Texas

HERBERT H. HARRIS, M.D., F.A.C.S., F.I.C.S.
Oto-Laryngology Broncho-Esophagology
and Laryngeal Surgery
907 Hermann Professional Bldg. Houston, Texas

MARVIN G. SHEPARD, M.D., F.A.C.S.
Practice limited to Otology and Otological Surgery
Medical Tower Building
712 N. Washington
Suite 514
Dallas, Texas Hours By Appt.

W. P. ANTHONY, M.D.
Otology
662 So. Henderson Fort Worth, Texas 76104

DONALD N. MATHESON, M.D., F.A.C.S.
Diplomate American Board of Otolaryngology
800 Fifth Avenue, Phone 336-7133
Fort Worth, Texas

JACK BLUM, M.D.
LLOYD F. RITCHEY, M.D.
Otolaryngology
8215 Westchester
Suite 135
Dallas, Texas

Pathology

MARVIN D. BELL, A.B., M.D.
Clinical Pathology

1109 Medical Arts Bldg. Dallas, Texas

A. B. CAIRNS, M.D.
GERARD NOTEBOOM, M.D.
MARC GARZA, M.D.
RONALD E. BUCHANAN, M.D.
WADE M. BRANNAN, M.D.
Diplomates American Board of Pathology
1105 N. Bishop Methodist Hospital
Dallas, Texas Dallas, Texas

FORT WORTH MEDICAL LABORATORIES
John J. Andujar, M.D.
Dorothy Patras, M.D.
1404 Pennsylvania Ave. (817) 336-7137
P. O. Box 1118 Fort Worth, Texas 76101

BROWN & ASSOCIATES MEDICAL LABORATORY
Tissue Pathology, Exfoliative Cytology, Hematology, Serology, Clinical Chemistry, Bacteriology, Parasitology, Serum Protein Electrophoresis and Hemoglobin Electrophoresis
Wilson G. Brown, M.D. George V. Miller, M.D.
Walter G. Olin, M.D. John R. Thomas, M.D.
S. J. Skinner, M.D. Joe B. Haden, M.D.
Diplomates American Board of Pathology
165 Hermann Professional Bldg., 526-4031
Houston, Texas
"Mailing Containers on Request"
"Office Pickup Service in Houston"

DR. PREUSS PATHOLOGY LABORATORY
Exfoliative Cytology
and Surgical Pathology
FRED S. PREUSS, M.D., F.C.A.P.
3607 Gaston Avenue, Room 305
Dallas, Texas 75226
Telephone: 823-6912
Specimen containers on request

NUCLEAR MEDICINE LABORATORIES
OF TEXAS
6411 South Main Street
Texas Medical Center
Houston, Texas 77025
Completely equipped radioisotope laboratory for diagnostic radioactive tests in:
Hematology, Thyroidology, Endocrinology, Gastroenterology, Cardiology, Neurology, Neuro-Surgery, Urology, Ophthalmology and Obstetrics-Gynecology
Herbert C. Allen, Jr., M.D., Director
526-1501

John H. Childers, M.D. E. H. Valentine, M.D.
R. R. Rember, M.D. W. L. Crofford, M.D.
E. P. Jenevein, M.D.
MEDICAL LABORATORY SERVICE OF DALLAS
Clinical Pathology Surgical Pathology
Diagnostic Radioisotopes Exfoliative Cytology
6011 Harry Hines Boulevard Dallas, Texas 75235
637-0210
(Mailing containers available upon request)

PRUITT MEDICAL LABORATORIES
Jack Pruitt, M.D.
Diplomate, American Board of Pathology
Tissue Pathology, Exfoliative Cytology, Clinical Pathology, Medicolegal Consultation.
P. O. Box 160 Lufkin, Texas 75901
Phone 634-4453

WACO CLINICAL PATHOLOGY LABORATORY
K. P. Wittstruck, M.D., F.C.A.P.
Walter Krohn, M.D., F.C.A.P.
Clinical Pathology Exfoliative Cytology
Surgical Pathology Medicolegal Consultation
Mailing containers on request
2112 Washington Avenue 756-7226
P.O. Box 3160 Waco, Texas 76707

GEORGE J. RACE, M.D. AND ASSOCIATES
PATHOLOGISTS
421 Medical Tower Building
712 North Washington, Dallas, Texas 75246
Telephone AC 214, 824-1258

DELTA PATHOLOGY LABORATORIES
James W. G. Carman, M.D.
Clinical Pathology And Anatomic Pathology
Cytology
6209 Stuebner Airline (713) 697-7875
Houston, Texas 77018

Physical Medicine and Rehabilitation

TEXAS REHABILITATION HOSPITAL
OF GONZALES
WARM SPRINGS FOUNDATION, INC.
P.O. BOX 58, GONZALES, TEXAS 78629
Facilities for physical restoration.
Physical Therapy, Occupational Therapy, Speech Therapy, Recreational Therapy, School from first grade through twelfth grade.
ROBERT M. IZARD, JR., M.D. LYNN SMITH, SR.
Medical Director Administrator

Plastic Surgery

THOMAS D. CRONIN, M.D., F.A.C.S.
RAYMOND O. BRAUER, M.D.
THOMAS M. BIGGS, M.D.
Diplomates American Board of Plastic Surgery
PLASTIC SURGERY
5419 Caroline Street 523-8131 Houston, Texas 77004

WILLARD C. SELLMAN, JR., M.D.
Plastic, Maxillo-Facial and Hand Surgery
530 Locke Medical Building
6011 Harry Hines Blvd.
Dallas, Texas 75235 637-4770

BROMLEY SMITH FREEMAN, M.D., F.A.C.S.
Diplomate American Boards of Surgery and Plastic Surgery
PLASTIC AND RECONSTRUCTIVE SURGERY
Tumors of the Head and Neck
1810 The Medical Towers Tel. 529-3579
Houston, Texas 77025 Res. 782-1628

JOHN B. PATTERSON, M.D., F.A.C.S.
Diplomate American Board
PLASTIC SURGERY
612 Doctors Building Fort Worth, Texas
336-0356

SIMON FREDRICKS, M.D., F.A.C.S.
Diplomate American Board of Plastic Surgery

Houston Office	*Pasadena Office*
1103 Medical Towers	904½ E. Southmore
Houston, Texas 77025	Pasadena, Texas 77502
523-5575	473-5488

DAVID A. GRANT, M.D., F.A.C.S.
Diplomate American Boards of Surgery and Plastic Surgery
PLASTIC & RECONSTRUCTIVE SURGERY
COSMETIC SURGERY
800 Fifth Avenue
Fort Worth, Texas 76104
335-4751

CARL R. COERS, III, M.D.
Diplomate American Board of Plastic Surgery
PLASTIC, RECONSTRUCTIVE & HAND SURGERY
800 Fifth Avenue
Fort Worth, Texas 76104
335-4751

MARCUS L. FINLEY, M.D., F.A.C.S.
Diplomate American Board of Plastic Surgery
PLASTIC, RECONSTRUCTIVE AND HAND SURGERY
1115A Pennsylvania Avenue
Fort Worth, Texas 76104
Telephone 335-6439

VALENTIN GRACIA, M.D.
F.A.C.S., F.I.C.S., D.A.B.
AESTHETIC SURGERY—BURNS
1001 W. Rosedale Phone
Fort Worth, Texas 76104 336-0446

FRANCIS A. MORRIS, JR., M.D.
WILLIAM E. BARNES, M.D.
Diplomates American Board of Plastic Surgery
Plastic, Reconstructive and Hand Surgery
3100 Red River 476-9149 Austin, Texas

Plastic Surgery
JOHN R. HILL, M.D., F.A.C.S.
Diplomate, American Board of Plastic Surgery
Practice limited to Plastic, Reconstructive and Hand Surgery
Medical Center Office: 272 Hermann Prof. Bldg.
Houston, Texas 77025 528-2481
Spring Branch Office: 9320 Westview
Houston, Texas 77055 528-2481

E. FRANK DUNTON, M.D., F.A.C.S.
Plastic & Reconstructive Surgery and Surgery of the Hand
Telephone 824-7290
Suite 104
3434 Swiss Avenue
Dallas, Texas

W. W. SCHUESSLER, M.D., F.A.C.S.
Diplomate of American Board of Plastic Surgery
Plastic, Reconstructive & Maxillo-Facial Surgery
Telephone 533-6362
Suite 4-C Medical Center
1501 Arizona Avenue
El Paso, Texas 79902

Radiology

AMARILLO RADIOLOGICAL GROUP
Practice Limited to Radiology
ROYAL WERTZ, M.D., F.A.C.R.
WILBUR Q. BUDD, M.D., D.A.B.R.
800 Rusk Street
Amarillo, Texas 79106 373-8324

J. R. MAXFIELD, JR., M.D., M.A.C.R.
JACK G. S. MAXFIELD, M.D., M.A.C.R.
Radiological Center
Including Radioisotopes
2711 Oak Lawn, Dallas 526-6661

MAURICE C. ARCHER, M.D., M.A.C.R.
MARY L. KILLINGSWORTH, M.D., M.A.C.R.
Diplomates of the American Board of Radiology
800 Fifth Avenue Doctors Building
Fort Worth, Texas 332-3401

DRS. CARLSON AND BAREKMAN
Glenn D. Carlson, M.D., F.A.C.R.
William H. Barekman, M.D., D.A.B.R.
Agnes M. Guthrie, M.D., D.A.B.R.
X-RAY DIAGNOSIS
X-RAY AND RADIUM THERAPY
RADIOISOTOPES
1221 Medical Arts Bldg.....741-3621
6011 Harry Hines Blvd.....631-7070
3607 Gaston Ave.....823-9961
DALLAS, TEXAS

Harvey M. Lowry, M.D., F.A.C.R.
James R. Gish, M.D., D.A.B.R.
Edward A. Sheldon, M.D., D.A.B.R.
James P. Wills, M.D.
RADIOLOGY
109 Doctors Bldg. 838-4543
502 Goodhue Bldg. 838-2224
Baptist Hospital 833-6421
Beaumont, Texas

JAMES L. CLIFFORD, M.D., D.A.B.R.
Cobalt 60 Rotational Therapy
X-Ray and Radium Therapy
X-Ray Diagnosis
Radioisotopes
845 Clarksville St. 784-4624 Paris, Texas

DOCTORS McCONNELL, RIDINGS AND FULLER
208 Locke Medical Building Telephone 637-0774
6011 Harry Hines Boulevard
Dallas, Texas 75235
R. W. McConnell, M.D.
Practice Limited to Nuclear Medicine
G. Ray Ridings, M.D.
D. E. Fuller, M.D.
Practice Limited to Radiation Therapy

Thoracic Surgery

Donald L. Paulson, M.D. Harold C. Urschel, Jr., M.D.
DRS. PAULSON AND URSCHEL
Thoracic and Cardiovascular Surgery
3810 Swiss Ave. 824-2503
Dallas, Texas

THORACIC AND CARDIOVASCULAR SURGERY
James O. McBride, M.D., F.A.C.S.
662 South Henderson, Suite A
P. O. Box 1407
Fort Worth, Texas 76102
332-7454 738-4594

Charles T. Meadows, M.D.
Diplomate, American Board of Thoracic Surgery
Thoracic and Cardiovascular Surgery
Broncho-esophagology
The Professional Building
673-8184
1101 North 19th Abilene, Texas

LeROY J. KLEINSASSER, M.D., F.A.C.S.
Diplomate American Board of Surgery &
The Board of Thoracic Surgery
CARDIOVASCULAR and
PERIPHERAL VASCULAR SURGERY
The Doctors Bldg., 3707 Gaston Ave.
Dallas 10, Texas

Robert R. Shaw, M.D. John L. Kee, Jr., M.D.
DRS. SHAW AND KEE
THORACIC SURGERY
The Doctors Building 3707 Gaston Avenue
Dallas, Texas 75246
826-5184

WILLIAM W. TAYLOR, M.D.
Diplomate Board of Thoracic Surgery
Thoracic, Cardiac, and Vascular Surgery
804 Locke Med. Bldg. 6011 Harry Hines Blvd.
Dallas, Texas 75235 637-4833

ALLAN L. GRAHAM, M.D.
Diplomate American Board of Surgery and
Board of Thoracic Surgery
Cardiovascular and Peripheral Vascular Surgery
502 Doctors Building 800 Fifth Avenue
Fort Worth, Texas 332-7879

Alton C. Lawton, M.D., F.A.C.S.
Diplomate, American Board of Thoracic Surgery
Thoracic and Cardiovascular Surgery
Endoscopy
626 Doctors Building 800 Fifth Avenue
Fort Worth, Texas 332-5791

FOR INFORMATION ON SUBMITTING MANUSCRIPTS FOR PUBLICATION IN *TEXAS MEDICINE*, contact:
Managing Editor
1801 North Lamar Blvd.
Austin, Texas 78701

Urology

CECIL M. CRIGLER, M.D., F.A.C.S.
Practice limited to
UROLOGY
1519 Hermann Professional Bldg., Houston, Texas

JO C. ALEXANDER, M.D.,
KARL B. KING, M.D., FOSTER FUQUA, M.D.,
ELGIN W. WARE, JR., M.D.,
GEORGE E. HURT, JR., M.D.,
EUGENE R. TODD, M.D.,
DONALD E. JOHNSON, M.D. & ASSOCIATES
Urology
3707 Gaston Avenue Dallas, Texas 75246

THE UROLOGY CLINIC
1415 Pennsylvania Ave., Fort Worth, Texas 76104
Dolphus E. Compere, M.D., M.S., F.A.C.S.
Diplomate of American Board of Urology
Grant F. Begley, A.B., M.D.
Diplomate of American Board of Urology
Hugh Lamensdorf, M.D.

H. M. GIBSON, JR., M.D., F.A.C.S.
(Certified by American Board of Urology)
Practice limited to
UROLOGY
512 University Towers Bldg. 1900 North Oregon St.
El Paso, Texas Ph. 532-8130 & 533-4765

MARVIN GREER RAPE, M.D.
Diplomate of American Board of Urology
NEWTON F. McDONALD, M.D.
Diplomate of American Board of Urology
Practice Limited to
UROLOGY
1703 St. Joseph Professional Bldg., 2000 Crawford
Houston, Texas 77002

JOHN B. TRIBLE, M.D.
Practice Limited to
UROLOGY
1209-10 Medical Arts Bldg.
222-7521 Houston, Texas 77002

ERWIN C. WINKEL, M.D.
practice limited to
UROLOGY
Northwest Professional Center 681-0343
2925 West T.C. Jester Blvd. Houston, Texas

THE UROLOGY CLINIC
1010 Louisiana, Houston, Texas 77002
227-1414
JAMES S. BOREN, M.D.
ROBERT I. COX, M.D.
Diplomates American Board of Urology

JOHN F. COLLINS, JR., M.D.
Urology
Doctor's Park 1400 Crescent
Denton, Texas 76201 (817) 387-3828

CLASSIFIED ADS

Physicians Wanted

WANTED—M.D.'s to do general practice with surgery, Houston area. Present doctors netting $4,000 to $8,000 monthly after six months practice. No investment required. Send resume to Ad-179, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

ORTHOPEDIC SURGEON AND TWO GP's needed by 19 doctor group. 100-bed fully accredited hospital. Salary open. Full partnership in one year. For additional details, write John B. Chester, M.D., 3330 South Lancaster Road, Dallas, Texas 75216.

GENERAL PRACTITIONER NEEDED to assnme well-established practice in Milford, Texas. The community's only doctor recently suffered a heart attack and has moved. An eight room small clinic owned by the City is available rent free. Income limited only by interest and ability. Good school and churches. Twelve and 17 miles from two first-class hospitals, 48 miles sonth of Dallas, 48 miles north of Waco. Contact C. O. Miller, P.O. Box 546, Milford, Texas 76670, area code 214, 493-2511.

DERMATOLOGIST, EENT AND GENERAL PRACTITIONER WANTED to associate with clinic with five physicians, two dentists, one orthodontist. Also complete laboratory and x-ray facilities. Write John G. Compton, Jr., M.D., Medical Center Clinic, Waxahachie, Texas 75165.

INTERNIST, board certified or eligible to join four internists in 15-doctor, multi-specialty clinic in West Texas city of 35,000. Life and malpractice insurance, disability and retirement programs provided. Modern clinic building adjacent to accredited hospital. Starting salary $25,000. Contact Jack H. Burnett, Jr., M.D., Malone and Hogan Clinic, 901 Main Street, Big Spring, Texas 79720.

EXCELLENT OPPORTUNITY FOR PHYSICIANS in Carrizo Springs, Texas. Office space available in new professional building adjacent to hospital and nursing home. Excellent schools and housing in city. One general practitioner needed. For information write or call C. W. Vandervoort, 500 North 1st Street, Carrizo Springs, Texas 78834. Phone 876-2550.

UROLOGIST, board certified or eligible, to associate with a progressive and expanding multispecialty group in West Texas. Many fringe benefits inclnding retirement program. No investment reqnired. Adjoining accredited hospital. City population 35,000. Contact Ad-236, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

RADIOLOGIST, board certified or eligible, to associate with a progressive and expanding multispecialty group in West Texas. Many fringe benefits including retirement program. No investment reqnired. Adjoining accredited hospital. City population 35,000. Contact Ad-236, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

PEDIATRICIAN, board certified or eligible, to associate with a progressive and expanding multispecialty group in West Texas. Many fringe benefits including retirement program. No investment required. Adjoining accredited hospital. City population 35,000. Contact Ad-236, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

ORTHOPEDIC SURGEON, PEDIATRICIAN, OBSTETRICIAN AND TWO GENERAL PRACTITIONERS needed by 19 doctor-group. Salary open. Full partnership in one year. 100-bed fnlly accredited hospital. Many fringe benefits including tax-sheltered retirement plan. For additional details write Chester Clinic and Hospital Association, 3330 Sonth Lancaster Road, Dallas, Texas 75216, Attn: John B. Chester, M.D.

WANTED: GENERAL PRACTITIONER, PEDIATRICIAN, INTERNIST on staff of Denton State School. Base annual salary $20,000, extra $1,000 to $3,500 if board certified. 40-hour work week with ample vacation time, other fringe benefits. Excellent community to live. Near Dallas, Fort Worth. Contact Medical Director, Denton State School, Box 368, Denton, Texas.

GENERAL PRACTITIONER OR GP-SURGEON WANTED in East Texas community of Crockett (Houston County). Office space available for solo practice or association with other physicians in area—106-bed new hospital. Center for industry, farming, livestock, and forestry operations. Excellent schools, churches, and recreational facilities available. For additional information contact Houston County Development Foundation, P.O. Box 307, Crockett, Texas 75835, area code 713, 544-2359.

PATHOLOGY RESIDENCIES AND INTERNSHIPS available in 600-bed general hospital. Fully approved four year program in anatomical and clinical pathology. Average annual specimens and tests—348,587. Interns—$6300; residents—$8100 up. Board and laundry. Charles B. Mitchell, M.D., Director of Laboratories, Harris Hospital, 1300 West Cannon, Fort Worth, Texas 76104.

GENERAL PRACTITIONER WANTED to join five man clinic in growing town of Clifton, 30 miles northwest of Waco near Lake Whitney. 41-bed fully accredited hospital with plans to expand by 30 beds. Salary to start, commensurate with present requirements; partnership later. Good schools, churches and hunting and fishing facilities. Contact V. D. Goodall, M.D., Goodall & Witcher Clinic, Clifton, Texas 76634.

PSYCHIATRIC RESIDENCY in approved three year program. Effective connections with universities, medical schools, private clinics, and community centers. Outstanding faculty, and programs. Stipends with Texas license, $13,000, $14,000 and $15,000 per year. NIMH grants available. For full information write: Anthony P. Rousos, M.D., Director of Training, Austin State Hospital, Austin, Texas 78751.

PHYSICIAN NEEDED: Clinic located in the downtown and industrial areas of Dallas needs a physician. The first year salary is guaranteed with the possibility of a future percentage partnership. For additional information contact Harry Carter, Business Manager, Suite 350, 6011 Harry Hines Blvd., Dallas, Texas or call 638-2730.

RADIOLOGIST TO ASSOCIATE in diagnosis and therapy with established board man in hospital, office practice. Progressive South Texas city of 58,000. Minimal school and community strife. Leisurely pace. Growth potential. Intensifiers, automatic processing. Pre-partner first-year salary $30,000 if board certified, $25,000 if eligible. Write Ad-282, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

BOARD ELIGIBLE INTERNIST WANTED for 7-man medical department with well established multispecialty group in Dallas, Texas. $25,000 beginning annual salary, early partnership; liberal vacation and meeting time; life insurance, group hospitalization, retirement benefits and teaching opportunities. New facilities. Interviewing expenses paid. Please reply to Arthur L. Cook, Business Manager, Dallas Medical & Surgical Clinic, P. O. Box 28, Dallas, Texas 75221.

GENERAL SURGEON WANTED FOR ASSOCIATE. Established large practice in Central Texas located between Dallas-Fort Worth metropolitan area. Excellent opportunity for general surgeon interested in suburban practice. Must be hoard certified or eligible. Send complete resume or contact Jack Utt Hudson, M.D., 909 Dalworth Avenue, Grand Prairie, Texas. AC 214-262-5466.

OPPORTUNITIES IN YOAKUM COUNTY, TEXAS. DENVER CITY, TEXAS. Actual need for four general practitioners. Three overworked general practitioners for the past six years until January 15, 1970. One man left at that time to enter industrial medicine, leaving two. His modern well equipped clinic available, rent free for six months, low rent for following six months, with option to buy, records available. This clinic on same block with hospital. Hospital is 50 beds, well equipped, has radiology, clinical and tissue pathology consultation on regular basis. Present two physicians will welcome one or two other physicians, will help introduce. Amicable working arrangement for time off, patient coverage and consultation. PLAINS, TEXAS. County seat of Yoakum County, 15 miles north of Denver City, excellent highway. Completely equipped modern clinic available for one dollar ($1.00) a month. Utilities furnished by city. Large enough for two physicians. Physicians in Denver will make same arrangements for coverage, etc. as outlined above. Yoakum County has excellent schools, good churches, Yoakum County Park between the two towns with very good grass, green nine hole golf course. Lubbock with Texas Tech University, one hour, twenty minutes away. Midland-Odessa area one hour, thirty minutes away. Contact administrator Yoakum County Hospital, Denver City, Texas, area code 806, 592-2121 or County Judge Gene Bennett, Plains, Texas, area code 806, 456-8606.

PRIVATE INDIVIDUAL AND GROUP PRACTICE. $30,000 guaranteed first year with little or no practice expense. Maximum leisure time with family. Both small town and city locations. Not an employment agency. Sanford Smith, P. O. Box 9836, Houston, Texas 77015. 713-453-5454.

ESTABLISHED GENERAL PRACTICE, office, all equipment rent free for two years while I take leave of absence with Peace Corps. Associates for alternating calls. Available in four to eight months. If you want to stay, full partnership of all facilities would be offered at my return. Good area in North Texas with full hospital facilities. Furnished home included for cost of payments. Write P. O. Box 4109, Wichita Falls, Texas 76308.

PHYSICIANS NEEDED: Staff physicians, general practitioners and/or board certified specialists, for staff of Travis State School. Fringe benefits include 40 hour work week, vacation and sick leave. Present and projected salary increases make positions attractive. Contact Medical Director, Travis State School, P.O. Box 430, Austin, Texas 78767.

PEDIATRICIAN: BOARD CERTIFIED OR ELIGIBLE, to associate with one other pediatrician in 13-man multispecialty group. Liberal fringe benefits and retirement program. Modern, newly redecorated building within one block of two hospitals. City size over 100,000. Beginning salary $25,000 per year plus percentage. Please reply to Administrator, The Medical and Surgical Clinic, 1518 Tenth Street, Wichita Falls, Texas 76301 or phone AC 817, 723-1411.

EENT NEEDED in city of 60,000 in Dallas-Fort Worth area where there are no such specialists. Advantages of continued education at Southwestern Medical. Space available in attractive dental building January, 1971. Please reply to Ad-284, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

WANTED: MD TO DO GENERAL PRACTICE in a fully equipped modern two man clinic. Guarantee and association after interval. No investment needed. Rotate weekends and off days with busy general practitioner who is clinic owner. 36-bed hospital available, located in Central Texas area, with recreational facilities and large cities accessible. Contact 647-1182, or send resume to L. R. Gohlke, M.D., Box 37, Ranger, Texas 76470.

GENERAL PRACTITIONER OR TWO to take over large solo practice in GP. Present MD moving in July due to progressive family allergies. Recently built office, 3 bedroom, 2½ bath home, and mobile home on lake lot for sale, lease, or rent with option to buy part or all. Town of 9,000 in Lower Rio Grande Valley of Texas. 26-bed hospital, 50-bed nursing home, good schools, churches, hunting, fishing, boating and golf. Near Mexico and Gulf of Mexico. Contact Gene E. Bennack, M.D., 505 South 10th Street, Raymondville, Texas 78580. Phone 689-2188.

WANTED: GENERAL PRACTITIONER, INTERNIST, OR PEDIATRICIAN to join medical staff of Abilene State School. Base annual salary $20,000 with supplement of $1,000-$3,000 if board certified and working full-time in that capacity. Forty-hour week, excellent vacation/sick plan and about 12 holidays a year. Good life and hospitalization plan, Social Security and excellent state retirement coverage. Lovely community of 90,000 friendly people in West Central Texas. Texas license required. Contact Superintendent L. W. Cain, P. O. Box 451, Abilene, Texas 79604.

WANTED—ONE OR TWO ANESTHESIOLOGISTS to join anesthesia group at 300-bed hospital in Southwest area. Call collect AC 713, 938-1551 or write P. O. Box 607, La Marque, Texas 77568.

CLASSIFIED AD RATES & DATA: Classified Advertising sells for $6.00 per issue for 50 words or less, payable in advance. Ad numbers can be substituted for formal addresses upon request at no extra cost. Name and address of ad number listings can not be given out unless specific permission to do so has been given. The advertising office will not contact ad number holders except by mail. Copy deadline is the 20th of the month preceding publication. Send copy to Advertising Assistant, TEXAS MEDICINE, 1801 North Lamar Blvd., Austin, Texas 78701.

STAFF PHYSICIANS—Texas State Mentally Retarded School. Excellent working conditions and location. Salary $20,000, plus, according to qualifications. Foreign graduates with ECFMG certificate acceptable. All holidays, compensatory time and sick leaves. Write Superintendent, Box 1132, Mexia, Texas.

WANTED: PHYSICIANS WITH INTEREST IN SURGERY AND/OR OBSTETRICS to locate in progressive East Texas area with complete support of local medical staff. Contact Paul R. Bennett, 300 West Upshur, Gladewater, Texas, or phone AC 214, 845-2281.

PEDIATRICIAN: To join an 8 man, mixed specialty group. Enlarging our pediatric department to accommodate third pediatrician. Guaranteed $25,000 to start. Contact F. L. Phillips, M.D., 7630 Bellfort Blvd., Houston, Texas. Phone 644-3344.

SITUATIONS AVAILABLE. A board certified or eligible OB/GYN with adequate subspecialty training in either OB or endocrinology needes as fifth OB/GYN in 107 member multi-specialty group. Excellent professional climate, hospital facilities, and recreational area. Fully accredited residency program. Requires academic interest. Salary negotiable. Liberal fringe benefits. Reply to Ad-279, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

RADIOLOGIST: to join group of two. Certified or board eligible; private office and two hospitals; includes general diagnostic radiology; therapy and nuclear medicine. Send curriculum vitae, personal interview required. Financial arrangement open to negotiation. Please reply to Ad-280, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

ATTENTION: GENERAL PRACTITIONERS-SURGEONS. If you would like the advantages of small city living together with a wide open field for practicing your profession, contact the Board of Directors, Taft Hospital District, 1220 Gregory Street, Taft, Texas 78390. A modern hospital and convalescent home is at your disposal. Added attraction: only 15 minutes by car from the Sparkling City by the Sea, Corpus Christi, Texas. Ideal climate, plus swimming, fishing, sailing, golfing, hunting, and social activities available. Write us for more details, or better still, come and see for yourself. You will be pleasantly surprised.

WANTED: GENERAL PRACTITIONER TO ASSOCIATE with two GP's doing surgery, obstetrics, orthopedics. Salary open with full partnership in one year. No investment needed. All white town with 4,000 population. Golf course, lake, hunting and fishing. 21-bed hospital fully staffed, licensed and approved for Medicare. Joins three-doctor clinic. On call every third night and every third weekend. Contact: A. D. Major, M.D. or K. J. Wharram, M.D., Box 239, Nocona, Texas 76255.

ON GALVESTON BAY—We need an internist, board certified or eligible, and a general practitioner to join our multi-specialty group. Salary plus percentage. Contact Stan M. Sheppard, Manager, Beeler-Manske Clinic, 818 5th Street North, Texas City, Texas 77590. 713-948-8521.

Situations Wanted

RADIOLOGIST, age 30 years, board eligible. Military obligation completed July 1971. Desires position in community of under 70,000. Prefer Central or West Texas. Please reply to Ad-285, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

For Sale or For Rent

AVAILABLE—Office suite designed for obstetrician or general practitioner in doctors building. Richardson, Texas. For additional information call AC 214, 363-2001, Dallas.

FOR LEASE. Am building luxury professional building in Hurst (between Dallas and Fort Worth). Up to 3,000 feet to lease. Two ten year old general dental practices committed. Prefer orthodontics and MDs. Contact W. H. Albritton, D.D.S., 112 West Pipeline Road, Hurst, Texas 76053. Phone AC 817, 282-1421.

SETTLING ESTATE: For sale, as is, where is. Complete equipment for doctor in general practice. In storage Cumby, Texas, except six items of reception room furnishings in Houston, Texas. Includes x-ray, autoclave, and electrocardiogram. Will consider all offers. Write James E. Connor, 14318 Chadbourne, Houston, Texas 77024.

Miscellaneous

M.A. PSYCHOLOGIST, eligible Texas certification. Desires association with hospital, clinic, group practice, psychiatrist in metropolitan setting. Eight years experience in diagnostics, group, individual, marital, play, therapies, vocational guidance. One year supervisory experience in forming and directing children's crisis short-term treatment unit. Prefer Central, South Central Texas area. Vita, references available. Please reply to Ad-286, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

Make your plans now to attend the

Texas Medical Association

Conference on Medical Practice

September 19, 1970
Austin

HOMESTEAD
CHILD PLACEMENT AGENCY
and
HOMESTEAD MATERNITY HOME
1250 W. Rosedale
335-5942 **336-7905**
Fort Worth, Texas

Licensed Adoption Service and Private, Confidential maternity care provided unwed expectant mothers. Obstetrical services by a Diplomate of THE AMERICAN BOARD. Also pediatric care furnished by a licentiate of THE AMERICAN BOARD.

ONCOLOGY

Oscar L. Morphis, M.D., F.A.C.R.
Radiation Therapy
Radium Therapy

R. P. O'Bannon, M.D., F.A.C.R.
Radiation Therapy

Norris Gilfillan, M.D., F.A.C.S.
Chemotherapy

Tom B. Bond, M.D., F.A.C.R.
Consultant

Jack M. Morgan, M.S., F.A.C.R.
Consultant-Physicist

1550 West Rosedale, Suite 620 Fort Worth 336-2028

ADVERTISING INDEX

American College of Cardiology
Vectorcardiology—
A Workshop 43

Arch Laboratories
Dicarbosil 45

Barnes-Hind Laboratories
Tinver Lotion 41

Becton, Dickinson and Company
Plastipak 91-92

Beverly Hills Hospital and Clinic 107

Blue Cross-Blue Shield of Texas 7

The Brown Pharmaceutical Company
Android 108
Cerebro-Nicin 108

Bristol Laboratories
Salutensin 96-97

Burroughs Wellcome & Company, Inc.
Neosporin 26

Campbell Soup Company 63

Casualty Indemnity Exchange
Malpractice Insurance 35

Conal Pharmaceuticals, Inc.
Urised 66

Custom Home Elevator
Welcolator 43

Dallas Medical & Surgical Clinic and Hospital 2nd Cover

The Dow Chemical Company
Novahistine LP 25

Eaton Laboratories
Furacin Otic 20

Flint Laboratories
Synthroid 18

Francis Hospitels Incorporated
Convalescent Care 40

Geigy Pharmaceuticals
Preludin 28-29

Harcliffe Laboratories, Inc.
StomAseptine 90

Highland Hospital 8

Homestead Child Placement 124

Humco Laboratory
Vasomist 8

Hynson, Westcott and Dunning, Inc.
Lactinex 111

Ives Laboratories, Inc.
Cyclospasmol 44-45

Kelsey-Seybold Clinic 94

King's Daughters Clinic Back Cover

Loma Vista, Kerrville 96

Lederle Laboratories
Achrocidin 67
Achromycin V 3rd Cover
Achrostatin V 36
Declostatin 101

Eli Lilly and Company
Cordran Tape 30

The Martin X-Ray and Radium Clinic 98

Medical Arts Clinic, Corsicana 112

The Medical Protective Company
Professional Liability Insurance 98

The National Drug Company
AVC 110
Orenzyme Bitabs 109
Quinamm 24
Tepanil Ten-tab 23

Oncology—Fort Worth 124

Pfizer Laboratories Division
Pfizer, Inc.
Bonine 76-77

William P. Poythress & Company, Inc.
Trocinate 27

T. Rowe Price Growth Stock Fund, Inc. 45

The Prudential Insurance Company of America
TMA Group Insurance Plan 86

Radiology Associates of Fort Worth 112

Schering Corporation
Garamycin 9-12

Julius Schmid Pharmaceuticals
Candeptin 42-43

Scott and White Clinic Back Cover

G. D. Searle & Company
Dem/ulen 64-65

Starlite Village Clinic 112

Stuart Pharmaceuticals
Mylanta 126

Surgical Mechanical Research, Inc.
Medical and Dental Equipment 36

Terrell's Laboratories and Medical Group 1

Texas Medical Association
Conference on Medical Practice 124
Orient Adventure 102
Texas Medicine 38

Timberlawn Psychiatric Hospital 94

Torbett, Hutchings, Smith Memorial Hospital 2nd Cover

Travis Clinic and Nan Travis Memorial Hospital 112

Turner's Clinical & X-Ray Laboratories 98

Wichita Falls Clinic-Hospital 96

Wyeth Laboratories
Equanil 21-22

Physicians' Directory 113-122

Classified Advertisements 123-124

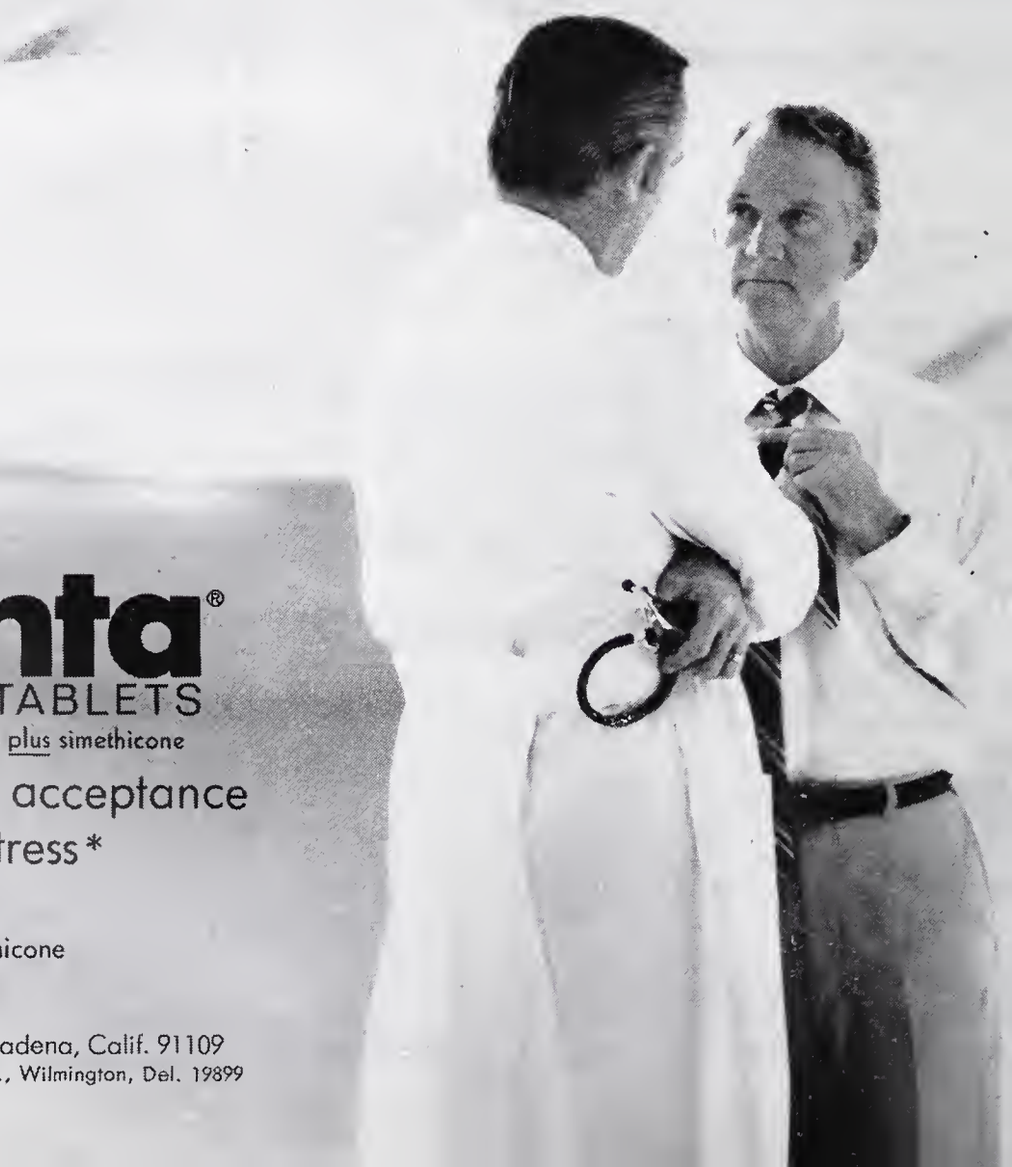
ADVERTISING RATES & DATA: Available on request from the Advertising Director, Texas Medicine. Advertising plates should be sent directly to the printer. Space reservations, copy and proofs should be sent to the Advertising Director. Represented nationally by the State Medical Journal Advertising Bureau, Inc., 1010 Lake Street, Oak Park, Ill. 60301.

ADVERTISING & BUSINESS OFFICES: Texas Medical Association, 1801 North Lamar Blvd., Austin 78701; Telephone: 512-477-6704.

PRINTING OFFICES: Texas Medicine, c/o Stafford-Lowdon Company, 1114 West Daggett, Fort Worth 76104.

Mylanta®
24 million hours a day.

Through the day, every day,
ulcer patients take
one million doses of Mylanta
for relief of ulcer pain.



Mylanta®
LIQUID/TABLETS
aluminum and magnesium hydroxides plus simethicone

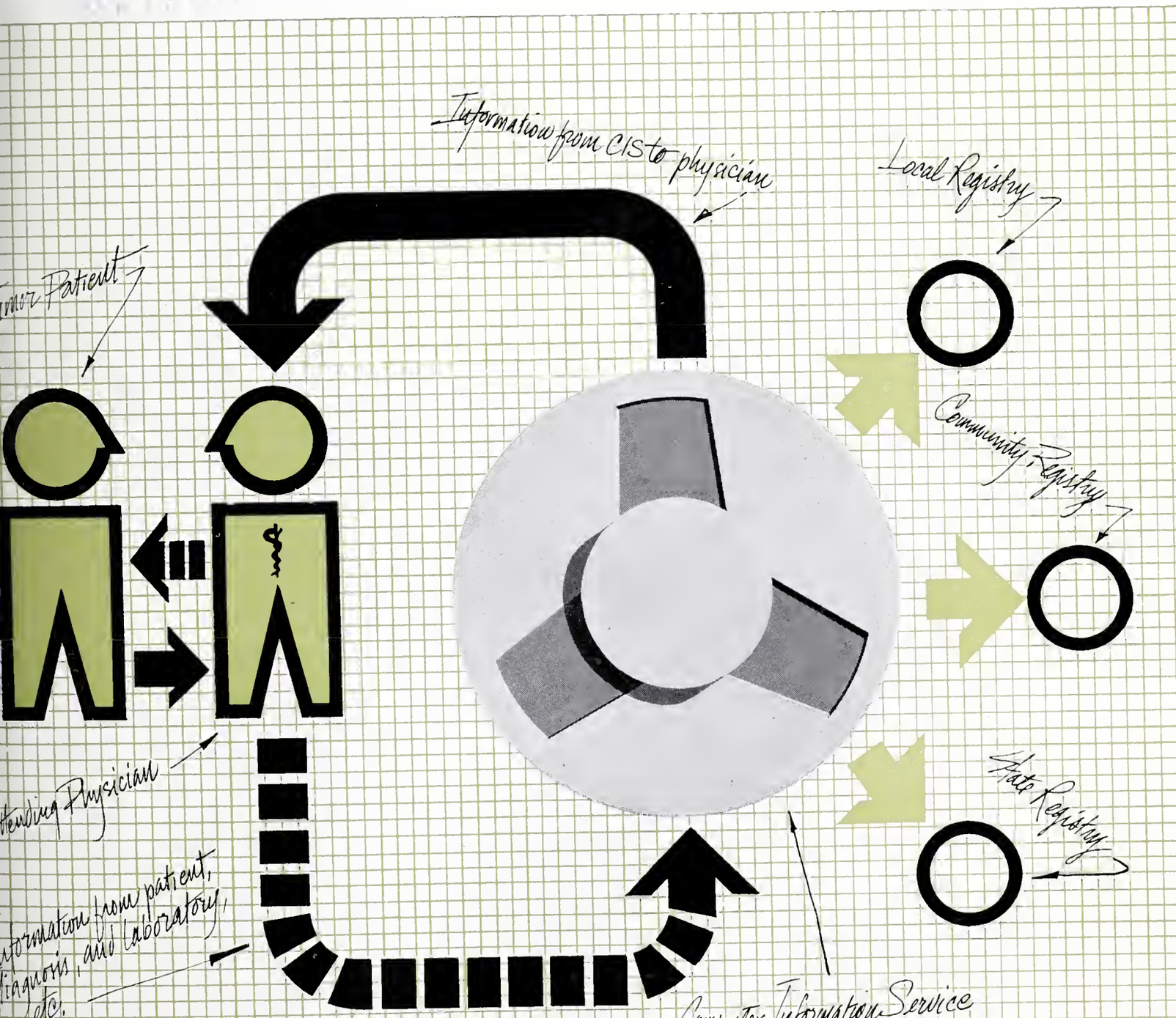
Good taste = patient acceptance
Relieves G.I. gas distress*
Non-constipating

*with the defoaming action of simethicone

Stuart PHARMACEUTICALS Pasadena, Calif. 91109
Division of Atlos Chemical Industries, Inc., Wilmington, Del. 19899

AUGUST 1970

TEXAS MEDICINE



TEXAS CANCER INFORMATION SERVICE
PROGRAM OF MEDICAL PRACTICE CONFERENCE
ACCREDITATION—TWO VIEWS
WATER FLUORIDE LEVELS

Torbett, Hutchings, Smith Memorial Hospital
And The Torbett Clinic

306 Coleman Street
Post Office Box 60

Marlin, Texas

Telephone: WE 6-3561

GENERAL SURGERY
Howard O. Smith, M.D., F.A.C.S.
D. R. Swetland, M.D., F.A.C.S.
Howard L. Smith, M.D., F.A.C.S.

INTERNAL MEDICINE
W. F. McKinley, Jr., M.D.
James S. Bussell, M.D.
C. G. Brown, M.D.

EYE, EAR, NOSE AND THROAT
S. W. Hughes, M.D.

ALLERGY
Walter S. Smith, M.D.*

OBSTETRICS AND PEDIATRICS
M. A. Davison, M.D., F.A.C.O.G.
W. L. Reese, M.D., F.A.C.O.G.

RADIOLOGY
J. M. Brown, M.D., F.A.C.R.

PATHOLOGY
W. W. Klatt, M.D.
Ronald E. Henderson, Jr., M.D.
Kent Smith, M.D.

UROLOGY
Howard O. Smith, M.D., F.A.C.S.

DENTISTRY
B. E. Latimer, D.D.S.

NEUROPSYCHIATRY
S. B. Morrison, M.D.

DERMATOLOGY
Maurice C. Barnes, M.D., D.A.B.D.

Administrator:
J. D. Norris, Jr.

Superintendent of Nurses:
Ruby Lowrance, R.N.

Howard O. Smith, M.D., FACS, Chairman of the Board of Trustees, of Torbett, Hutchings, Smith Memorial Hospital and the Torbett Clinic which opened January, 1963. The original hospital was founded by Dr. J. W. Torbett, Sr., in 1898.

The Torbett Clinic and Memorial Hospital continues to utilize the Marlin Hot Mineral Water and other forms of physical therapy as an adjunct in the treatment of arthritis and allied rheumatic conditions.

*Expired 4-24-69.

THE DALLAS MEDICAL & SURGICAL CLINIC AND HOSPITAL

4105 Live Oak Street

DALLAS, TEXAS

Telephone TA 3-4151

*Geo. M. Underwood, M.D., F.A.C.P., Diagnosis & Gastroenterology, D.A.B. Internal Medicine & Gastroenterology
P. E. Luecke, Sr., M.D., F.A.A.P., Pediatrics
Diplomate American Board Pediatrics
*G. A. Davidson, B.S., M.D., Dermatology
*Wm. H. Potts, B.A., F.A.C.P., Internal Medicine
*Ozro T. Woods, M.D., Surgery, Emphasizing Tumors
Richard M. Smith, M.D., F.A.C.P., Diagnosis & Internal Medicine
J. Wilbur Bourland, Jr., M.D., Obstetrics & Gynecology
Harry M. Spence, M.D., D.A.B.U., F.A.C.S., Urology
Wells M. Wade, D.D.S., Dental Surgery
Halcuit Moore, M.D., F.A.A.P., Pediatrics
Diplomate American Board Pediatrics
John B. Bourland, M.D., Gynecology & Obstetrics
Diplomate American Board OB-GYN
Raymond W. Burford, M.D., D.A.B.R., Radiology
Henry G. Montgomery, M.D., F.A.C.S., D.A.B.S., Surgery
Edwin M. Cleveland, M.D., Internal Medicine
John B. Allen, M.D., Internal Medicine
Diplomate American Board Internal Medicine
R. M. Burnside, M.D., D.A.B.O., Ophthalmology
Adam D. Green, M.D., Surgery
Morris E. Magers, M.D., Internal Medicine
Diplomate American Board Internal Medicine
B. Celia Slaughter, M.D., F.A.A.P., Pediatrics
Diplomate American Board Pediatrics
D. W. Shuster, M.D., D.A.B.O., Otolaryngology and Otologic Surgery
P. E. Luecke, Jr., M.D., Pediatrics, F.A.A.P.,
Diplomate American Board Pediatrics
Channing Woods, M.D., Internal Medicine
William W. Hoffman, M.D., D.A.B.U., F.A.C.S., Urology
James M. Copps, M.D., D.A.B.O., Ophthalmology
Joe B. Caldwell, M.D., D.A.B.R., Radiology
Terry D. Allen, M.D., D.A.B.U., Urology
J. Boyd Hollabaugh, D.D.S., General Dentistry
George P. Fosmire, M.D., F.A.C.S., D.A.B.S., General Surgery
Richard C. Stone, M.D., Internal Medicine and Gastroenterology
Daniel L. Maddox, D.D.S., General Dentistry
William N. New, M.D., Dermatology
Masashi Kawasaki, M.D., D.A.B.O., Otolaryngology, Tumor and Reconstructive Surgery of the Head and Neck
Landon W. Stewart, M.D., Internal Medicine
William S. Wolff, M.D., Surgery
Miss Billye J. Norris, R.N., Director of Nurses
C. H. Rosamond, Administrator
Arthur L. Cook, Associate Administrator

*Inactive status

TERRELL'S LABORATORIES

T. C. TERRELL, M.D., F.C.A.P., F.A.C.P., DIRECTOR
JOHN S. TERRELL, M.D., F.A.A.P., ASSISTANT DIRECTOR

FORT WORTH, TEXAS

211 Medical Arts Building

DEPARTMENT OF PATHOLOGY
T. C. Terrell, M.D., F.C.A.P., F.A.C.P.
May Owen, M.D., F.C.A.P., F.A.C.P.
Robert Hausman, M.D., F.C.A.P.
Joan Windmiller, M.D., F.A.A.P.

DEPARTMENT OF RADIOLOGY
H. W. Banker, M.D., D.A.B.R., M.A.C.R.
Ernest E. Holt, M.D., D.A.B.R., M.A.C.R.
James C. Moore, M.D., D.A.B.R., M.A.C.R.

DEPARTMENT OF CHEMISTRY
LaMonte A. Tucker, Ph.D.

DEPARTMENT OF BACTERIOLOGY & MYCOLOGY
Robert F. Devlin, Ph.D.

CONSULTING & ANALYTICAL SERVICES

PATHOLOGY, FORENSIC PATHOLOGY & VETERINARY PATHOLOGY: Histology, Cytology.
CLINICAL PATHOLOGY: Serology, Bacteriology & Mycology, Parasitology, Hematology.
INDUSTRIAL & CLINICAL CHEMISTRY: Radioassay, SMA-12 survey and other Automated Procedures. Hormone Chemistry, Chromatography, Electrophoresis, Immunochemistry.
TOXICOLOGY: Drugs, Water, Foods & Biological materials.
MANUFACTURING DEPARTMENT: Allergenic Extracts and Treatment Sets, Mounting Media, Specifically Prepared Reagents and Stains for Laboratory Use.

TERRELL MEDICAL GROUP

FORT WORTH, TEXAS

210 Medical Arts Building

INTERNAL MEDICINE Diagnosis, Allergy, Cardiology	T. C. Terrell, M.D., F.C.A.P., F.A.C.P. Elizabeth A. Taylor, M.D.
NEUROPSYCHIATRY Electroencephalography	Henry G. Gardiner, Jr., M.D.
PEDIATRICS Pediatric Hematology Adolescent Medicine & Pediatric Consultation	Joan Windmiller, M.D., F.A.A.P. John S. Terrell, M.D., F.A.A.P.
CLINICAL PSYCHOLOGY	Michael W. Wheeler, Ph.D.

TEXAS MEDICINE

VOLUME 66 NUMBER 8 AUGUST 1970

SCIENTIFIC ARTICLES

44 The Texas Cancer Information Service: A Proposed Statewide Service-Oriented Tumor Registry

Daniel J. Schneider is associate professor at The University of Texas School of Public Health, Houston. His coauthors are Robert E. Roberts, associate research demographer, and Eun Sul Lee, research biometrician.

48 Fluoride Levels in Drinking Water in Texas

Ira L. Shannon is director of the Oral Physiology Research Laboratory, VA Hospital, and professor of biochemistry, The University of Texas Dental Branch, Houston. He is a fellow of the American College of Dentists and a member of several other professional societies. Dr. Shannon is the author of some 250 articles and other publications.

54 Hyperbaric Oxygen as an Adjunct to Radiation Therapy

Robert Lindberg is associate radiotherapist and professor of radiotherapy, The University of Texas MD Anderson Hospital and Tumor Institute, Houston. He is a diplomate of the American Board of Radiology and a member of the American College of Radiology, American Society of Therapeutic Radiologists, American Radium Society, and other professional groups.

58 Present Status of Selective Coronary Cinearteriography: A Review

George W. Barclay, Jr, is a former resident in cardiology at the Veterans Administration Hospital in Dallas. He is now in private practice of internal medicine and cardiology in Beaumont. His coauthor, William Shapiro, is chief of the Cardiovascular Section at the VA Hospital, and also is associate professor of internal medicine at The University of Texas (Southwestern) Medical School.

68 The Tack Operation for Meniere's Disease

Bert A. DeBord is chairman of the Department of Otolaryngology, Scott and White Clinic, Temple. He is a diplomate of the American Board of Otolaryngology and a member of the American Laryngology, Rhinology and Otology Association,

SCHNEIDER

SHANNON

LINDBERG

BARCLAY

DeBORD

JORDAN

MATTOX

American Academy of Ophthalmology and Otolaryngology, and is a past president of the Texas Otolaryngological Society.

70 Carcinoma of the Ampulla of Vater

George L. Jordan, Jr, is professor of surgery at Baylor College of Medicine, Houston. He is chief of staff at the Harris County Hospital District and holds appointments in several hospitals in Houston. Dr. Jordan, a diplomate of the American Board of Surgery and Board of Thoracic Surgery, is affiliated with a variety of professional groups. His coauthor, Bryan E. Simons, completed his training in general surgery in the Baylor Affiliated Hospitals Program in June 1969, and is now serving as a captain in the US Army in Vietnam. After completing his military service, he plans to enter the private practice of surgery.

74 Air Embolism Following Subclavian Vein Catheterization

Kenneth L. Mattox is a resident in general surgery at Baylor College of Medicine, Houston. His coauthor, Donald L. Bricker, is assistant professor of surgery at Baylor and assistant surgeon-in-chief at Ben Taub Hospital.

EDITORIALS

29 A Physician Looks at Accreditation

Walter Walthall

32 An Administrator's View of Hospital Accreditation

A. L. McElmurry

39 Texas Delegates Influence Major AMA Actions

Walter Walthall

DEPARTMENTS

4 Association and Late News

13 Highlights of Coming Meetings

19 Continuing Education Courses

79 News

81 What Makes TMA Annual Sessions Run?

87 Pamphlets

87 Personals

89 Medicine in Literature

90 Recent Deaths

ON THE COVER

The diagram shows some of the ways that the proposed Texas Cancer Information Service can facilitate the obtaining and advantageous use of information about cancer. To learn more of the potential benefits and to find out how the service would work, read the article beginning on page 44.

NEXT MONTH

There was a time when anyone who was mixed up in the money end of politics was expected to keep the subject out of polite conversation. Times have changed. Genteel or not, the subject for next month's editorial is the relationship between money, politics, and TEXPAC. Another one you won't want to miss is a Texas SAMA leader's answer to the question, "Are medical students radical?" Also, a special article will delve into the basic research and health needs of the nation. Scheduled for the scientific section are articles on an epidemiological overview of meningococcal infections; tetanus; the major cause of death (anger!); stress fractures in joggers; and the Texas Medicine Award winner's article.

PUBLICATION INFORMATION

Texas Medicine is published monthly by the Texas Medical Association.

Editorial and Business Offices: 1801 N. Lamar Blvd., Austin, Texas 78701; Telephone: Area Code 512 477-6704.

Second Class Postage paid at Austin, Texas, with additional entry at Fort Worth, Texas, under Act of March 3, 1879.

Subscription communications should be sent to the Business Offices, $3 per year for members; $6 for nonmembers; $8 for foreign; $3 for medical students; single copy, $1.

Contributions, previously unpublished, are welcomed for review; suggestions for preparation are available from the Editorial Offices. News and other items should be sent to the Editorial Offices by the 10th of the month preceding the month of publication. All contributions are sent at the owner's risk.

Printing Offices: c/o Stafford-Lowdon Company, 1114 West Daggett, Fort Worth 76104.

ASSOCIATION & LATE NEWS

Conference to focus on local, national aspects of medical practice; then there's football, the riverboat, the catfish dinner . . . y'all come

The Texas Medical Association's 1970 Conference on Medical Practice and Orientation Program Saturday, Sept. 19, in Austin offers something for everyone—stimulating guest speakers discussing the national medical scene; a panel session on the physician and the hospital; information for new TMA members; board, council, and committee meetings; a colorful afternoon football game; a riverboat cruise; and a hearty catfish dinner.

Medical Practice Conference: The Conference on Medical Practice will begin at 9 a.m. with an address by Dr. Walter Walthall, TMA President, "Goals and Challenges for Medicine." Guest speakers and their topics will be:

Dr. John R. Kernodle, Burlington, N. C., Vice Chairman, AMA Board of Trustees, "Medicine's Positive Response to Public Criticism Against Physicians."

Dr. Michael J. Halberstam, Washington, D. C., practicing physician, "America's 'Non-System' of Medical Care; The Individual Physician's Response."

Max Wildman, LL.B., Chicago, senior partner, Wildman, Harrold, Allen & Dixon, "Medical Trials and Tribulations."

Dr. George J. Lawrence, Jr., Flushing, N. Y., chairman, AMPAC Board of Directors, "The 1970 National Election; Its Potential Impact upon Shaping Medical Practice in the Future."

Physicians and Hospitals: Following a panel session on "The Physician and the Hospital; Current Issues and Interests," a discussion period will provide an opportunity for those in the audience to add their views or invite comments on additional questions. Topics will include staffing patterns

for hospital emergency rooms; consideration of osteopaths for hospital staff privileges; physician representation on hospital governing boards—medical staff rights and responsibilities; and the revised standards of hospital accreditation and their impact upon practicing physicians and medical staffs of hospitals.

Dr. G. V. Brindley, Jr., Past President of the Texas Medical Association, will preside; panelists will be Dr. Robert Mayo Tenery, Waxahachie, chairman, Council on Constitution and By-Laws; Philip R. Overton, LL.B, Austin, general counsel; Dr. Charles Max Cole, Dallas, Immediate Past President; and Dr. William F. Ross, San Benito, chairman, Committee on Hospital Accreditation.

Business Meetings: Many of TMA's boards, councils, and committees will meet during the weekend, with most of the meetings scheduled Friday evening or Saturday morning and some on Saturday afternoon.

Sunday morning, Sept. 20, the Executive Board will meet in the TMA Building's Sam Thompson room. In the interim between annual sessions of the House of Delegates, the Executive Board guides the policies and ongoing affairs of the Association. Any TMA member may attend, but only Board members may participate in deliberations.

Orientation: New members attending the TMA Orientation Program often reflect—with some surprise—that in addition to fulfilling a requirement for membership, they also have gained a substantial amount of practical and useful information. They learn more about the current status and challenges to their profession; also, medical ethics are discussed in terms of the physician's obligation to his colleagues and to his profession. And, having paid their dues, members have considerable interest in how it is spent and in what the Association offers in return in the way of service to individual members and to the profession as a whole.

Football: The University of Texas at Austin will play the University of California Saturday afternoon, and physicians who plan to be in Memorial Stadium for the 4 p.m. kickoff should order tickets ($6 each, limit 4) immediately from TMA.*

Riverboat Cruise: After the football game, TMA members may enjoy a hospitality hour aboard the Riverboat Commodore as the colorful paddle wheeler cruises up Lake Austin to scenic Greenshores. After a dinner of fresh-water catfish, salad, and hush puppies, the riverboat will whistle all aboard for the starlit cruise back to the city. Riverboat Commodore will leave from the east bank of Lake Austin, near Tom Miller Dam, at 7:30 p.m. and return about 11 p.m.

The evening on Lake Austin will be hosted by the TMA Group Insurance Plans at the special price of only $5 per person. Tickets should be ordered early* since space is limited and tickets will be sold on a first-come, first-served basis.

The Riverboat Commodore plies Lake Austin between the LCRA Boat Dock near Tom Miller Dam and her berth at Greenshores, a private lakefront area.

*Order tickets from Business Manager, TMA, 1801 N. Lamar Blvd., Austin, Tex. 78701. Tickets must be picked up at the TMA Headquarters Bldg. before 11 a.m. Sept. 19.

Consultative review guidelines offered

Guidelines for consultative review committees have been sent to all county medical society presidents, secretaries, consultative review committee chairmen, and executive officers.

Prepared by the Board of Councilors at the direction of the TMA House of Delegates, these guidelines are not mandatory rules; rather, they are suggestions to help facilitate the work of the review committee.

These guidelines are intended (1) to provide the physician a means of appeal in his relationships with fiscal intermediaries; (2) to offer on a local basis for those who seek this consultative mechanism the expertise of dedicated, practicing physicians; (3) to implement and reinforce mechanisms for review "before the fact, not after the fact"; and (4) to provide a responsible, professional, knowledgeable review for the maintenance of ethical and quality care.

The guidelines are as follows:

"The consultative review committee should be established only after full discussion, consideration, and endorsement by the sponsoring society. A complete understanding of the committee's objectives and purposes, on the part of each member of the local society, can materially contribute to its prompt acceptance and productive performance.

"It is suggested that the committee be sufficiently large to permit representation of all fields of practice and specialty groups in the community. Terms of initial appointees should be staggered to provide that successive appointments will provide continuity of knowledge and experience in the committee's work.

"Suggested specific guidelines: (1) This is an advisory committee. It should be emphasized to the local people that this is not a committee to investigate fraud, which is the responsibility of the carrier. (2) The consultative review committee shall receive advice from and offer opinions to both the carrier and the physician regarding fees and utilization. (3) All parties concerned shall have equal access to

the consultative review committee with any complaints they may have against other parties. (4) All disciplinary action is and shall remain the function of the Board of Censors.

"(5) All societies are urged to utilize an existing committee to perform consultative review functions. A special committee may perform these functions when designated by the president. (6) Where local circumstances make review mechanism impossible or not feasible, the Board of Councilors may exercise its primary jurisdiction, when requested by the Councilor or Vice Councilor. (7) The committee should keep a written record of its activity, and copies should be filed with the county society and the Councilor of the district. (8) The physician and a representative of the carrier should be present. A representative of the party initiating the action must be present. Notice of review must be supplied to all parties at least ten days prior to the date of review."

AAGP surveys members on income, work hours

A new survey of members of the American Academy of General Practice shows that family doctors have increased their income since Medicare and Medicaid began in 1966, but only by slightly over 25% for the highest percentage-of-increase group. At the same time, this group—working an average of 59 hours per week in 1965—increased the number of hours worked per week by 15% and number of patient visits by the same percentage.

The survey results reflect income and related practice data of 1,000 members of the AAGP. Respondents represent an at-random cross-section of the United States. They were requested not to sign the survey forms or give any identifying information, and advised that no attempt would be made to monitor postmarks or relate responses to the mailing list in any way.

The purpose of the survey was to find out how much family doctors had benefited financially from the two big health programs. A recent national publication had suggested there had been increases in earnings of as high as 71% since Medicare. This survey does show a rise in net earnings in all groups (categorized by hours worked per week), but these percentage increases range from 5.3% for doctors working 41-45 hours per week to 26.3% for the highest group in terms of percentage increase, doctors who work 66-70 hours per week.

Doctors working over 70 hours per week increased their earnings by only 18.6%. The highest percentage-increase-group of doctors, which had an average before-tax income of $36,454 a year in 1969, actually increased its net earnings per patient visit by only 30 cents between 1965 and 1970.

Significantly, the survey shows that, while number of hours worked per week and number of patient visits per week have gone up considerably for many of these doctors, the time spent per patient visit has remained about the same. For example, the number of patients seen per hour is three and a fraction in all categories now and was just about the same in 1965. The data indicate approximately 18 minutes per patient visit in all categories.

The survey did show that all respondents had at least a small increase (5% or less) in net earnings as a result of Medicare and Medicaid. This tends to support the contention of many doctors that they now are being paid for the services that they rendered free of charge before the federal programs came into existence. This payment thus became primarily net profit because costs already were factored in for patients not previously charged for service who later became Medicare patients.

The survey shows also that the family physician in general practice frequently is thought of as being largely in small towns or rural areas. This study of a vertical and horizontal cross-section (on the basis of postal zip codes) shows that 81% of all respondents live and practice in towns larger than 5,000, and that 33% of them live and practice in cities of more than 100,000 population.

Fifty-seven percent of doctors who work less than 40 hours per week, the survey indicates, practice in towns of less than 25,000, and, by contrast, less than 10% of the small number of respondents (28) working less than 40 hours work in towns of more than 100,000. At the same time, apparently more doctors in towns of 5,000-25,000 worked more than 61 hours per week than did doctors in any other community-size category.

A generally-held belief that this survey appears to open to question is the one contending that group practice allows the doctor the most free time. Respondents in this survey report that 39.5% of all those in group practice work more than a 60-hour week. At the same time, only 44.6% of solo practitioners, long held by many medical circles to be the most overworked and harried of all US doctors, worked more than 60 hours a week.

The most significant general conclusion from the survey apparently is that the more a doctor works, the more he can earn, but not in direct ratio to additional hours worked. This is illustrated by the net increase in earnings per patient visit since 1965. For all doctors working between 41 and 65 hours per week, this increase is stabilized at an average of about 44 cents. It drops off sharply to 30 cents in the 66-70 hour-per-week group, and plummets to a 14 cent increase per patient visit for the more than 70 hour-per-week group.

Southwestern gets grant for basic sciences unit

The University of Texas (Southwestern) Medical School at Dallas has received approval of a $12.7 million grant from the Department of Health, Education and Welfare, providing two-thirds of the expected construction costs for a five-story Basic Sciences Teaching Building and an elevated plaza with four lecture halls beneath. This is the largest component of the school's phase one building program designed to relieve space shortages and enable Southwestern to double the size of annual enrolling classes by 1975. Officials expect construction to start early in 1971 and be finished by the fall of 1973.

Credit cards are good–

this card is better

And the minute your patient sits down at the hospital admissions desk, he finds out why. What he finds out is, that BLUE CROSS® and BLUE SHIELD®′ are a *prepayment* against the health care he is going to require. And that, certainly, is far better than saying "charge it."

And what a lot better it is for the providers of health care! Isn't it nice to know that 72 million Americans are already protected by the "Blues"? And — that just about

"Everybody's swingin' to the Blues!"

BLUE CROSS® and BLUE SHIELD®′

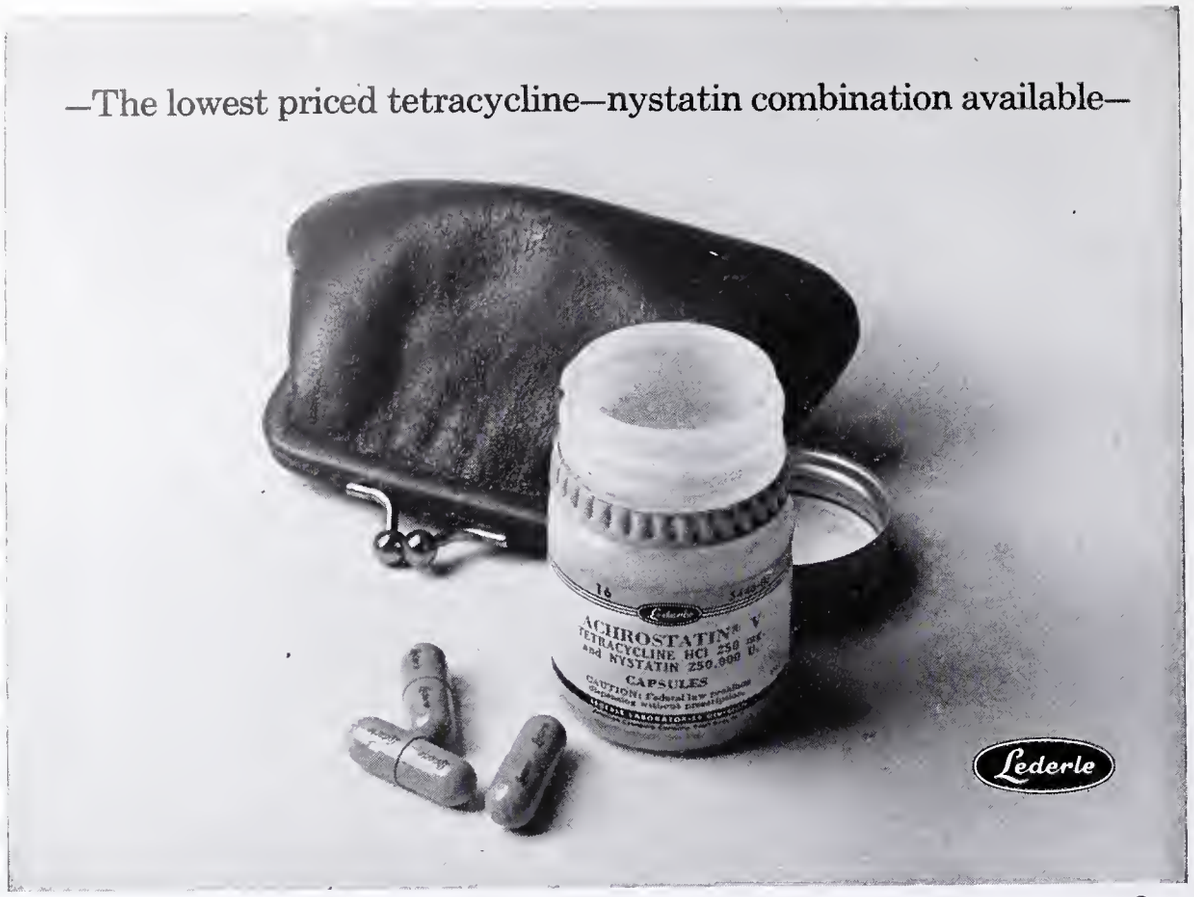
Hospital and Health Care Coverage
(GROUP HOSPITAL SERVICE, INC.)

Medical and Surgical Benefits
(GROUP LIFE & HEALTH INSURANCE COMPANY)

OF TEXAS

MAIN AT NORTH CENTRAL EXPRESSWAY ■ DALLAS, TEXAS 75222

®American Hospital Association
®′National Association of Blue Shield Plans



HIGHLAND HOSPITAL

ASHEVILLE, NORTH CAROLINA

Founded 1904

A DIVISION OF THE DEPARTMENT OF PSYCHIATRY OF DUKE UNIVERSITY

Accredited by the Joint Commission on Accreditation and Certified for Medicare

Complete facilities for evaluation and intensive treatment of psychiatric patients, including individual psychotherapy, group therapy, psychodrama, electro-convulsive therapy, Indoklon convulsive therapy, drugs, social service work with families, family therapy, and an extensive and well organized activities program, including occupational therapy, art therapy, music therapy, athletic activities and games, recreational activities and outings. The treatment program of each patient is carefully supervised in order that the therapeutic needs of each patient may be realized.

High school facilities for a limited number of appropriate patients are now available on grounds. The School Program is fully integrated into the hospital treatment program and is accredited through the Asheville School System.

Complete modern facilities with 85 acres of landscaped and wooded grounds in the City of Asheville.

Brochures and information on financial arrangements available

Contact: (1) Mrs. Elizabeth Harkins, ACSW, Coordinator of Admissions

or

(2) Samuel N. Workman, M.D.
Chief of Clinical Services

(3) Charles W. Neville, Jr., M.D.
Assistant Professor of Psychiatry and Medical Director

Area Code 704 - 254-3201

Sandoz announces...

a new agent for the alcohol-dependent patient who wants to quit

and

a program for the Texas physician who wants to help

a major tranquilizer with specific advantages for the alcohol-dependent patient:

1. Alleviates tension, anxiety, and depression; may also ease prevalent neurotic symptoms in personality disorders.
2. No reported habituation or addiction.
3. Antiemetic properties to control nausea and vomiting.
4. Has not caused hepatic dysfunction or interfered with functional recovery of impaired liver.
5. Four tablet strengths to allow flexibility of dosage (usual starting dose: for the problem drinker, 10 mg. t.i.d.; for the frank alcoholic, 25 mg. b.i.d.).
6. Injectable form available for acute episodes.

a program for early recognition and successful treatment:

Alcoholism in Texas*

State Rank

tatal no. alcahalics	9th
no. per capita	34th
per capita cansumptian†	32nd

Texas Physicians' Report
(compared with U.S. average)

	%Tex.	%U.S.
see 5 ar mare prablem drinkers in 2-manth periad	30.2	37.1
half ar more seen are wamen	39.6	37.4
treat, rather than refer	69.1	72.6
mare cammunity services needed	61.7	63.0

*bosed on preliminary data supplied by Center af Alcohol Studies, Rutgers Univ. †obsolute alcohol

The Ins-and-Outs of Alcoholism: A series of recordings and other mailings, each concerned with a particular aspect of the alcohol problem. Recognized authorities in the field discuss the scope, recognition and treatment of alcohol-dependent patients. Also included will be **The Alcoholic Directory,** a nationwide survey of treatment centers.

Interested? Complete and mail this coupon to:
Dept. SERENTIL/Sandoz Pharmaceuticals
Route 10/Hanover, N. J. 07936

SANDOZ

Dr. _____
(PLEASE PRINT)

Street _____

City _____ State _____ Zip _____

See next page for prescribing information.

SERENTIL®
(mesoridazine)
new weapon in the fight against alcoholism

...clinical studies, Serentil (mesoridazine) has been found useful in the following disorders:

Alcoholism—Acute and Chronic: Serentil ameliorates emotional tension, depression, nausea and vomiting in both acute and chronic alcoholics without producing hepatic dysfunction or hindering the functional recovery of the impaired liver.

Schizophrenia: Serentil is effective in the treatment of schizophrenia. It substantially reduces the severity of Emotional Withdrawal, Conceptual Disorganization, Anxiety, Tension, Hallucinatory Behavior, Suspiciousness and Blunted Affect in schizophrenic patients. As with other phenothiozines, patients refractory to previous medication may respond to Serentil.

Behavioral Problems in Mental Deficiency and Chronic Brain Syndrome: The effect of Serentil was found to be excellent or good in the management of hyperactivity and uncooperativeness associated with Mental Deficiency and Chronic Brain Syndrome.

Psychoneurotic Manifestations: Serentil reduces the symptoms of anxiety and tension, prevalent symptoms often associated with neurotic components of many disorders, and benefits personality disorders in general.

CONTRAINDICATIONS: As with other phenothiozines Serentil (mesoridazine) is contraindicated in severe central nervous system depression or comatose states from any cause. Serentil is contraindicated in individuals who have previously shown hypersensitivity to the drug.

WARNINGS: Where patients are participating in activities requiring complete mental alertness (e.g., driving), it is advisable to administer the phenothiozines cautiously and to increase the dosage gradually.

Usage in pregnancy: The safety of this drug in pregnancy has not been established; hence, it should be given only when the anticipated benefits to be derived from treatment exceed the possible risks to mother and fetus.

Usage in children: The use of Serentil in children under 12 years of age is not recommended, because safe conditions for its use have not been established.

Attention should be paid to the fact that phenothiozines are capable of potentiating central nervous system depressants (e.g., anesthetics, opiates, alcohol, etc.) as well as atropine and phosphorus insecticides.

PRECAUTIONS: While ocular changes have not to date been related to Serentil, one should be aware that such changes have been seen with other drugs of this class.

Because of possible hypotensive effects, reserve parenteral administration for bedfast patients or for acute ambulatory cases, and keep patient lying down for at least ½ hour after injection.

Leukopenia and/or agranulocytosis have been attributed to phenothiozine therapy. A single case of transient granulocytopenia has been associated with Serentil (mesoridazine).

ADVERSE REACTIONS: *Drowsiness* and hypotension were the most prevalent side effects encountered. Side effects tended to reach their maximum level of severity early with the exception of a few (rigidity and motoric effects) which occurred later in therapy.

With the exceptions of tremor and rigidity, adverse reactions were generally found among those patients who received relatively high doses early in treatment. Clinical data showed no tendency for the investigators to terminate treatment because of side effects.

Serentil has demonstrated a remarkably low incidence of adverse reactions when compared with other phenothiazine compounds.

Central Nervous System: Drowsiness, Parkinson's syndrome, dizziness, weakness, tremor, restlessness, ataxia, dystonia, rigidity, slurring, akathisia, motoric reactions (opisthotonos) have been reported.

Autonomic Nervous System: Dry mouth, nausea and vomiting, fainting, stuffy nose, photophobia, constipation and blurred vision have occurred in some instances.

Endocrine System: Inhibition of ejaculation and lactation have been noted rarely.

Skin: Itching, rash, hypertrophic papillae of the tongue and angioneurotic edema have been reported.

Cardiovascular System: Hypotension and tachycardia have been reported. EKG changes have occurred in some instances (see Phenothiazine Derivatives: Cardiovascular Effects).

Phenothiazine Derivatives: It should be noted that efficacy, indications and untoward effects have varied with the different phenothiazines. The physician should be aware that the following have occurred with one or more phenothiazines and should be considered whenever one of these drugs is used:

Autonomic Reactions: Miosis, obstipation, anorexia, paralytic ileus.

Cutaneous Reactions: Erythema, exfoliative dermatitis, contact dermatitis.

Blood Dyscrasias: Agranulocytosis, leukopenia, eosinophilia, thrombocytopenia, anemia, aplastic anemia, pancytopenia.

Allergic Reactions: Fever, laryngeal edema, angioneurotic edema, asthma.

Hepatotoxicity: Jaundice, biliary stasis.

Cardiovascular Effects: Changes in the terminal portion of the electrocardiogram, including prolongation of the Q-T interval, lowering and inversion of the T-wave and appearance of a wave tentatively identified as a bifid T or a U wave have been observed in some patients receiving the phenothiazine tranquilizers, including Serentil (mesoridazine). To date, these appear to be due to altered repolarization and not related to myocardial damage. They appear to be reversible. There is no evidence at present that these changes are in any way precursors of any significant disturbance of cardiac rhythm.

Hypotension, rarely resulting in cardiac arrest, has been noted.

Extrapyramidal Symptoms: Akathisia, agitation, motor restlessness, dystonic reactions, trismus, torticollis, opisthotonos, oculogyric crises, tremor, muscular rigidity, akinesia—some of which on rare occasions have persisted for several months or years especially in patients of advanced age with brain damage.

Endocrine Disturbances: Menstrual irregularities, altered libido, gynecomastia, weight gain. False positive pregnancy tests have been reported.

Urinary Disturbances: Retention, incontinence.

Others: Hyperpyrexia. Behavioral effects suggestive of a paradoxical reaction have been reported. These include excitement, bizarre dreams, aggravation of psychoses and toxic confusional states. More recently, a peculiar skin-eye syndrome has been recognized as a side effect following long-term treatment with phenothiazines. This reaction is marked by progressive pigmentation of areas of the skin or conjunctiva and/or accompanied by discoloration of the exposed sclera and cornea. Opacities of the anterior lens and cornea described as irregular or stellate in shape have also been reported.

DOSAGE AND ADMINISTRATION: Oral: The dosage of Serentil (mesoridazine), as in most medications, should be adjusted to the needs of the individual. The lowest effective dosage should always be used. When maximum response is achieved, dosage may be reduced gradually to a maintenance level.

Alcoholism: For most patients the usual starting dose is 25 mg. b.i.d. The usual optimum total daily dose range is 50-200 mg. per day.

Schizophrenia: For most patients, regardless of severity, a starting dose of 50 mg. t.i.d. is recommended. The usual optimum total daily dose range is 100-400 mg. per day.

Behavioral Problems in Mental Deficiency and Chronic Brain Syndrome: For most patients a starting dose of 25 mg. t.i.d. is recommended. The usual optimum total daily dose range is 75-300 mg. per day.

Psychoneurotic Manifestations: For most patients the usual starting dose is 10 mg. t.i.d. The usual optimum total daily dose range is 30-150 mg. per day.

Injectable Form: In those situations in which an intramuscular form of medication is indicated, Serentil (mesoridazine) Injectable is available. For most patients a starting dose of 25 mg. is recommended. The dose may be repeated in 30 to 60 minutes, if necessary. The usual optimum total daily dose range is 25-200 mg. per day.

HOW SUPPLIED: Tablets: 10 mg., 25 mg., 50 mg., and 100 mg. mesoridazine (as the besylate). Bottles of 100.

Ampuls: 1 cc. [25 mg. mesoridazine (as the besylate)]. Inactive ingredients—Disodium Edetate, U.S.P., 0.5 mg.; Sodium Chloride, U.S.P., 7.2 mg.; Carbon Dioxide Gas (Bone Dry), q.s.; Water for Injection, U.S.P., q.s. to 1 cc. Boxes of 20 and 100.

SER70-101

Sandoz Pharmaceuticals, Hanover, N.J. SANDOZ

TEXAS MEDICAL ASSOCIATION CONFERENCE ON MEDICAL PRACTICE AND ORIENTATION PROGRAM

Texas Medical Association's 1970 Conference on Medical Practice and Orientation Program is set for Sept. 19 in Austin. A panel session on "The Physician and the Hospital; Current Issues and Interests" will include presentations on staffing patterns for hospital emergency rooms, consideration of osteopaths for hospital staff privileges, physician representation on hospital governing boards—medical staff rights and responsibilities, and the revised standards of hospital accreditation—their impact upon practicing physicians and medical staffs of hospitals. Guest speakers will be Drs. Walter Walthall, President, Texas Medical Association; John R. Kernodle, vice chairman, AMA Board of Trustees; Michael J. Halberstam, practicing physician, Washington, D.C.; George J. Lawrence, Jr., chairman, AMPAC Board of Directors; and Mr. Max Wildman, LL.B., senior partner, Wildman, Harrold, Allen & Dixon. Entertainment features of the Conference weekend will be The University of Texas-University of California football game at 4 p.m. Saturday and an evening cruise up Lake Austin on the Riverboat Commodore to Greenshores. Additional information appears on p. 4.

Contact: C. Lincoln Williston, 1801 N. Lamar Blvd., Austin 78701, executive secretary.

TEXAS PEDIATRIC SOCIETY

"Learning Disorders in Children" will be the theme of the Texas Pediatric Society's meeting Sept 24-26 at the Sheraton-Fort Worth Hotel in Fort Worth. Participants in the program include Drs. Gerald Solomons, professor of pediatrics, University of Iowa College of Medicine, Iowa City, Iowa; Dora Chao, department of pediatrics, Baylor College of Medicine, Houston; Bill Caldwell (PhD), department of pediatrics, The University of Texas Medical Branch, Galveston; William Hardy Hendren, III, director of pediatric surgical service, Massachusetts General Hospital, Boston; Carl M. Pfeifer, Community Guidance Center, San Antonio; Thomas W. Wilson, former director, Child Study Center, Fort Worth; and Mrs. Shulamith Kastein, associate director, Mount St. Ursula Speech Center, New York, N.Y. "Learning Disabilities," "Language—The Tool of Learning," "Reconstructive Surgery of the Urinary Tract in the Small Infant," and "Can Learning Disability and Secondary Emotional Problems be Prevented by the Pediatrician?" are some of the presentation topics.

Contact: Dr. Stephen G. Maddox, 5211 W. Freeway, Fort Worth 76107, program chairman.

AMERICAN HEART ASSOCIATION, TEXAS AFFILIATE, INC.

The annual scientific meeting of the American Heart Association, Texas Affiliate, Inc., will be held Sept. 17-19 at the Sheraton-Dallas Hotel in Dallas. Program speakers and their presentations will include Drs. E. Grey Dimond, Kansas City, Mo., "Evaluation and Management in the Immediate Post Myocardial Infarction Period"; Herman K. Hellerstein, Cleveland, Ohio, "Myocardial Infarction Patients, Evaluation and Therapy after Recovery"; Ray W. Gifford, Cleveland, Ohio, "Evaluation and Medical Management of Chronic Occlusive Arterial Disease"; L. Thomas Sheffield, Birmingham, Ala., "Objective Laboratory Evaluation of Angina and Coronary Heart Disease"; and Albert A. Kattus, Los Angeles, Calif., "Medical Management of Chronic Atherosclerotic Heart Disease."

Contact: Dudley H. Hafner, Box 9928, 8600 Hwy. 183 N., Austin 78757, executive officer.

HIGHLIGHTS OF COMING MEETINGS

CURRENT MEETINGS IN TEXAS

AMERICAN SOCIETY OF ABDOMINAL SURGEONS, SOUTH CENTRAL SECTION, will hold its fifth annual meeting at the Royal Coach Inn, Dallas, Aug. 28-30. Featured speakers at the scientific program will be Drs. Milford O. Rouse, Arthur Grollman, Charles S. Petty, Earle Williams (DDS), G. Ray Ridings, Fred J. Bonte, all of Dallas; Grady L. Hallman, Houston; and Meyer O. Cantor, Huntington Woods, Mich. Contact: Dr. Virgil M. Payne, Jr., 1210 Medical Arts Bldg., Dallas 75201, chairman, committee on arrangements.

ASSOCIATION FOR THE ADVANCEMENT OF MEDICAL INSTRUMENTATION will hold a Workshop on the Safe Use of Monitoring Equipment Sept. 18 at The Methodist Hospital in Houston. Oriented towards physicians, nurses, administrators, and hospital engineers, the workshop is presented to explain and teach the safe use of equipment to those persons responsible for patient care and management of instrumentation. Contact: Michael J. Miller, c/o AAMI, 9650 Rockville Pike, Bethesda, Md. 20014, executive director.

METHODIST HOSPITAL AND LUBBOCK SURGICAL SOCIETY will sponsor the 11th annual Methodist Hospital Lecturesbip in Medicine and the 8th annual Lubbock Surgical Society Lectures Sept. 26 at KoKo Palace in Lubbock. General topic for the lectureship in medicine is "The Edema State and Aldosteronism," and speakers will be Dr. Grant W. Liddle, cbairman, department of medicine, Vanderbilt University School of Medicine, Nashville, Tenn.; and Dr. Louis G. Welt, chairman, department of medicine, University of North Carolina School of Medicine, Chapel Hill, N.C. Speakers at the surgical section will be Dr. W. Sterling Edwards, III, professor and chairman, department of cardiovascular and thoracic surgery, University of New Mexico School of Medicine, Albuquerque, N.M.; and Dr. Jack Wickstrom, professor and chairman, department of orthopedic surgery, Tulane University School of Medicine, New Orleans, La. Contact: Dr. Millard Carnrick, 701 University, Lubbock 79408 (medical lectureship); or Dr. W. T. Snodgrass, 3601 21st St., Lubbock 79419 (surgery lectureship).

CURRENT NATIONAL MEETINGS

AMERICAN ACADEMY OF GENERAL PRACTICE will present a program of postgraduate courses covering the spectrum of the family doctor's professional educational needs at its 22nd annual scientific assembly to be held in San Francisco, Sept. 28-Oct. 1. The medicine of the future—the family practice of medicine—with emphasis on health care for the 70's, and subjects ranging from post-coronary care to the family physician's role in sex education and medicine in the ghetto, outline the physician-oriented program. Topics to be covered at the clinical seminars include common skin disorders, cardiac arrhythmias, management of diabetes mellitus, headache—diagnosis and management, diagnosis and treatment of arthritis, alcoholism, the repeatedly ill child, and the allergic patient. Contact: Mac F. Cahal, Volker Blvd. at Brookside, Kansas City, Mo. 64112, executive director.

AMERICAN ASSOCIATION OF MEDICAL CLINICS will meet Sept. 20-23 in San Francisco. "Up the Delivery System" is the theme of the 21st annual meeting which will be staged at the St. Francis Hotel. Exhibits, breakfast roundtables, and workshops are planned. Subjects to be studied include what government planners have in mind for us today, the health delivery system, how to control the quality of your work, up your delivery system with an efficient examining arrangement, insights to group leadership, and the dynamics of planning. Contact: Dr. Edward M. Wurzel, PO Box 949, 719 Prince St., Alexandria, Va. 22313, executive director.

AMERICAN CONGRESS OF REHABILITATION MEDICINE'S 47th annual session will take place Aug. 19-21 at the New York Hilton in New York City. The scientific program will consist of paper presentations and discussions, scientific films, panel discussions, and a new feature—"Meet the Experts" breakfasts—which will provide an opportunity for a personal exchange with recognized authorities in seven selected areas of interest to rehabilitation professionals. Topics to be covered at the breakfast sessions are aphasia, undergraduate medical education, orthotics, electromyography, medical writing, rehabilitation success predictors, and cerebral palsy. Registration fee for members is $35. Contact: Creston C. Herold, 30 N. Michigan Ave., Chicago 60602, executive director.

AMERICAN MEDICAL ASSOCIATION'S Judicial Council will sponsor the Third National Congress on Medical Ethics, Sept. 19-20, at The Ambassador Hotel in Chicago. Speakers will include Drs. Walter C. Bornemeier, president, AMA; Russell B. Roth, speaker, house of delegates, AMA; and Maynard Shapiro, immediate past president, American Academy of General Practice. Other speakers will be officers of various state medical associations. Some of the topics to be covered are the intellectual dropout, ethics and professionalism, and medicine's ethical responsibilities. Contact: Dr. E. G. Shelley, chairman, Judicial Council, AMA, 535 Nortb Dearborn St., Chicago 60610.

AMERICAN MEDICAL WRITERS ASSOCIATION's 30tb annual convention will provide a unique opportunity for editors, writers, and researchers in the medical field to exchange ideas with their colleagues and to keep abreast of what's new in science communications when it convenes Sept. 24-27 at the Waldorf-Astoria Hotel in New York City. The program will feature roundtables, workshops, symposia, and panel discussions. Program participants include Drs. William B. Ober, associate professor of patbology, Mount Sinai School of Medicine, New York, N.Y.; John B. Blake (PhD), chief, history of medicine division, National Library of Medicine, Bethesda, Md.; Lester S. King, senior editor, *Journal of the American Medical Association*, Chicago, Ill.; and Roger O. Egeberg, assistant secretary for health and scientific affairs, Department of Health, Education and Welfare, Washington, D.C. Contact: W. Wayne Curtis, 420 Lexington Ave., New York 10017, executive officer.

AMERICAN SOCIETY OF CLINICAL PATHOLOGISTS will meet in Atlanta, Ga., Sept. 11-19. Workshops and applied seminars will be held each day, Sept. 12-19, and roundtable luncheon symposia will be offered Sept. 13-17. The Commission on Continuing Education will present seminars arranged by councils on anatomic pathology, clinical chemistry, cytopathology, forensic pathology, hematology, immunohematology, microbiology, radioisotopes, and special topics. The Commission on Medical Technology will sponsor seminars on platelet counting, medical protozoology, laboratory diagnosis of malaria, microchemistry, and medical helminthology. Many of the programs are planned for joint participation by pathologists, medical technologists, and other ASCP-registered medical laboratory personnel. Some programs are designed for pathologists or technologists only. General registration fee for nonmembers is $10 in addition to individual program fees. ASCP and CAP members will not be charged the general registration fee. Contact: Albert G. Boeck, Jr., 710 S. Wolcott Ave., Chicago 60612, executive officer.

MORE HIGHLIGHTS OF COMING MEETINGS

■ Denotes Texas meetings.

ALSO IN AUGUST

THE UNIVERSITY OF WISCONSIN, Ninth National Conference on Therapies for Advanced Cancers, Madison, Wis., Aug. 20-22, 1970. Dr. Robert J. Samp, Assistant Professor of Surgery and Clinical Oncology, University Hospitals, Madison, Wis. 53706, Program Coordinator.

WORLD MEDICAL ASSOCIATION, Oslo, Norway, Aug. 16-22, 1970. Dr. A. Z. Romualdez, 10 Columbus Circle, New York 10019, Sec.

ALSO IN SEPTEMBER

AMERICAN ELECTROENCEPHALOGRAPHIC SOCIETY, Washington, D.C., Sept. 17-19, 1970. Dr. Philip T. White, Marquette University School of Medicine, 8700 W. Wisconsin Ave., Milwaukee, Wis. 53226, Sec.

AMERICAN FRACTURE ASSOCIATION, New York, Sept. 26-30, 1970. Dr. H. W. Wellmerling, 610 Griesheim Bldg., Bloomington, Ill. 61701, Sec.-Gen.

■ AMERICAN HOSPITAL ASSOCIATION, Houston, Sept. 14-17, 1970. James E. Hague, 840 N. Lake Shore Dr., Chicago, Sec.

AMERICAN HUMANE ASSOCIATION, St. Louis, Sept. 27-30, 1970. Rutherford T. Phillips, P. O. Box 1266, Denver 80201, Exec. Dir.

AMERICAN MEDICAL ASSOCIATION, 30th Annual Congress on Occupational Health, Los Angeles, Sept. 30-Oct. 1, 1970. Department of Occupational Health, AMA, 535 N. Dearborn St., Chicago 60610.

AMERICAN ROENTGEN RAY SOCIETY, Miami Beach, Sept. 30, 1970. Dr. William B. Seaman, 20 N. Wacker Dr., Chicago 60606, Exec. Officer.

ASSOCIATION OF LIFE INSURANCE MEDICAL DIRECTORS OF AMERICA, Boston, Sept. 28-30, 1970. Dr. Arthur E. Brown, c/o ALIMDA, P.O. Box 594, Newark, N.J.

■ TEXAS SOCIETY OF CHILD PSYCHIATRY, Fort Worth, Sept. 25-26, 1970. Dr. Ann H. Hughes, 3643 W. Lake Dr., Austin, Sec.

■ THE UNIVERSITY OF TEXAS SOUTHWESTERN MEDICAL SCHOOL AT DALLAS and CHILDREN'S MEDICAL CENTER OF DALLAS, Pediatric Anesthesia Symposium, Moore Auditorium, Children's Medical Center, Dallas, Sept. 12-13, 1970. Dr. C. R. Stephen, Dept. of Anesthesia, Children's Medical Center, 1935 Amelia St., Dallas 75235.

OCTOBER

AMERICAN ACADEMY OF CLINICAL TOXICOLOGY, San Francisco, Oct. 24-26, 1970. Dr. Eric G. Comstock, P. O. Box 2565, Houston 77001, Exec. Dir.

AMERICAN ACADEMY OF OPHTHALMOLOGY AND OTOLARYNGOLOGY, Las Vegas, Oct. 5-9, 1970. Dr. C. M. Kos, 15 Second St., SW, Rochester, Minn. 55901, Exec. Sec.-Treas.

AMERICAN ACADEMY OF PEDIATRICS, annual, San Francisco, Oct. 17-22, 1970. Dr. Robert G. Frazier, 1801 Hinman Ave., Evanston, Ill. 60204, Exec. Dir.

AMERICAN ASSOCIATION OF BLOOD BANKS, San Francisco, Oct. 25-29, 1970. Lois J. James, 30 N. Mich. Ave., Chicago, Central Office Mgr.

AMERICAN ASSOCIATION OF MEDICAL ASSISTANTS, Des Moines, Iowa, October, 1970. Pauline M. Hunter, 5652 N. 10th St., Phoenix, Ariz., Sec.

AMERICAN ASSOCIATION OF OPHTHALMOLOGY, annual, Las Vegas, Oct. 4-5, 1970. Lawrence A. Zupan, Rm. 304, 1100 17th St., NW, Washington, DC 20036, Exec. Officer.

■ AMERICAN CANCER SOCIETY, TEXAS DIVISION, INC., annual, Dallas, Oct. 14-15, 1970. Curt W. Reimann, 5014 Bull Creek Rd., Austin 78731, Exec. Officer.

AMERICAN COLLEGE OF CHEST PHYSICIANS, annual, Los Angeles, Oct. 25-30, 1970. Dr. Alfred Soffer, 112 E. Chestnut St., Chicago 60611, Exec. Dir.

AMERICAN COLLEGE OF EMERGENCY PHYSICIANS, annual, Las Vegas, Oct. 18-23, 1970. Executive Secretary, 120 W. Saginaw, E. Lansing, Mich. 48823.

AMERICAN COLLEGE OF GASTROENTEROLOGY, New York, Oct. 25-31, 1970. Daniel Weiss, 299 Broadway, New York 10007, Exec. Officer.

AMERICAN COLLEGE OF SURGEONS, Chicago, Oct. 12-16, 1970. Dr. C. Rollins Hanlon, 55 E. Erie St., Chicago 60611, Dir.

AMERICAN COUNCIL OF OTOLARYNGOLOGY, Las Vegas, Oct. 4, 1970. Dr. John E. Bordley, Suite 406, 1100 17th St., NW, Washington, DC 20036, Exec. Dir.

AMERICAN DIETETIC ASSOCIATION, Cleveland, Oct. 5-9, 1970. Ruth M. Yakel, 620 N. Mich. Ave., Chicago 60611, Exec. Dir.

■ AMERICAN PUBLIC HEALTH ASSOCIATION, Houston, Oct. 26-30, 1970. Berwyn F. Mattison, 1790 Broadway, New York 10019, Exec. Dir.

AMERICAN SOCICTY OF ANESTHESIOLOGISTS, New York, Oct. 17-21, 1970. John W. Andes, 515 Busse Hwy., Park Ridge, Ill., Exec. Sec.

ASSOCIATION OF AMERICAN MEDICAL COLLEGES, annual, Los Angeles, Oct. 29-Nov. 2, 1970. Dr. John A. D. Cooper, One Dupont Circle, NW, Washington, DC 20036, Pres.

ASSOCIATION OF AMERICAN PHYSICIANS AND SURGEONS, INC., Richmond, Va., Oct. 1-3, 1970. Frank K. Woolley, 230 N. Mich. Ave., Chicago 60601, Exec. Dir.

■ EASTER SEAL SOCIETY FOR CRIPPLED CHILDREN & ADULTS OF TEXAS, INC., San Antonio, Oct. 8-10, 1970. William E. Russell, 4429 N. Central Expwy., Dallas, Exec. Dir.

OKLAHOMA CITY CLINICAL SOCIETY, Oklahoma City, Oct. 26-28, 1970. Mrs. Alma O'Donnell, 601 NW Expwy., Oklahoma City 73118.

■ PANHANDLE DISTRICT MEDICAL SOCIETY, Amarillo, Oct. 17, 1970. Mrs. Carlie Umphres, Box 3276, Amarillo 79106, Exec. Sec.

■ SCOTT AND WHITE CLINIC, seminar on practical neurology, Temple, Oct. 1-3, 1970. Dr. W. L. Griggs, Department of Neurology, Scott and White Clinic, Temple 76501.

SOCIETY FOR CRYOSURGERY, Seminar on Cryosurgery in EENT, Las Vegas, Oct. 4, 1970. Dr. John G. Bellows, 30 N. Michigan Ave., Chicago 60602, Sec.

SOUTHERN PSYCHIATRIC ASSOCIATION, West Palm Beach, Fla., Oct. 4-6, 1970. Mrs. Annette S. Boutwell, P.O. Box 10387, Raleigh, NC 27605, Exec. Sec.

WESTERN CARDIAC CONFERENCE, 17th annual, Denver, Oct. 21-23, 1970. Colorado Heart Association, 1375 Delaware St., Denver 80204.

NOVEMBER

AMERICAN ASSOCIATION FOR THE ACCREDITATION OF LABORATORY ANIMAL CARE, Chicago, Nov. 2-6, 1970. Joseph J. Garvey, 4 E. Clinton St., Suite 605, P. O. Box 13, Joliet, Ill. 60434, Exec. Sec.

AMERICAN ASSOCIATION FOR INHALATION THERAPY, New Orleans, Nov. 14-18, 1970. Mark T. Bowers, 3554 Ninth St., Riverside, Calif. 92501, Exec. Sec.

AMERICAN CANCER SOCIETY, annual, New York, Nov. 4-6, 1970. Norman R. Hollis, 219 E. 42nd St., New York 10017, Asst. Sec.

■ AMERICAN COLLEGE OF CHEST PHYSICIANS, Southern Chapter, annual, Dallas, Nov. 16, 1970. Dr. Charles Frank Tate, Jr., 1700 NW 10th Ave., Miami, Fla. 33136, Sec.-Treas.

AMERICAN DENTAL ASSOCIATION, Las Vegas, Nov. 8-12, 1970. Dr. C. Gordon Watson (DDS), 211 E. Chicago Ave., Chicago 60611, Exec. Dir.

AMERICAN HEART ASSOCIATION, Atlantic City, Nov. 12-17, 1970. Dr. James M. Hundley, 44 E. 23rd St., New York 10010, Exec. Officer.

AMERICAN MEDICAL ASSOCIATION, clinical session, Boston, Nov. 29-Dec. 2, 1970. AMA, 535 N. Dearborn St., Chicago 60610.

AMERICAN MEDICAL RECORD ASSOCIATION, Colorado Springs, Nov. 1-6, 1970. Mrs. Mary-j Waterstraat, 211 E. Chicago Ave., Chicago 60611, Exec. Officer.

AMERICAN MEDICAL WOMEN'S ASSOCIATION, INC., Puerto Rico, Nov. 7-10, 1970. Gertrude F. Conroy, 1790 Broadway, New York 10019, Exec. Dir.

AMERICAN SOCIETY OF CLINICAL HYPNOSIS, Miami Beach, Nov. 4-8, 1970. F. D. Nowlin, 800 Washington Ave., SE, Minneapolis 55414, Exec. Sec.

AMERICAN SOCIETY OF CYTOLOGY, Los Angeles, Nov. 4-7, 1970. Dr. Warren R. Lang, 7112 Lincoln Dr., Philadelphia 19119, Sec.-Treas.

ASSOCIATION OF MILITARY SURGEONS OF THE US, Washington, DC, Nov. 29-Dec. 2, 1970. RADM Walter Welham, MC, USN, Ret., 8502 Connecticut Ave., Chevy Chase, Md. 20015, Exec. Dir.

■ BLACKFORD MEMORIAL LECTURES, annual, Denison, Nov. 7, 1970. Dr. John D. Gleckler, 211 N. Fannin, Denison 75020, Chrmn.

CONGRESS OF COUNTY MEDICAL SOCIETIES, annual, Cincinnati, Nov. 6-8, 1970. Dr. Joseph F. Boyle, P. O. Box 54571, Terminal Annex, Los Angeles 90054, Chrmn., Bd. of Trustees.

INTERNATIONAL COLLEGE OF SURGEONS, Las Vegas, Nov. 20-24, 1970. Dr. Aldo Parentela, 1516 Lake Shore, Chicago 60610, Exec. Officer.

INTERSTATE POSTGRADUATE MEDICAL ASSOCIATION OF NORTH AMERICA, annual, Chicago, Nov. 2-5, 1970. Roy T. Ragatz, 307 N. Charter St., Madison, Wis. 53715, Exec. Dir.

MEDICAL SOCIETY OF THE US AND MEXICO, annual, Guadalajara, Jal. Mexico, Nov. 4-7, 1970. Virginia E. Bryant, 333 W. Thomas Rd., #207, Phoenix 85013, Exec. Sec.

NATIONAL SOCIETY FOR THE PREVENTION OF BLINDNESS, INC., New York, Nov. 19, 1970. Margaret S. Banks, 79 Madison Ave., New York 10016, Admin. Asst.

RADIOLOGICAL SOCIETY OF NORTH AMERICA, Chicago, Nov. 29-Dec. 4, 1970. Mrs. Marguerite H. Henry, 713 E. Genessee St., Syracuse, NY 13210, Exec. Dir.

■ SOUTHERN MEDICAL ASSOCIATION, Dallas, Nov. 16-19, 1970. Robert F. Butts, 2601 Highland Ave., Birmingham, Ala. 35205, Exec. Dir.

■ SOUTHWESTERN MEDICAL ASSOCIATION, El Paso, Nov. 4-6, 1971. Bob Reid, 723 Mills Bldg., El Paso 79901, Exec. Sec.

■ TEXAS ASSOCIATION FOR CHILDREN WITH LEARNING DISABILITIES, INC., Austin, Nov. 20-21, 1970. Mrs. William F. Howard, 4601 Small Drive, Austin 78731, Chrmn.

■ THE UNIVERSITY OF TEXAS M. D. ANDERSON HOSPITAL AND TUMOR INSTITUTE AT HOUSTON, 15th annual clinical conference, Houston, Nov. 19-20, 1970. UT M. D. Anderson Hospital and Tumor Institute, Texas Medical Center, Houston 77025.

UNIVERSITY OF FLORIDA COLLEGE OF MEDICINE, seminar in obstetrics and gynecology, Gainesville, Fla., Nov. 19-20, 1970. Division of Postgraduate Education, University of Florida College of Medicine, J. Hillis Miller Health Center, Gainesville 32601.

DECEMBER

AMERICAN ACADEMY OF DERMATOLOGY, Chicago, Dec. 5-10, 1970. Mrs. Dorothy P. Compton, 2250 NW Flanders St., Portland, Ore., Exec. Sec.

AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE, Chicago, Dec. 26-31, 1970. Dr. Dael Wolfe, 1515 Massachusetts Ave., NW, Washington, DC 20005, Exec. Officer.

ASSOCIATION OF STATE AND TERRITORIAL HEALTH OFFICERS, Washington, DC, Dec. 6-10, 1970.

Noble J. Swearingen, 234 E. Capitol St., Washington, DC 20002, Dir.

SOUTHERN SURGICAL ASSOCIATION, Boca Raton, Fla., Dec. 7-9, 1970. Dr. David C. Sabiston, Jr., Duke University Medical Center, Durham, NC, Sec.

■ TEXAS ACADEMY OF INTERNAL MEDICINE, Galveston, Dec. 5, 1970. Dr. O. Roger Hollan, 703 Nix Bldg., San Antonio 78205, Sec.

■ TEXAS SOCIETY OF INTERNAL MEDICINE, INC., Galveston, Dec. 4, 1970. Dr. Thomas Runge, 1801 N. Lamar Blvd., Austin 78701, Sec.-Treas.

■ TEXAS SOCIETY OF OPHTHALMOLOGY AND OTOLARYNGOLOGY, Corpus Christi, Dec. 4-5, 1970. Dr. Bland H. Schwarting, 304 Med. Prof. Bldg., San Antonio, Sec.

■ TEXAS STATE BOARD OF MEDICAL EXAMINERS, Fort Worth, Dec. 7-9, 1970. Dr. M. H. Crabb, 1612 Summit Ave., Suite 303, Fort Worth 76102, Sec.

JANUARY

ARIZONA HEART ASSOCIATION, Fourteenth Annual Cardiac Symposium, Phoenix, Jan. 22-24, 1971. Arizona Heart Association, 1720 E. McDowell Rd., Phoenix 85006.

■ FIFTH DISTRICT MEDICAL SOCIETY, annual, San Antonio, Jan. 29, 1971. S. E. Cockrell, Jr., 202 W. French Place, San Antonio 78212, Exec. Officer.

■ INTERNATIONAL MEDICAL ASSEMBLY OF SOUTHWEST TEXAS, annual, San Antonio, Jan. 28-29, 1971. S. E. Cockrell, Jr., 202 W. French Place, San Antonio 78212, Exec. Officer.

NATIONAL CONFERENCE ON CANCER OF THE COLON AND RECTUM, San Diego, Jan. 7-9, 1971. Dr. Ronald N. Grant, c/o American Cancer Society, Inc., 219 E. 42nd St., New York 10017.

■ TEXAS MEDICAL ASSOCIATION, Austin, Jan. 15-17, 1971. C. Lincoln Williston, 1801 N. Lamar Blvd., Austin 78701, Exec. Sec.

■ TEXAS RADIOLOGICAL SOCIETY, annual, Dallas, Jan. 29-30, 1971. Dr. Herman C. Sehested, 1550 W. Rosedale, Fort Worth 76104, Sec.

FEBRUARY

AMERICAN ACADEMY OF ALLERGY, annual, Chicago, Feb. 20-24, 1971. James O. Kelley, 756 N. Milwaukee St., Milwaukee, Wis. 53202, Exec. Officer.

AMERICAN COLLEGE OF CARDIOLOGY, annual, Washington, DC, Feb. 3-7, 1971. William D. Nelligan, 9650 Rockville Pike, Bethesda, Md. 20014, Exec. Dir.

AMERICAN SOCIETY OF ABDOMINAL SURGEONS, New Orleans, Feb. 14-17, 1971. Dr. Blaise F. Alfano, 675 Main St., Melrose, Mass., Exec. Sec.

■ FIRST DISTRICT MEDICAL SOCIETY, annual, Pecos, February, 1971. Dr. John Emmett, 1900 N. Oregon, El Paso, Sec.

INTERNATIONAL ACADEMY OF PROCTOLOGY, 23rd annual congress and teaching seminar, Mexico City, Feb. 26-March 5, 1971. Dr. Alfred J. Cantor, 147-41 Sanford Ave., Flushing, NY 11355, Exec. Sec.

PAN-PACIFIC SURGICAL ASSOCIATION, annual, Honolulu, Feb. 26-March 3, 1972. Harriet N. DeVault, 236 Alexander Young Bldg., Honolulu 96813, Exec. Sec.

MARCH

AMERICAN ACADEMY OF ORTHOPAEDIC SURGEONS, annual, San Francisco, March 6-11, 1971. John K. Hart, 430 N. Michigan Ave., Chicago 60611, Exec. Sec.

AMERICAN ASSOCIATION OF PATHOLOGISTS AND BACTERIOLOGISTS, annual, Montreal, Quebec, March 6-9, 1971. Dr. K. M. Brinkhous, Dept. of Pathology, University of North Carolina, Chapel Hill, NC 27514, Sec.

AMERICAN COLLEGE OF ALLERGISTS, annual, San Francisco, March 28-April 1, 1971. Dr. John D. Gillaspie, 2141 14th St., Boulder, Colo. 80302, Exec. Sec.

AMERICAN COLLEGE OF PHYSICIANS, annual, Denver, March 28-April 2, 1971. Dr. Edward C. Rosenow, Jr., 4300 Pine St., Philadelphia 19104, Exec. Dir.

AMERICAN COLLEGE OF RADIOLOGY, annual, St. Louis, March 29-April 3, 1971. William C. Stronach, 20 N. Wacker Dr., Rm. 2920, Chicago 60606, Exec. Dir.

AMERICAN COLLEGE OF SURGEONS, Phoenix, March 1-3; New Orleans, March 15-17, 1971. Dr. C. Rollins Hanlon, 55 E. Erie St., Chicago 60611, Dir.

AMERICAN SOCIETY OF INTERNAL MEDICINE, annual, Denver, March 26-28, 1971. W. R. Ramsey, 525 The Hearst Bldg., San Francisco 94103, Exec. Officer.

■ DALLAS SOUTHERN CLINICAL SOCIETY, annual, Dallas, March 15-18, 1971. Millard J. Heath, 433 Medical Arts Bldg., Dallas 75201, Exec. Officer.

NEW ORLEANS GRADUATE MEDICAL ASSEMBLY, annual, New Orleans, March 8-11, 1971. Irma B. Sherwood, 1430 Tulane Ave., New Orleans 70112, Exec. Sec.

SOCIETY FOR CRYOSURGERY, annual, Hollywood, Fla., March 1-5, 1971. Dr. John G. Bellows, 30 N. Michigan Ave., Chicago 60602, Sec.

■ SOCIETY OF NUCLEAR MEDICINE, Southwestern Chapter, annual, Houston, March 19-21, 1971. Dr. Herbert C. Allen, Jr., 100 Hermann Prof. Bldg., Houston 77025, Sec.-Treas.

■ TEXAS ASSOCIATION OF OBSTETRICIANS AND GYNECOLOGISTS, annual, Corpus Christi, March 5-6, 1971. Dr. J. L. Jinkins, Jr., 200 University Blvd., Galveston 77550, Sec.-Treas.

■ TEXAS UROLOGICAL SOCIETY, annual, Wichita Falls, March 11-13, 1971. Dr. Charles Dryden, 1605 Tenth St., Wichita Falls 76301, Sec.-Treas.

US-MEXICO BORDER PUBLIC HEALTH ASSOCIATION, annual, Tucson, March 29-April 2, 1971. Dr. Jorge Jimenez-Gandica, 501 U.S. Court House, El Paso 79901, Sec.

APRIL

AMERICAN ASSOCIATION OF ANATOMISTS, annual, Philadelphia, April 18-23, 1971. Dr. Russell T. Woodburne, Dept. of Anatomy, The University of Michigan, 4643 Medical Science Bldg., Ann Arbor, Mich. 48104, Sec.-Treas.

AMERICAN ASSOCIATION FOR THORACIC SURGERY, Atlanta, April 26-28, 1971. Ada Hanvey, 7710 Carondelet Ave., St. Louis 63105, Admin. Asst.

AMERICAN COLLEGE HEALTH ASSOCIATION, annual, San Francisco, April 27-30, 1971. James W. Dilley, 2807 Central St., Evanston, Ill. 60201, Exec. Dir.

AMERICAN COLLEGE OF SURGEONS, Montreal, Quebec, Canada, April 5-7, 1971. Dr. C. Rollins Hanlon, 55 E. Erie St., Chicago 60611, Dir.

HELP! IN SWIMMER'S EAR,

help comes fast with Furacin Otic. Diperodon hydrochloride provides rapid relief of pain and pruritus . . . antibacterial Furacin (nitrofurazone) and antimycotic Micofur (nifuroxime) combat the susceptible pathogens. The nonmacerating, hygroscopic vehicle softens cerumen . . . penetrates to the infection . . . permits free drainage.

FURACIN® OTIC

(nitrofurazone)

antibacterial/anesthetic/antifungal

Formula: Contains (w/w) 0.2% Furacin, brand of nitrofurazone, 0.375% Micofur®, brand of nifuroxime, and 2% diperodon hydrochloride dissolved in water-soluble, nondrying, hygroscopic polyethylene glycol.

Indications: For treatment of bacterial otitis externa, bacterial otitis media and otomycosis. In otitis media, this preparation is not effective if the tympanic membrane is intact.

Furacin (nitrofurazone) and Micofur (nifuroxime) are active against a variety of gram-positive and gram-negative organisms. Activity versus Pseudomonas sp. is limited to certain strains. Micofur (nifuroxime) is active against Candida (Monilia) albicans.

Precautions: Sensitization may occur with prolonged use and is more likely to develop in eczematous otitis externa. To minimize such reactions (a) limit application to a week or less, and (b) avoid use of excessive amounts which may run down the face.

This preparation is not indicated for use in treatment of cholesteatoma, where surgical intervention is necessary.

Supplied: Bottle of 15 cc. with dropper.

™ Originators and Developers of The Nitrofurans
EATON LABORATORIES
Division of The Norwich Pharmacal Company
NORWICH, NEW YORK 13815

CONTINUING EDUCATION COURSES

Teaching Emergency Care: A three-day course in techniques of emergency care education of paramedical personnel will be held Sept. 9-11 at the San Antonio Convention Center, with demonstration sessions at the US Army Medical Training Center at Fort Sam Houston. It will be of interest to physicians who may conduct training courses for ambulance attendants, policemen, firemen, volunteer rescue squad workers, and others who provide emergency medical aid. Contact Dr. Charles A. Rockwood, Jr., The University of Texas Medical School at San Antonio, San Antonio, Tex. 78229.

General Practice Review: Directed toward the practical aspects of general practice, this course will be held at Galveston's Jack Tar Hotel Sept. 20-25. Information is available from Dr. S. R. Lewis, Director, Postgraduate Education, The University of Texas Medical Branch, Galveston, Tex. 77550.

Pediatrics: A symposium on pediatric anesthesia will be held Sept 12-13 at Moore Auditorium, Children's Medical Center, Dallas. Presented by the department of anesthesia, UT Southwestern Medical School at Dallas and Children's Medical Center of Dallas, in cooperation with the division of postgraduate medical education, UT Southwestern Medical School, the symposium will feature discussions of anesthetic management for pyloromyotomy, surgical considerations in the neonate, muscle relaxant drugs in pediatric anesthesia, and surgical problems in abdominal masses and tumors. Guest faculty will be Dr. A. W. Conn, professor of anesthesiology, University of Toronto Faculty of Medicine, and chief of anesthesia, The Hospital for Sick Children, Toronto, Ontario, Canada.

Registration fee is $60. For information write Dr. C. R. Stephen, Department of Anesthesia, Children's Medical Center, 1935 Amelia St., Dallas, Tex. 75235.

Birth Defects: The Second Annual Birth Defects Symposium, "Disorders of Glucose Metabolism in Children," will be Oct. 30-31 at the University of Florida College of Medicine, Gainesville, Fla. Sponsors are the University's Institutional Division of Endocrinology and Metabolism and the National Foundation-March of Dimes Birth Defects Center. Mrs. Betty L. Howard, Division of Postgraduate Education, J. Hillis Miller Health Center, Gainesville, Fla. 32601, can send complete information; registration fees will be waived for interns and residents.

Laboratory Training: Information and applications for the following courses may be obtained from the Training Office, Laboratory Division, National Communicable Disease Center, Atlanta, Ga. 30333:

Epidemiology and Control of Vector-Borne Diseases: I. Basic Vector-Borne Disease Control, Sept. 8-18; registration closes Aug. 24. II. Advanced Epidemiology and Ecology of Vector-Borne Diseases, Sept. 21-25; registration closes Sept. 7.

Basic Laboratory Methods in Virology, Oct. 19-30; registration closes Aug. 24.

Laboratory Methods in Anaerobic Bacteriology, Oct. 26-Nov. 6; registration closes Aug. 31.

Neurology: The department of neurology, Scott and White Clinic, Temple, will present a seminar on practical neurology Oct. 1-3. The symposium will be devoted to selected practical topics in neurology, neurosurgery, and psychiatry with presentations by members of the staff of Scott and White and by a distinguished visiting faculty which will include Drs. David D. Daly, professor and chairman, department of neurology, UT Southwestern Medical School at Dallas; Robert E. McMasters, associate professor of physiology and medicine (neurology), UT Medical School at San Antonio; B. Joe Wilder, associate professor of physiology and medicine (neurology), University of Florida School of Medicine, Gainesville, Fla.; and Charles Reul, neurologist, Sheppard Air Force Base, Wichita Falls. Informal panel discussions of specific patient problems will be given by the visiting faculty and by participating Scott and White physicians. Questions and comments from the floor are encouraged.

Registration fee is $50; no charge to residents, interns or members of the Armed Forces. For further information write to the Education Office, Scott and White Memorial Hospital, Temple, Tex. 76501.

Emergency Nursing: The American Academy of Orthopaedic Surgeons Committee on Injuries will sponsor a postgraduate course for emergency department nurses Nov. 8-11, at the Holiday Inn Downtown in Dallas. Held in conjunction with The University of Texas Southwestern Medical School at Dallas, Dallas County Medical Society, and Texas Nurses Association, the course will include lectures, demonstrations, discussions, and class participation. Topics will concern cardiopulmonary resuscitation, shock, control of hemorrhage, burns, poisonings, narcotics and LSD intoxication, cardiac emergencies, fractures, legal aspects of emergency department care, religious aspects of emergency department care, intravenous catheterization technique, psychiatric emergencies, and other related subjects.

Registration will be limited to 200, and tuition will be $50. For registration applications or additional information contact Dr. George N. Aldredge, Jr., 1224 Medical Arts Bldg., Dallas, Tex. 75201.

Otolaryngology: A postgraduate course entitled "Otolaryngology for the Family Practitioner" will be presented Nov. 13-14, at the Sheraton Four Ambassadors Hotel in Miami, Fla., by the University of Miami School of Medicine's department of otolaryngology. The course is accredited by the American Academy of General Practice.

For additional information write to Dr. Fredric W. Pullen, II, Neuro-Otologic Laboratory, University of Miami School of Medicine, P. O. Box 875, Biscayne Annex, Miami, Fla. 33152.

Psychiatry: Dr. Jack E. Ponder, assistant professor of psychiatry at The University of Texas (Southwestern) Medical School at Dallas, will be the instructor for a course on Emotional Dimensions of Medical Problems to begin in October and run through December. Enrollment is limited to 10, and the course will be taught in weekly two-hour sessions. The course is sponsored by Southwestern's department of psychiatry and division of postgraduate education; for details write Dr. Ponder in care of the school, 5323 Harry Hines Blvd., Dallas, Tex. 75235.

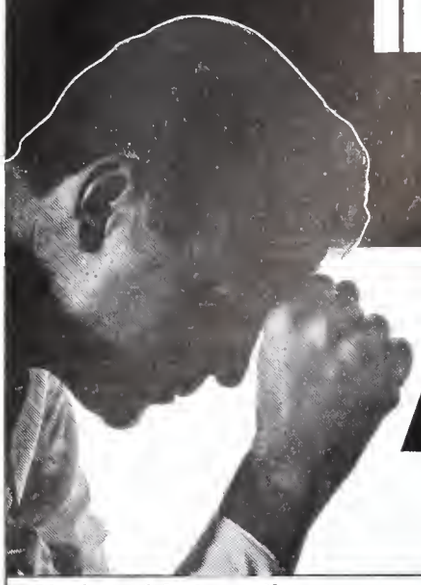
The treatment of

impotence

in the American male is complex.
The concept of chemotherapy plus the physician's psychological support is confirmed as effective therapy.

NEW CLINICAL STUDY

The Treatment of Impotence with Methyltestosterone Thyroid (100 patients — Double Blind Study)
T. Jakobovits
Fertility and Sterility, January 1970
Official Journal of the American Fertility Society



Android®

(thyroid-androgen) tablets

Double-Blind Study and Type of Patient: 100 patients suffering from undifferentiated impotence. Examination revealed the patients were within the average range of 17-Ketosteroid excretion and protein bound iodine. Except for fatigue in some patients all were in good health. Study was for one month in duration. Each patient received one tablet 3 times daily.

Results: Of the patients receiving the active medication (Android) a favourable response was seen in 78%. This compares with 40% with those on placebo. 80% of the patients treated with the active ingredients showed relief in fatigue compared with 42% of those receiving the placebo. Although psychotherapy is indicated in patients suffering from functional impotence the concomitant role of chemotherapy (Android) cannot be disputed.

Choice of 4 strengths:

Android

Each yellow tablet contains:
Methyl Testosterone ..2.5 mg.
Thyroid Ext. (1/6 gr.) ..10 mg.
Glutamic Acid .....50 mg.
Thiamine HCL .....10 mg.
Dose: 1 tablet 3 times daily.
Available:
Bottles of 100, 500, 1000.

Android-HP
HIGH POTENCY

Each red tablet contains:
Methyl Testosterone ..5.0 mg.
Thyroid Ext. (½ gr.) ...30 mg.
Glutamic Acid .....50 mg.
Thiamine HCL .....10 mg.
Dose: 1 tablet 3 times daily.
Available:
Bottles of 100, 500, 1000.

Android-X
EXTRA HIGH POTENCY

Each orange tablet contains:
Methyl Testosterone .12.5 mg.
Thyroid Ext. (1 gr.) ....64 mg.
Glutamic Acid .....50 mg.
Thiamine HCL .....10 mg.
Dose: 1 or 2 tablets daily.
Available:
Bottles of 60, 500.

Android-Plus
WITH HIGH POTENCY B-COMPLEX AND VITAMIN C

Each white tablet contains:
Methyl Testosterone ..2.5 mg.
Thyroid Ext. (¼ gr.) ...15 mg.
Ascorbic Acid (Vit. C) .250 mg.
Thiamine HCL .....25 mg.
Glutamic Acid .....100 mg.
Pyridoxine HCL .....5 mg.
Niacinamide .....75 mg.
Calcium Pantothenate .10 mg.
Vitamin B-12 .....2.5 mcg.
Riboflavin .....5 mg.
Dose: 2 tablets daily.
Available: Bottles of 60, 500.

Contraindications—Methyltestosterone is not to be used in malignancy of reproductive organs in male, coronary heart disease. Thyroid is not to be used in heart disease, hypertension unless the metabolic rate is low.

References: 1. Montesano, P., and Evangelista, I. Methyltestosterone-thyroid treatment of sexual impotence. Clin Med 12:69, 1966. **2. Dublin, M. F.** Treatment of impotence with methyltestosterone-thyroid compound. West Med 5:67, 1964. **3. Titeff, A. S.** Methyltestosterone-thyroid in treating impotence. Gen Prac 25:6, 1962. **4. Heilman, L., Bradlow, H. L., Zumoff, B., Fukushima, D. K., and Gallagher, T. F.** Thyroid-androgen interrelations and the hypocholesteremic effect of androsterone. J Clin Endocr 19:936, 1959. **5. Farris, E. J., and Colton, S. W.** Effects of L-thyroxine and liothyronine on spermatogenesis. J Urol 79:863, 1958. **6. Osol, A., and Farrar, G. E.** United States Dispensatory (ed. 25). Lippincott, Philadelphia, 1955, p. 1432. **7. Wershub, L. P.** Sexual Impotence in the Male. Thomas, Springfield, Ill., 1959, pp. 79-99.

REFER TO PDR

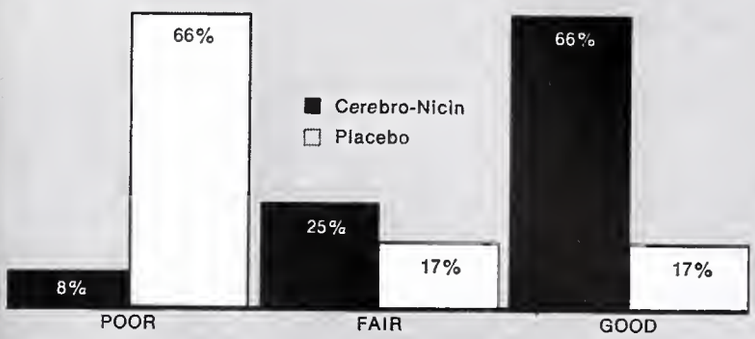
Write for literature and samples: BROWN **THE BROWN PHARMACEUTICAL CO., INC.** 2500 West 6th Street, Los Angeles, California 90057
A SUBSIDIARY OF ASSOCIATED CARE ENTERPRISES, INC.

For the treatment of the aging patient

Cerebro-Nicin®

capsules/elixir

A Gentle Cerebral Stimulant and Vasodilator



CEREBRO-NICIN® New double-blind study* shows how effectively senility can be forestalled. Four times as many aging patients showed striking improvement.

*A Double-Blind Study of Cerebro-Nicin, Therapy for the Geriatric Patient, R. Goldberg Jrnl,. of the Amer. Ger. Soc. June, 1964

Available in a tasty wine base elixir and capsules

Each Cerebro-Nicin capsule contains:

Pentylenetetrazole	100 mg.
Nicotinic Acid	100 mg.
Ascorbic Acid	100 mg.
Thiamine HCl	25 mg.
l-Glutamic Acid	50 mg.
Niacinamide	5 mg.
Riboflavin	2 mg.
Pyridoxine	3 mg.

DOSAGE: One capsule t.i.d, or as prescribed by physician.
AVAILABLE: Bottles of 100, 500, 1000 capsules.
Also elixir 8 oz. bottles.
CONTRAINDICATIONS: There are no known contraindications to Pentylenetetrazole although caution should be exercised when treating patients with a low convulsive threshold.
Most persons experience a flushing or tingling sensation after taking a higher potency niacin-containing compound. As a secondary reaction some will complain of nausea and other sensations of discomfort. This reaction is transient and is rarely a cause of discontinuance of the drug if the patient is forewarned to expect the reaction.

REFER TO PDR

Write for literature and samples...

BROWN **THE BROWN PHARMACEUTICAL CO.**
2500 W. 6th St., Los Angeles, Calif. 90057
Write for Product Catalog

QUIET: AMYLOFENE®

(chloral hydrate with glycine)

WORKING

When insomnia is the problem, AMYLOFENE may be the answer. A formulation of Chloral Hydrate and Glycine, it contains *no barbiturates*. This makes it safe and effective for virtually all ages.

As a basic sedative-hypnotic, Chloral Hydrate has been in use *more than a century*. And in AMYLOFENE tablets, Chloral Hydrate is better than ever. Easier and more pleasant to take. No disagreeable odor or taste. Buffered with Glycine.

Fast action is another feature. With onset of 30 to 60 minutes, AMYLOFENE helps patients get to sleep easily. And with duration of 4 to 8 hours, it helps them *stay* asleep . . . a "natural" sleep with refreshed awakening.

For any type of simple insomnia: AMYLOFENE. It works.

First Texas Pharmaceuticals, Inc. Dallas, Texas 75222

the Concern for Care

Amylofene® Tablets (Chloral Hydrate, U.S.P.) Buffered with Glycine.
Each tablet contains:
Chloral Hydrate, U.S.P. .....486 mg.
(Warning: May be habit forming)
Aminoacetic Acid .....243 mg.

AMYLOFENE TABLETS (Chloral Hydrate, U.S.P.) is an effective sedative-hypnotic drug in stable coated tablet form, buffered with aminoacetic acid.

ACTION: Onset of action is from 30 minutes to 1 hour with duration of 4 to 8 hours.

CONTRAINDICATIONS: Chloral Hydrate is contraindicated in patients with hepatic or renal impairment. Larger doses should be avoided in individuals with cardiac disease.

WARNINGS: Concomitant chloral hydrate and coumarin anticoagulant therapy should be administered with caution. Chloral hydrate may cause an increase or decrease in expected anticoagulant action.

ADVERSE REACTIONS: Chloral hydrate may cause gastric irritation, nausea and vomiting in some patients. Occasionally skin eruptions may occur.

ADMINISTRATION AND DOSAGE: Orally: Adults, as a hypnotic, 1 or 2 tablets taken one-half hour before bedtime. Caution: Federal law prohibits dispensing without a prescription.

Hot spots on her bikini are one thing.

Tinea versicolor spots on her body are something else. The specific solution is TINVER®—the likeable lotion that provides a 25% sodium thiosulphate solution *without* the unpleasant odor. With TINVER, a colloidal alumina suspension allows controlled, gradual release of nascent sulphur so there's never any unpleasant odor—just pleasant acceptance by your patients. Cleansing, keratolytic salicylic acid has also been added to enhance the penetration of the fungicide and assure more dependable results.

Description: Sodium thiosulfate 25%; salicylic acid 1%; isopropyl alcohol 10%; propylene glycol; menthol; disodium edetate; colloidal alumina; purified water. *Indications:* For topical use in the treatment of tinea versicolor (*Malassezia furfur* infection). *Administration:* Thoroughly wash, rinse and dry the affected areas before application of medication. Apply a thin film of lotion twice a day or as directed. Although diagnostic evidence of the disease may disappear in a few days, it is advisable to continue the treatment for a much longer period. Clothing should be boiled to prevent reinfection. *Precautions:* If signs of irritation or sensitivity develop, discontinue use. Do not use on or about the eyes. *Supply:* 5-fl. oz. and new economy 12-fl. oz. plastic squeeze bottles.

Tinver
(sodium thiosulphate 25%, salicylic acid 1%)
The pleasant solution to tinea versicolor.

Barnes-Hind Laboratories
Subsidiary of Barnes-Hind Pharmaceuticals, Inc.
Sunnyvale, California 94086.
Makers of the *fine* line of dermatological products...Komed® HC, Barseb® HC, Tinver®, and Heb®-Cort MC.

Lutrexin®

HW&D BRAND OF LUTUTRIN

3000 UNIT TABLETS

IN THE TREATMENT OF FUNCTIONAL DYSMENORRHEA AND SELECTED CASES OF PREMATURE LABOR AND 2ND AND 3RD TRIMESTER THREATENED ABORTION

■ LUTREXIN, the non-steroid "uterine relaxing factor" has been found to be useful by many clinicians in controlling abnormal uterine activity.

■ Literature on indications and dosage available on request.

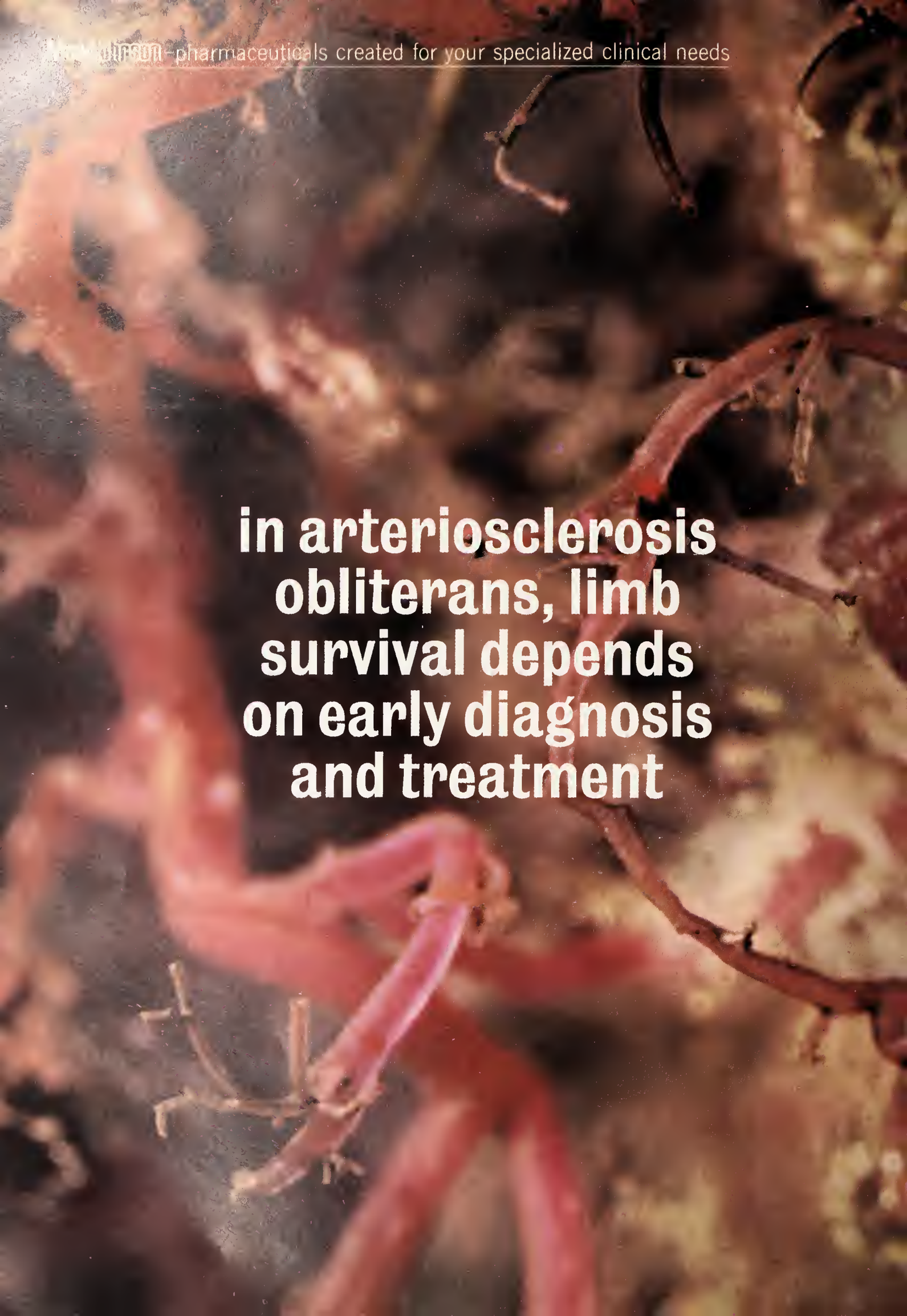
■ No side effects have been reported, even when massive doses (25 tablets per day) were administered.

■ Supplied in bottles of twenty-five 3,000 unit tablets.

(In vivo measurement of Lutrexin on contracting uterine muscle of the guinea pig.)

HYNSON, WESTCOTT & DUNNING, INC. BALTIMORE, MARYLAND 21201

(LTR23)



in arteriosclerosis obliterans, limb survival depends on early diagnosis and treatment

Microphoto of small artery occlusions in a toe amputated because of severe arteriosclerosis obliterans. Cast was made by injecting acrylic plastic into the vessels. The occluded vessels measure about 30 to 50 microns in diameter. *Used with permission. Courtesy of Margaret C. Conrad, Ph D., Department of Physiology, Bowman-Gray School of Medicine, Wake Forest College, Winston-Salem, N. C.*

in responsive arteriosclerosis obliterans

VASODILAN®

(ISOXSUPRINE HCl)

- **acts directly to increase blood flow to deep muscle arteries**[1-3]
- **improves walking ability, relieves rest pain**[3-5]
- **may be used safely in patients with peptic ulcer, diabetes or chronic coronary artery disease**[3,6,7]

New 20 mg. strength now available: Vasodilan 20 mg. tablets for greater dosage simplicity and convenience. Recommended *initial* dose: one 20 mg. tablet q.i.d.

Although not all clinicians agree on the value of peripheral vasodilators,[8-10] several investigators[3,6] have reported favorably on the effects of isoxsuprine on peripheral blood flow in skeletal muscle vessels. Effects have been demonstrated both by objective measurement[1,6,11] and observation of clinical improvement.[3-5,12]

Indications: Arteriosclerosis obliterans, diabetic vascular diseases, thromboangiitis obliterans (Buerger's disease), Raynaud's disease, postphlebitic conditions, acroparesthesia, frostbite syndrome and ulcers of the extremities (arteriosclerotic, diabetic, thrombotic). **Composition:** VASODILAN tablets, isoxsuprine hydrochloride 10 mg. and 20 mg. **Dosage:** Oral—10 to 20 mg. t.i.d. or q.i.d. **Contraindications and Cautions:** There are no known contraindications to recommended oral dosage. Do not give immediately postpartum or in the presence of arterial bleeding. **Side Effects:** Occasional palpitation and dizziness can usually be controlled by dosage reduction. As intramuscular administration of 10 mg. or more may cause brief hypotension and tachycardia, single intramuscular doses exceeding this amount are not recommended. Complete details available in product brochure from Mead Johnson Laboratories. **References:** (1) Stein, I. D.: Angiology *15*:1 (April) 1964. (2) New Drugs— Evaluated by the A.M.A. Council on Drugs, Chicago, American Medical Association, 1967, pp. 295-297. (3) Kaindl, F.; Pärtan, J., and Polsterer, P.: Wien. klin. Wchnschr. *68*:186-191 (March 16) 1956. (4) Frieh, Ch., and Olivier, L.: Lyon Méd. *91*:891-896 (May 24) 1959. (5) Weghaupt, Von K.: Wien. klin. Wchnschr. *69*:31-32 (Jan. 11) 1957. (6) Kaindl, F.; Samuels, S. S.; Selman, D., and Shaftel, H.: Angiology *10*:185-192 (Aug.) 1959. (7) Samuels, S. S., and Shaftel, H. E.: J. Indiana M. A. *54*:1021-1023 (July) 1961. (8) Myers, K. A.: Mod. Treat. *4*:370-383 (March) 1967. (9) Gillespie, J. A.: Angiology *17*:280-288 (May) 1966. (10) Smit, Arne, F., *et al.*: Nord. med. *20*:1260, 1959. (11) Samuels, S. S., and Shaftel, H. E.: J.A.M.A. *171*:142-145 (Sept. 12) 1959. (12) Clarkson, I. S., and LePere, D. M.: Angiology *11*:190-192 (June) 1960.

Mead Johnson LABORATORIES

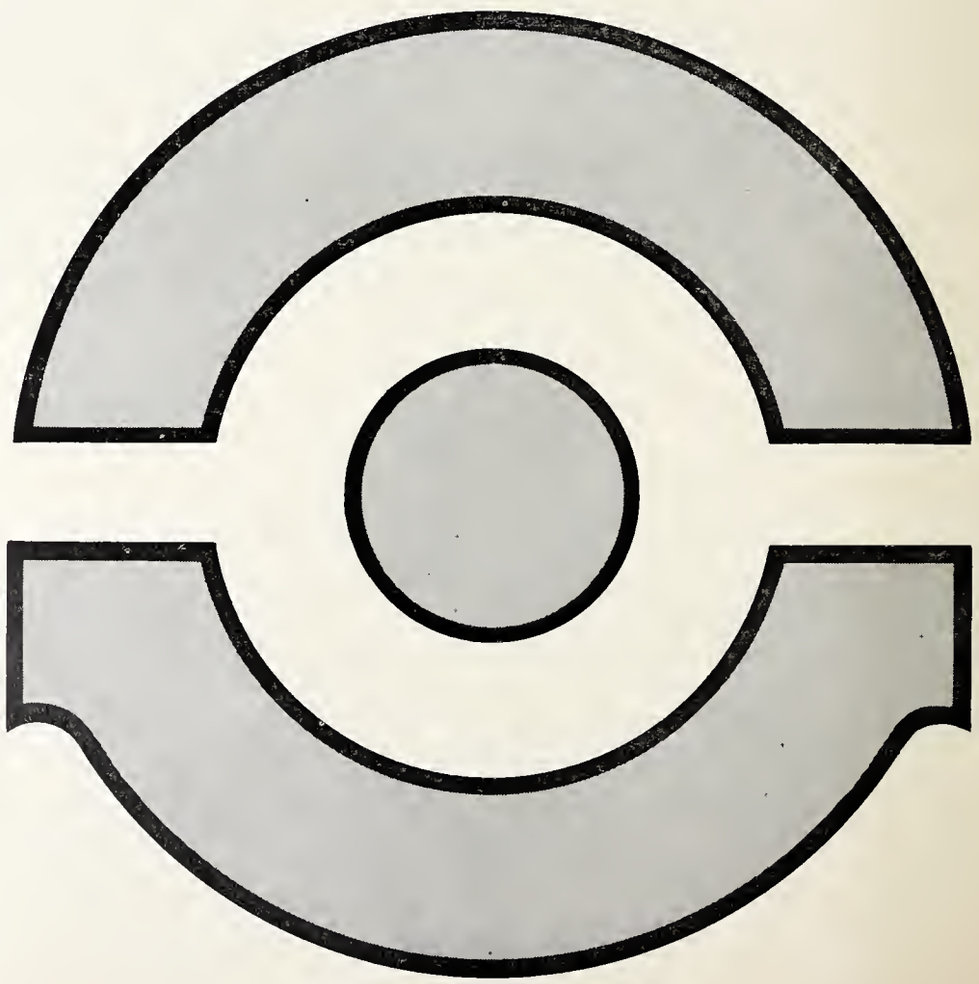
© 1970 MEAD JOHNSON & COMPANY • EVANSVILLE, INDIANA 47721 76170

A LOOK AT TEXAS MEDICINE TODAY

ONE OF A SERIES

Advertising

It informs, educates, adds color and variety, often entertains— and it helps pay the bills. These are some of the many roles that advertising plays in your journal. The information provided to Texas physicians each month on the advertising pages of TEXAS MEDICINE is a primary source of current data on pharmaceutical products, medical supplies, and a variety of goods and services vital to the practice of medicine. The top companies in the United States select TEXAS MEDICINE for their advertising messages, and your journal is one of the leaders in its field in total advertising volume. More than 1000 pages of advertising have been carried in TEXAS MEDICINE during each of the past three years. We are, however, selective. All advertising is carefully screened before it is accepted, for we realize the importance of providing accurate and reliable information to you—whether it is in a scientific article, a news story, or a page of advertising. Of course publishing TEXAS MEDICINE is an expensive undertaking and a first-class medical journal can't afford to cut corners. Much of the expense of producing your journal is paid for by the companies and individuals who support it through their advertising. When a representative of one of these advertisers calls on you, let him know you appreciate his company's support of your journal. And remember, TEXAS MEDICINE carries a rich store of informative ads each month. Read, enjoy, and learn from them.



When disease is ruled out and psychic tension is implicated

Valium® (diazepam) helps relax the patient and relieve his somatic symptoms

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Tension and anxiety states; somatic complaints which are concomitants of emotional factors; psychoneurotic states manifested by tension, anxiety, apprehension, fatigue, depressive symptoms or agitation; acute agitation, tremor, delirium tremens and hallucinosis due to acute alcohol withdrawal; adjunctively in skeletal muscle spasm due to reflex spasm to local pathology, spasticity caused by upper motor neuron disorders, athetosis, stiff-man syndrome, convulsive disorders (not for sole therapy).

Contraindicated: Known hypersensitivity to the drug. Children under 6 months of age. Acute narrow angle glaucoma.

Warnings: Not of value in psychotic patients. Caution against hazardous occupations requiring complete mental alertness. When used adjunctively in convulsive disorders, possibility of increase in frequency and/or severity of grand mal seizures may require increased dosage of standard anticonvulsant medication; abrupt withdrawal may be associated with temporary increase in frequency and/or severity of seizures. Advise against simultaneous ingestion of alcohol and other CNS depressants. Withdrawal symptoms have occurred following abrupt discontinuance. Keep addiction-prone individuals under careful surveillance because of their predisposition to habituation and dependence. In pregnancy, lactation or women of childbearing age, weigh potential benefit against possible hazard.

Precautions: If combined with other psychotropics or anticonvulsants, consider carefully pharmacology of agents employed. Usual precautions indicated in patients severely depressed, or with latent depression, or with suicidal tendencies. Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.

Side Effects: Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances, stimulation, have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice; periodic blood counts and liver function tests advisable during long-term therapy.

ROCHE

Roche
LABORATORIES
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

Now available for your prescribing needs

Cordran® Tape

Flurandrenolide Tape (4 mcg. per sq. cm.)

Additional information available upon request • Eli Lilly and Company, Indianapolis, Indiana 46206

000121

Lilly

TEXAS MEDICINE

VOLUME 66 NUMBER 8 AUGUST 1970

Devoted to the interests of the medical profession and public health in Texas

BOARD OF PUBLICATION
Charles P. Hardwicke, MD, Austin
Chairman
James A. Hallmark, MD, Fort Worth
John M. Smith, Jr, MD, San Antonio
Vice Chairman
R. Harvey Bell, MD, Palestine
N. L. Barker, MD, Paris
C. W. Yates, MD, Rosenberg
Don G. Harrel, MD, Dallas

TMA OFFICERS
Walter Walthall, MD, San Antonio
President
C. Lincoln Williston, Austin
Executive Secretary

EDITORIAL AND BUSINESS OFFICES
1801 North Lamar Blvd, Austin
Telephone: 477-6704
Marilyn Baker, Managing Editor
Rae Vajgert, Assistant Managing Editor
Sharon Walker, Editorial Assistant
Judy Harris, Editorial Secretary
E. Maxwell Jones, Business Manager
Jon R. Hornaday, Advertising Director
Anne Shelnutt, Advertising Assistant

PRINTING OFFICES
c/o Stafford-Lowdon Company
1114 West Daggett, Fort Worth 76104

Subscriptions: $3 per year for members; $6 for nonmembers; $8 for foreign; $3 for medical students. Single copy: $1.

Copyright 1970 by The Texas Medical Association. Owned and issued monthly by the Association.

A PHYSICIAN LOOKS AT ACCREDITATION

I see a multihued, multifaceted picture from a viewpoint that few physicians are able to enjoy. I say this not because I am conceited, but because I am old. I made house calls with my grandfather behind a team of horses, because he could not trust his gasoline-driven car to negotiate the muddy, chug-holed streets. He went to the house, sniffed the air within, and promptly told me whether there was a contagious disease inside or whether I could enter with him. As a subteen, I operated elevators in the old Physicians and Surgeons' Hospital in San Antonio.

In my spare time during my premedical years, I learned laboratory technology at the Fort Sam Houston Hospital, and later helped to establish the School of Medical Technology and taught in it at the Robert B. Green Hospital in San Antonio. I returned to that hospital as extern, intern, resident in surgery, assistant to the administrator, staff man (Surgical Service) and, finally, member and chairman of the board of managers. It has been a rewarding 33 years.

World War II interrupted and, upon my return, I was appalled to find that the 100 physicians we left to look after 200,000 people had done little work on hospitalized patients' records or on hospital staff work. I could well understand. Some of my good friends had from 2,000 to 6,000 hospital records on which *no* physician notes had been made.

This must have been a general situation over the United States, for about this time my generation of physicians began to talk of "accreditation." The American College of Surgeons had established the Hospitalization Standardization Program after World War I to encourage voluntary adoption of a uniform medical record. There was only a modest beginning, but after World War II the list of hospitals seeking help from the ACS became overwhelming. ACS could not afford such a vast program, and so joined with the American College of Physicians, the Canadian Medical Association, the American Hospital Association, and the AMA to form the Joint Commission on Accreditation of Hospitals. (The Canadians dropped out in 1959.)

The purposes of the JCAH are summarized as follows:

1. To establish standards for operation of hospitals and other health care facilities and services.

2. To conduct survey and accreditation programs which will encourage members of the health professions, hospitals, and other health care facilities and services *voluntarily* to: (a) apply certain basic principles of physical plant safety

and maintenance, and of organization and administration, for efficient care; (b) promote high quality of care in all aspects in order to give patients the optimum benefits of medical science; and (c) maintain the essential services through coordinated effort of the organized staffs and the governing bodies of the facilities.

3. To recognize compliance with standards by issuing certificates of accreditation.

4. To conduct and publish results of education and research programs which will forward the other purposes of the corporation, and to accept grants, etc, in support of this purpose.

5. To assume other responsibilities and conduct other activities compatible with operation of the standard-setting, survey, and accreditation program.

In early years, field representatives of three of the member organizations conducted the accreditation surveys coincidentally with other functions they performed for their own organizations. In 1961, the JCAH developed its own full-time field staff and has been surveying 2,000 hospitals per year. A survey fee was established in 1964 to make the field program self-supporting; contributing members continued to support the board and central office.

Then the Medicare Act came into being in 1965. Written into this act was the provision that participating institutions would maintain the level of patient care that had come to be recognized as "the essential norm." The JCAH standards were cited in the law as constituting that level. At that time, this represented 4,606 hospitals (65%) and 88% of beds in eligible general hospitals.

Congress had taken the "norm" and made it the "minimum." Hospitals then began to attempt to rise above the "minimum." Also, this required the JCAH to take a new, hard look at its requirements. In 1966, the board of commissioners decided to review, reevaluate, and rewrite the hospital accreditation standards and their supplemental interpretations in order to (1) raise and strengthen the standards from the level of minimum essential to the level of optimum achievable, and to assure their suitability to the modern state of the art, and (2) simplify and clarify the language of standards and interpretation to remove all possible ambiguities and misunderstandings.

The revised standards are now complete, after much discussion and some harassing criticism, and will be put into effect about Dec 1, 1970. It was my pleasure, as well as one of my duties, to follow these discussions through the Bexar County Medical Society, TMA, and several sessions of AMA's House of Delegates. Yet, when composing my thoughts on accreditation, I was tempted to begin with, "It is a necessary evil. It is expensive. It is time-consuming." I still think these are true.

The prescribed standards were designed to assure improved patient care and safety in hospitals. Somehow, in order to do this, a complicated system of staff and committee meetings was set up by each hospital staff. This might have been acceptable to physicians who use only one hospital, but there is no way that physicians can live up to the JCAH standards and practice in a number of hospitals. In 1967, the Wichita County Medical Society initiated a resolution (subsequently adopted by TMA and AMA) to petition the JCAH board of commissioners to end such "unwarranted demands upon hospital staffs and individual practicing physicians." Recently, I was pleased to hear a JCAH staff representative state that one hospital had too many meetings and that many could be combined.

Always a sore point with physicians and medical organizations is the exclusion of physicians from hospital governing boards.

I think a governing board desperately needs a physician *as a voting member.* First, the board needs his views as a physician

and as a citizen interested in that hospital as much as it needs the views of businessmen, lawyers, and other community leaders. Second, a physician is needed to interpret for board members what their actions mean in terms of hospital services, patient care, and safety. Third, he can seek initiation of new programs, continuation of old ones, or elimination of those no longer needed. Fourth, a voting physician member can achieve better liaison with the medical staff than can a representative who has no vote or influence.

Thomas A. Blumenthal of Southington, Conn, made several excellent points in an article published in the June 1, 1969, issue of *Hospitals*. Briefly, he pointed out that in order to be well informed a hospital governing board must consider every resource, and the medical staff is one of the most important. The staff knows about health matters and has an enormous stake in the effective operation of the hospital; some of the reasons for its profound influence on the hospital should be recognized:

1. Physicians order hospital services; thus, the actions of the medical staff directly affect the hospital's financial experience.

2. Except for patients, members of the medical staff have a greater interest in quality of care than any other group. Since good care is expensive, physicians have reason to be interested in what it costs. Explanation of costs may encourage staff members to seek or accept suitable alternative methods of care and participate in establishment of priorities.

3. As much as any other single group, the medical staff can influence the hospital's community relations, and community support is vital. A well-informed physician is more likely to engender favorable attitudes than one who is ill-informed.

4. Specialists, aware of advances in their own fields, are best equipped to translate them into specific programs for a specific hospital. It is important that the governing board take advantage of specialized knowledge and use it in the execution of their responsibilities.

"Given these considerations," Mr. Blumenthal concludes, "by what logic should the medical staff *not* participate in the decision-making process? How could it be possible to make sound decisions *without* medical staff involvement?"

It should be represented on that governing board!

Yet, I will be the first to admit that when a member of the medical staff is appointed to the governing board of a hospital, a "personality" is chosen. He must be capable of representing the views of that staff, his own views, his views as a citizen, and sometimes his views as a taxpayer. It is a challenging, all-inclusive role.

The medical profession is under attack, but we are not alone. Hospitals (and their administrative staffs) nurses, technologists, pharmacists, pharmaceutical manufacturers, and all of our other allied groups, are under attack with us. We will survive intact, weakened, or divided; or we all will eventually come under complete government regulation and domination. We are in a group whose services are demanded more and more by a population which has grown far faster than our members or capabilities. Through the next decade, the delivery of health care to our population will change rapidly. Yet physicians will continue to be key people in any method that may be devised. We must join together, if at all possible, with all of the other members of our allied health team to find means of caring for the tremendous population we must expect in the next few decades.

The greatest purpose in this world has not to do so much with where we are as in what direction we are moving.

Walter Walthall, MD, San Antonio.

AN ADMINISTRATOR'S VIEW OF HOSPITAL ACCREDITATION

Hospital accreditation is really a young program—only 50 years—yet in this time it has become the most valuable yardstick ever devised to measure hospital efficiency. The maturing process has not always been smooth; there have been controversies since its inception.

Its first director was the late Dr. Malcolm T. MacEachern. "An Ontario farm boy who became a McGill graduate, 'Mac' was then the administrator of the fast-growing Vancouver General Hospital. An enthusiast with a keen sense of dedication, boundless energy and a complete disregard of the necessity for sleep, Dr. MacEachern tore into his new assignment with a zeal that quickly got the machinery working all over both countries. At first he was not received with open arms . . . on one occasion, . . . (Dr. MacEachern) was met at the station by a deputation of his friends who solemnly advised him to put his bags back on the train and pass up a meeting of resentful doctors that evening. He stayed and finally won a rousing approval . . . hospital standardization was but one of the many contributions of Dr. MacEachern to the advancement of hospitals."*

It is significant that hospitals and physicians voluntarily developed guidelines for organization and operation of hospitals. Our commodity is man's most valued asset—his health; it was fitting and proper that doctors and hospitals should, without outside influence, determine how health needs can best be served.

In the absence of legal and other regulatory requirements, the accreditation program is the only bench mark by which to identify hospitals that offer quality patient care. Institutions which display the certificate of the JCAH are saying to the public, "We provide high quality medical and hospital care in all services and our primary objective is the safety and welfare of the patient." The paying public demands, and in my opinion has a right to expect, this covenant.

As I visualize the role of the administrator in meeting the requirements of accreditation, the primary responsibility is one of leadership. Certainly, the administrator must be thoroughly familiar with the standards, but he can recite the provisions forward and backward and his hospital still will not be accredited unless there is cooperation and support of the governing board and the medical staff. Here is where the leadership role comes into view. In the nonaccredited institution, it is the administrator's job to lead his board to understand the significance of the program and why it is important for them to join the administration in working toward this goal; it is also the administrator's job to lead the medical staff to comply with the standards in an effort to upgrade patient care. Physicians are trained to practice good medicine and they desire good hospital care for their patients; the standards of accreditation have the same objective. But the necessary cooperation and support cannot be obtained by trying to drive or force the issues.

One of the primary jobs of an administrator is to secure qualified personnel and to organize and coordinate the departmental activities. Here, again, the JCAH standards provide excellent guidelines.

I am glad that we have the JCAH; I think every hospital that is eligible should be accredited and that patients are entitled to know that certain standards are met; and I think it is the administrator's responsibility to lead his institution to become accredited and to maintain accreditation.

Nevertheless, I am deeply concerned about the accreditation program continuing in

*Agnew H: Fifty years a'growin'. Accreditation—the greatest stimulus ever received by hospitals. Canad Hosp 46:70-71, 1969.

its present voluntary status. My concern is based on a trend which has developed in recent years and was openly demonstrated in the recent process of revising the accreditation standards.

The board of commissioners, which is the policy-making and decision-making body of the JCAH, is composed of 22 members appointed by the sponsoring organizations: seven by the AHA, seven by the AMA, three by the ACP, three by the ACS, one by the American Nursing Home Association, and one by the American Association of Homes for the Aging. As of May 1969, 18 of the 22 commissioners were physicians.

It appears to me, however, that the cleavage which has been developing between organized medicine and hospitals is being felt in the decision-making process of this organization, which was created voluntarily to enhance the work of both. In my opinion, it is a sad day when the partners of the health care team openly express mistrust of each other, and it is a sadder day when an organization such as the JCAH is affected. It is my recommendation that the sponsoring organizations permit their elected commissioners to debate the issues as mature-thinking individuals and to exercise judgment based on one criterion: what is best for the accreditation program.

AHA president Mark Berke recently cited "the great dilemma of the relationship of the hospital and the physician" as being among the key issues to be faced by hospitals. Hospital directors and administrators have tremendous respect for physicians as individuals highly educated, dedicated, and skilled in the practice of medicine. Administrators merely request the same respect for the skills of management and administration. Some physicians are skilled in hospital administration and some administrators may be qualified to practice medicine, but this is not the usual combination. Unless each profession can respect the other, the health care industry is heading for many major problems, one of which will be with the JCAH.

In the revised standards and interpretations, more emphasis is placed on the management functions of hospitals. I think this is good provided that the one doing the evaluation is qualified. Again, I believe the JCAH has a real problem in getting qualified surveyors. In more than 20 years of hospital administration, I recall few surveyors that I would classify as excellent. One told me that he traveled 50 weeks out of the year, and this alone would discourage many persons who might otherwise be interested in this type of work. The JCAH might consider a program of exchanging state surveyors.

Also, the revised standards and interpretations recommend that medical staff members be members of the governing board. Some physicians are excellent board members; however, I do not agree with a standard that requires a physician board member any more than I would agree to a standard *requiring* that the board include a clergyman, a lawyer, or even the hospital administrator. It is my opinion that the board should be made up of qualified persons, regardless of professions, who represent the community and who will represent the hospital as a whole.

In summary, I think the accreditation program has been good; that the JCAH should be commended; and that each hospital, with its governing board, medical staff, and administration, should strive to surpass the requirements. I predict major problems which will affect the accreditation program unless organized medicine and hospitals can resolve their differences and develop a mutual respect for the expertise of each other.

It is my sincere hope that such will come about, and that we can work hand in hand to provide a more effective health care system.

A. L. McElmurry, Texarkana,
President, Texas Hospital Association.

Equipped for the thyroid emergency?

When an ambulance arrives with the unexpected patient presenting the classical picture of myxedema coma, is your hospital suitably equipped? It is if SYNTHROID® (sodium levothyroxine) injectable is at hand. You are also ready to conveniently handle post-operative thyroid medication situations until oral therapy can be reinstated.

In tablet form this single entity synthetic thyroid provides smooth, predictable response for thyroid replacement. An excellent drug for long-term therapy.

But in an emergency, when rapid replacement is needed to sustain life, prompt clinical response is essential. SYNTHROID injection makes this therapy instantly available. Is it available in your hospital?

Levothyroxine has a high binding capacity for serum proteins in contrast to other thyroid medicaments that may contain a thyroactive agent with law binding capacity. *The baund levathyroxine is fatally measurable using the serum PBI test. It is not unusual ta find PBI levels of 8-10 mcg. per 100 ml. of serum.*

INDICATIONS: SYNTHROID (sodium levothyroxine) INJECTION is specific replacement therapy for diminished or absent thyroid function resulting from primary or secondary atrophy of the gland, congenital defect, surgery, excessive radiation, ar antithyroid drugs. It is indicated in myxedematous coma and other thyroid dysfunctions where rapid replacement of the hormane is required. When a patient does not respond to orol therapy, SNYTHROID (sodium levathyroxine) INJECTION may be administered intravenausly.

PRECAUTIONS: As with other thyroid preparotions, overdose may cause diarrhea or cramps, nervousness, tremors, tachycardia, insomnia and continued weight loss. These effects may become apparent in from 4 days to three weeks. Therefore, patients should be kept under close observation. Medication, in such cases, should be stopped for 2 to 6 days, then resumed at a lower level. In patients with diabetes mellitus, look for possible changes in metabolic octivity which may affect insulin or other antidiabetic drug dosage requirements.

CONTRAINDICATIONS: Thyrotoxicosis, acute myocordial Inforction.

SIDE EFFECTS: Side effects are secondary to increased rates of body metabalism: sweating, heart palpitatians with or without pain, leg cramps, weight loss, diarrhea, vomiting and nervausness. Myxedematous patients with heart disease have died from abrupt increases in dosage of thyroid drugs. in most cases, a reduction in dosage followed by a more gradual adjustment upword will indicate the patient's dosage requirements withaut the appearance of side effects.

DOSAGE AND ADMINISTRATION: In myxedematous stupor or coma, with no evidence of severe heart disease, 200 to 400 mcg. of SYNTHROID (sodium levothyroxine) INJECTION may be administered intravenously utilizing a solution containing 100 mcg. per ml. Detectable effects are usually observed by the sixth hour after injection and are fully appreciated during the following day. A repeat injection of 100 to 200 mcg. may be given on the second day if significant improvement has not occurred. The intravenaus use of sodium levothyroxine in myxedematous coma is advantageous because it produces a predictable increase in the concentration of protein-bound iodine, eliminates the need for multiple doses until oral therapy is reinstated, circumvents the uncertainty of oral absarption, and avoids the risk of pulmonary aspiration.

SUPPLIED: SYNTHROID (sodium levothyroxine) INJECTION is supplied in 10 ml. vials containing 500 mcg. of lyophilized active ingredient and 10 mg. of Mannitol, N.F.; a 5 ml. vial containing Sodium Chloride Injectian, U.S.P. is provided as diluent.

Also supplied as SYNTHROID (sodium levothyroxine) TABLET in color caded compressed tablets, and in seven strengths: 0.025 mg. (orange), 0.05 mg. (white), 0.1 mg. (yellow), 0.15 mg. (violet), 0.2 mg. (pink), 0.3 mg. (green), and 0.5 mg. (blue). Each strength is supplied in bottles of 100 and 500 tablets.

Synthroid®
(sodium levothyroxine, FLINT)
Injection

FLINT LABORATORIES
DIVISION OF TRAVENOL LABORATORIES, INC.
Morton Grove, Illinois

Schering

After only one year:

Administered to more people than live in Galveston, Waco, and Texas City.*

Injectable Garamycin®
brand of
gentamicin sulfate injection

*An estimated 208,000 patients have received GARAMYCIN Injectable to date. The combined population of Galveston, Waco, and Texas City is 203,000. (Estimated 1969 figures from The New York Times Encyclopedic Almanac 1970.)

See Clinical Considerations section on last page...

Injectable Garamycin®
brand of gentamicin sulfate injection

Schering

ADULT DOSAGE GUIDELINES

See definitive prescribing information in Package Insert.

Patients with Normal Renal Function

Total Daily Dose (administered in two, three, or four divided doses)			
Urinary Tract Infections (due to susceptible strains of gram-negative bacteria)†	Less Severe 0.8-1.2 mg./kg. for 7-10 days	Resistant/ Moderately Severe Larger doses or additional antibacterial therapy should be considered in severe urinary tract infections or in resistant cases involving the renal parenchyma or anatomic anomaly.	Serious/Life-Threatening up to 5 mg./kg.
Other Infections including bacteremia, infected surgical wounds, severe soft tissue infections, and respiratory tract infections (due to susceptible strains of gram-negative bacteria)	3 mg./kg. for 7-10 days		

†Alkalinization of the urine may be a useful therapeutic adjunct.

Patients with Impaired Renal Function

To minimize the risk of ototoxicity in patients with impaired kidney function, only the first dose should be that normally recommended. Each subsequent dose should be half or less of that recommended for patients with normal renal function, depending upon the degree of renal impairment.

In patients with renal failure who are undergoing 14-hour hemodialysis twice weekly, administration of 1 mg./kg. GARAMYCIN Injectable at the end of each dialysis period has been suggested.

Clinical Considerations

Indications: GARAMYCIN Injectable is clinically effective in infections due to susceptible strains of gram-negative bacteria, including *Pseudomonas aeruginosa,* and species of indole-positive and indole-negative *Proteus, Escherichia coli,* and *Klebsiella-Aerobacter.* Bacteriologic studies should be conducted to identify the causative organism and to determine its sensitivity to gentamicin sulfate. Sensitivity discs of the drug are available for this purpose. If the susceptibility tests indicate that the causative organism is resistant to gentamicin sulfate, other appropriate antibiotic therapy should be instituted.

IN VITRO INHIBITION OF CLINICALLY IMPORTANT BACTERIA BY GENTAMICIN SULFATE (TUBE DILUTION STUDIES)

BACTERIA	No. of Strains Tested	No. of Strains (%) Inhibited by: 4 mcg./cc. or less		8 mcg./cc. or less*		No. of *In Vitro* Studies
Staphylococcus aureus	1,210	1,200	(99%)	1,206	(99%)	11
Pseudomonas aeruginosa	885	771	(87%)	828	(93%)	16
Escherichia coli	836	736	(88%)	779	(93%)	11
Indole-positive and indole-negative *Proteus* species	477	210	(44%)	358	(75%)	12
Klebsiella-Aerobacter species	292	205	(70%)	231	(79%)	10

*Number of strains (%) of gram-negative bacteria inhibited by 10 mcg./cc. or less are as follows: *Pseudomonas aeruginosa,* 828 (93%); *Escherichia coli,* 792 (95%); *Proteus* species, 393 (82%); *Klebsiella-Aerobacter* species, 284 (97%). From same studies as above.
Source: Package Insert

This drug should be limited to the treatment of serious infections caused by gram-negative bacteria, particularly *Pseudomonas aeruginosa, Proteus* and other susceptible organisms, with due regard for relative antibiotic toxicity. Therefore, the drug should be considered for use against gram-negative: 1. Bacteremia; 2. Infected surgical wounds; 3. Severe soft tissue infections, including burns complicated by sepsis; 4. Respiratory tract infections; and 5. Selected cases of urinary tract infection.

Contraindications: GARAMYCIN Injectable is contraindicated in individuals with a history of hypersensitivity or toxic reactions to gentamicin.

Warnings: Patients receiving treatment with GARAMYCIN should be under close clinical observation because of the toxicity associated with the use of this drug. Ototoxicity, vestibular and auditory, can occur in patients, primarily those with pre-existing renal damage, treated with GARAMYCIN Injectable, usually for longer periods or with higher doses than recommended.

GARAMYCIN Injectable is potentially nephrotoxic, and this should be kept in mind when it is used in patients with pre-existing renal impairment. Kidney function diminished by infection of the upper urinary tract may, however, improve during effective treatment with GARAMYCIN Injectable.

Concurrent administration of potentially ototoxic drugs such as streptomycin and kanamycin or of potentially nephrotoxic drugs such as polymyxin, colistin, and kanamycin with gentamicin sulfate has not been shown to afford any clinical advantages and, moreover may result in additive toxicity. Monitoring of vestibular, cochlear, and renal function will provide guidance for therapy in such cases.

Precautions: In patients with impaired renal function in whom serious infection develops, serum concentrations of the drug may rise, with consequently increased risk of ototoxicity. In these patients or in those in whom recommended dosage or duration of therapy must be exceeded as a life-saving measure, routine studies of kidney function should be performed when possible. These may be supplemented by evaluation of the vestibular and auditory function and measurement of serum concentration of the drug when feasible. Serum concentrations of gentamicin should be maintained below the range of 10-12 mcg./ml. to reduce risk of ototoxicity.

Ordinarily, treatment should not be given for more than 7 to 10 days or be repeated unless required for serious infection not responsive to other agents.

As with other antibiotics, treatment with GARAMYCIN Injectable may occasionally result in overgrowth of nonsensitive organisms. If superinfection occurs, appropriate therapy is indicated.

Safety for use in pregnancy or the potential for fetal ototoxicity or nephrotoxicity have not been established. Studies in pregnant animals have not revealed teratogenic or ototoxic effects in the fetus. GARAMYCIN Injectable should not be used in pregnant patients or in women of childbearing age unless its use is deemed advisable by the physician.

Adverse Reactions: The overall incidence of ototoxicity considered related to treatment with GARAMYCIN Injectable was 2.8 per cent (16 of 565 patients). Contributory factors (two or more factors were relevant to most patients) were as follows: 10 had azotemia, 10 received a total of 1 gram or more of the drug, 7 had recently received other potentially ototoxic antibiotics (streptomycin or kanamycin), and 5 were over 60 years of age. Six also had decreased high-tone hearing acuity, which returned to or toward normal in the 4 patients retested.

Analysis of BUN data indicated that 4 (2%) of 172 patients showed increases in BUN that were probably related to treatment with GARAMYCIN Injectable. Of 20 increases probably or possibly related to treatment, 7 were reversible, 9 occurred in terminal patients, and 4 had no follow-up.

Other adverse reactions associated with treatment were one instance each of urticaria, decreased hematocrit, and reversible depression of granulocytes with normal bone marrow. Other rarely reported and possibly treatment-related adverse reactions were anemia, increased reticulocyte count, rash, purpura, drug fever, hypotension, convulsions, twitching, salivation, nausea; vomiting, increased transaminase activity (SGOT or SGPT), increased serum bilirubin, decreased serum calcium, and joint pain.

Packaging: GARAMYCIN Injectable, 40 mg./cc., 2-cc. multiple-dose vials, for intramuscular administration.

For more complete prescribing details, consult package insert or Physicians' Desk Reference. Schering literature is also available from your Schering Representative or Medical Services Department, Schering Corporation, Union, New Jersey 07083.

AHFS CATEGORY 8:12.28 S-029

The girth control pill

Tepanil® Ten-tab
(continuous release form)

(diethylpropion hydrochloride)

works on the appetite not on the 'nerves'

When girth gets out of control, TEPANIL can provide sound support for the weight control program you recommend. TEPANIL reduces the appetite—patients enjoy food but eat less. Weight loss is significant—gradual—yet there is a relatively low incidence of CNS stimulation.

Contraindications: Concurrently with MAO inhibitors, in patients hypersensitive to this drug; in emotionally unstable patients susceptible to drug abuse.

Warning: Although generally safer than the amphetamines, use with great caution in patients with severe hypertension or severe cardiovascular disease. Do not use during first trimester of pregnancy unless potential benefits outweigh potential risks.

Adverse Reactions: Rarely severe enough to require discontinuation of therapy, unpleasant symptoms with diethylpropion hydrochloride have been reported to occur in relatively low incidence. As is characteristic of sympathomimetic agents, it may occasionally cause *CNS effects* such as insomnia, nervousness, dizziness, anxiety, and jitteriness. In contrast, CNS depression has been reported. In a few epileptics an increase in convulsive episodes has been reported. *Sympathomimetic cardiovascular effects* reported include ones such as tachycardia, precordial pain, arrhythmia, palpitation, and increased blood pressure. One published report described T-wave changes in the ECG of a healthy young male after ingestion of diethylpropion hydrochloride; this was an isolated experience, which has not been reported by others. *Allergic phenomena* reported include such conditions as rash, urticaria, ecchymosis, and erythema. *Gastrointestinal effects* such as diarrhea, constipation, nausea, vomiting, and abdominal discomfort have been reported. Specific reports on the hematopoietic system include two each of bone marrow depression, agranulocytosis, and leukopenia. A variety of miscellaneous adverse reactions have been reported by physicians. These include complaints such as dry mouth, headache, dyspnea, menstrual upset, hair loss, muscle pain, decreased libido, dysuria, and polyuria.

Convenience of two dosage forms: TEPANIL Ten-tab tablets: One 75 mg. tablet daily, swallowed whole, in midmorning (10 a.m.); TEPANIL: One 25 mg. tablet three times daily, one hour before meals. If desired, an additional tablet may be given in midevening to overcome night hunger. Use in children under 12 years of age is not recommended.

T-006A / 1/70 / U.S. PATENT NO. 3,001,910

THE NATIONAL DRUG COMPANY
DIVISION OF RICHARDSON-MERRELL INC.
PHILADELPHIA, PENNSYLVANIA 19144

Painful night leg cramps...

unwelcome bedfellow for any patient– including those with arthritis, diabetes or PVD

One thing patients can sleep without, particularly patients with chronic disease conditions such as arthritis, diabetes or PVD, is painful night leg cramps. Although seldom the presenting complaint, night leg cramps can tie your patients up in painful knots. Now, just one tablet of QUINAMM at bedtime can usually bring an end to shattered sleep and needless suffering. Your patients will sleep restfully—gratefully—with QUINAMM, specific therapy to prevent painful night leg cramps.

Prescribing Information—Composition: Each white, beveled, compressed tablet contains: Quinine sulfate, 260 mg., Aminophylline, 195 mg. **Indications:** For the prevention and treatment of nocturnal and recumbency leg muscle cramps, including those associated with arthritis, diabetes, varicose veins, thrombophlebitis, arteriosclerosis and static foot deformities. **Contraindications:** QUINAMM is contraindicated in pregnancy because of its quinine content. **Precautions/Adverse Reactions:** Aminophylline may produce intestinal cramps in some instances, and quinine may produce symptoms of cinchonism, such as tinnitus, dizziness, and gastrointestinal disturbance. Discontinue use if ringing in the ears, deafness, skin rash, or visual disturbances occur. **Dosage:** One tablet upon retiring. Where necessary, dosage may be increased to one tablet following the evening meal and one tablet upon retiring. **Supplied:** Bottles of 100 and 500 tablets.

THE NATIONAL DRUG COMPANY
DIVISION OF RICHARDSON-MERRELL INC.
PHILADELPHIA, PENNSYLVANIA 19144

Quinamm™
(quinine sulfate 260 mg., aminophylline 195 mg.)

Specific therapy for night leg cramps

0915A

Texas Delegates Influence Major AMA Actions

The 125th annual session of the American Medical Association and of its House of Delegates came to a whirlwind finish June 25; the House had cleared its agenda of all controversial items, and it was time to vacate the spacious rooms of Chicago's Palmer House.

The House had considered at great length and had acted upon a dues increase, allowing only half of what the Board of Trustees had asked. It toyed with the idea of going to Hawaii after Thanksgiving in 1972, but upon hearing of the costs, decided it could not face the AMA membership to explain a $40 annual dues increase and then spend a good portion of it by meeting in Honolulu. The subject of abortion also occupied much time and thought, and the newly adopted policy is a compromise between the one recommended by the Board of Trustees ("between a patient and her doctor") and the efforts of some delegates to table, defeat, or refer any change in the AMA's policy.

The Texas delegation had one of its most successful trips to any AMA convention. We took forward a candidate for a major office; five resolutions (three from this year's annual session and two from last year's that were returned to the House after further study by committees); and, also, the finest study ever made by any state association—TMA's study of the Report of the Committee on Planning and Development (Himler Report). We succeeded in electing Dr. James Sammons to the Board of Trustees, in having all five resolutions adopted, and in placing most of our opinions—even much of our wording—in the final action on the Himler Report. We heard nothing but praise for our thorough critique of the latter.

The Texas delegation to the AMA truly reflects the spirit of the Texas Medical Association. It is a closely knit, hard working, sincere group with a great esprit de corps and great leadership. It is dedicated to carrying forward the policies of the Texas Medical Association, and deserves much credit for having done so. It is unfortunate that every member of the Texas Medical Association cannot see his delegation in action.

Any and all are invited—indeed, urged—to do so at the next meeting of the AMA in Boston from Nov 29 through Dec 2, 1970.

Walter Walthall, M.D.

Walter Walthall, MD, President, Texas Medical Association.

painless intramuscular therapy for calcium deficiencies:

Calphosan®

calcium glycerophosphate, calcium lactate

To bring effective calcium therapy to the patient, Calphosan may be administered intramuscularly . . . without pain, inflammatory reactions, induration or sloughing. Injections twice weekly for a series of 5 to 10 injections are recommended.

Average dose per injection: One or two 10 ml. injections of Calphosan each week for the first four or five weeks, and on a when-needed basis thereafter.

Calphosan is a specially processed solution of calcium glycerophosphate and calcium lactate, containing 1% of each, in a physiological solution of sodium chloride. Each 10 ml. contains 50 mg. of calcium glycerophosphate, 50 mg. calcium lactate, with 0.25% phenol as preservative. Available in 10 ml. ampules in boxes of 10s and 100s; 60 ml. multiple-dose vials. Also available as Calphosan with B-12. U. S. Patent No. 2657172.

Contraindication: Hypercalcemia; neoplastic diseases; and fully digitalized patients. Do not use intramuscularly in infants and young children. Before starting therapy, consult complete product literature.

Write for free copy of "Calcium: The Ubiquitous and Essential Element" and for samples.

THE CARLTON CORP

Tenafly, New Jersey 07670

Brief Summary of Prescribing Information— 9-9/22/69. For complete information consult Official Package Circular.
Indications: Essential hypertension. Use cautiously in patients with renal insufficiency, particularly if they are digitalized.
Contraindications: Anuria, oliguria, active peptic ulceration, ulcerative colitis, severe depression or hypersensitivity to its components contraindicates the use of Salutensin.
Warnings: Small-bowel lesions (obstruction, hemorrhage, perforation and death) have occurred during therapy with enteric-coated formulations containing potassium, with or without thiazides. Such potassium formulations should be used with Salutensin only when indicated and should be discontinued immediately if abdominal pain, distension, nausea, vomiting or gastrointestinal bleeding occurs. Use cautiously, and only when deemed essential, in fertile, pregnant or lactating patients. *Use in Pregnancy:* Thiazides cross the placenta and can cause fetal or neonatal hyperbilirubinemia, thrombocytopenia, altered carbohydrate metabolism and possibly electrolyte disturbances. Fatal reactions may occur with reserpine during electroshock therapy; discontinue Salutensin 2 weeks before such therapy. Increased respiratory secretions, nasal congestion, cyanosis and anorexia may occur in infants born to reserpine-treated mothers.
Precautions: Azotemia, hypochloremia, hyponatremia, hypochloremic alkalosis and hypokaliemia (especially with hepatic cirrhosis and corticosteroid therapy) may occur, particularly with pre-existing vomiting and diarrhea. Potassium loss or protoveratrine A may cause digitalis intoxication. *Potassium loss responds to potassium-rich foods, potassium chloride or, if necessary, discontinuation of therapy. Stop therapy if protoveratrine A induces digitalis intoxication.* Serum ammonia elevation may precipitate coma in precomatose hepatic cirrhotics. Discontinue therapy 2 weeks before surgery or if myocardial irritability, progressive azotemia or severe depression occur. Exercise caution in patients with chronic uremia, angina pectoris, coronary thrombosis or extensive cerebral vascular disease *or bronchial asthma* and in those with a history of peptic ulceration or bronchial asthma; in post-sympathectomy patients; in patients on quinidine; and in patients with gallstones, in whom biliary colic may occur. Patients who have diabetes mellitus or who are suspected of being prediabetic should be kept under close observation if treated with this agent.
Adverse Reactions: Hydroflumethiazide: Skin rashes (including exfoliative dermatitis), skin photosensitivity, urticaria, necrotizing angiitis, xanthopsia, granulocytopenia, aplastic anemia, orthostatic hypotension (potentiated with alcohol, barbiturates or narcotics), allergic glomerulonephritis, acute pancreatitis, liver involvement (intrahepatic cholestatic jaundice), purpura plus or minus thrombocytopenia, hyperuricemia, hyperglycemia, glycosuria, malaise, weakness, dizziness, fatigue, paresthesias, muscle cramps, skin rash, epigastric distress, vomiting, diarrhea and constipation. *Reserpine:* Depression, peptic ulceration, diarrhea, Parkinsonism, nasal stuffiness, dryness of the mouth, weight gain, impotence or decreased libido, conjunctival injection, dull sensorium, deafness, glaucoma, uveitis, optic atrophy, and, with overdosage, agitation, insomnia and nightmares. *Protoveratrine A:* Nausea, vomiting, cardiac arrhythmia, prostration, blurring vision, mental confusion, excessive hypotension and bradycardia. (Treat bradycardia with atropine and hypotension with vasopressors.)
Usual Dose: 1 tablet b.i.d.
Supplied: Bottles of 60, 600, and 1000 scored 50 mg. tablets.

Salutensin®

hydroflumethiazide, 50 mg./reserpine, 0.125 mg. protoveratrine A, 0.2 mg.

BRISTOL LABORATORIES
Division of Bristol-Myers Company
Syracuse, New York 13201

The antihypertensive therapy that is easy to live with.*

When successive blood pressure readings confirm essential hypertension, consider Salutensin for:

Easy-to-live-with control. Gradual reduction of blood pressure leading to decisive, comfortable control is the common clinical response.

*Salutensin is usually well-tolerated (however, serious side effects can occur; see adjacent column for brief summary of prescribing information).

Easy-to-live with dosage. Two tablets a day usually achieves control. One to two tablets a day often maintains control without need for additional antihypertensive agents.

Easy-to-live with cost of therapy. The one to two tablets a day maintenance dose makes Salutensin economical to stay with. Important, because long-term control calls for long-term therapy.

Salutensin®

hydroflumethiazide, 50 mg./reserpine, 0.125 mg. protoveratrine A, 0.2 mg.

Lately, his temper seems short.

(Did he mention it when you checked his cholesterol level?)

An increase in irritability... a moment of dizziness now and then... a few gaps in his memory: The early warnings of cerebrovascular disease are often subtle, easy for the patient to dismiss.

But they are by no means uncommon.

You are most likely to detect them, of course, in the cardiac patient, the hypertensive, the diabetic... surprisingly often during their forties and fifties.

Detecting these warnings, however, may require careful questioning, sometimes of the family as well as the patient. You can't always trust the patient to speak of them spontaneously.

It pays to be suspicious. Early diagnosis of transient ischemia means more viable vascular muscle capable of responding to the direct spasmolytic and dilating action of Cyclospasmol... a better chance to protect and maintain adequate cerebral circulation.

Cyclospasmol has a smooth, gradual onset of action... chances for the desired result increase with continued use... it is notably free of adrenergic, cardiostimulant and other unwanted effects.

Before transient cerebral ischemia gives way to lasting damage

Cyclospasmol® (cyclandelate)

For long-term enhancement of cerebral blood flow

See facing page for Brief Summary

Cyclospasmol
(cyclandelate)

ACTIONS: Cyclospasmol (cyclandelate) is an orally effective peripheral spasmolytic and vasodilator that acts directly on the vascular smooth musculature to produce a gradual and progressive relaxation that enhances the peripheral and cerebral blood flow. **INDICATIONS:** For adjunctive therapy in occlusive and vasospastic diseases of the vascular system associated with an impaired circulation, such as: intermittent claudication; arteriosclerosis obliterans; thrombophlebitis (to control associated vasospasm and muscular ischemia); nocturnal leg cramps; local frostbite; Raynaud's phenomenon; as an aid to encourage healing of diabetic and trophic ulcers of the legs; and for selected cases of ischemic cerebral vascular disease. A faster response may be expected in conditions in which vasospasm is predominant in the pathological process. The drug is not intended to substitute for an adequate medical or surgical program in the treatment of peripheral or cerebral vascular disease. It is imperative that the patient continue to follow established therapy, e.g., foot care, discontinuance of smoking, etc., while taking Cyclospasmol. Since cerebrovascular disease is diagnosed most frequently only after destruction of nerve tissue, it cannot be expected that signs and symptoms arising from an interruption of neuronal function can be completely reversed by correcting the exciting cause. Nevertheless, restoration of blood flow towards more normal levels with cyclandelate may often produce marked relief from such signs and symptoms as head noises, ringing in the ears, a feeling of weakness, unsteady gait, mental confusion, temporary fluctuations in hearing acuity, poor memory and slurred speech. More important, the drug may provide prophylaxis against further circulatory embarrassment, particularly if the diminished circulation is associated with spasm of the vascular wall. **CONTRAINDICATIONS:** Cyclospasmol is contraindicated in cases of known hypersensitivity to the drug. **WARNINGS: 1.** Cyclandelate should be used with extreme caution in patients with severe obliterative coronary artery or cerebral vascular disease, since there is a possibility that these diseased areas may be compromised by vasodilatory effects of the drug elsewhere. **2. USE IN PREGNANCY:** The safety of cyclandelate for use during pregnancy or lactation has not been established; therefore, it should not be used in pregnant women or in women of childbearing age unless, in the judgment of the physician, its use is deemed absolutely essential to the welfare of the patient. **3.** Although no prolongation of bleeding time has been demonstrated in humans in therapeutic dosages, it has been demonstrated in animals at very large doses. Therefore, the hazard of a prolonged bleeding time should be carefully considered when administering cyclandelate to a patient with active bleeding or a bleeding tendency. **PRECAUTIONS:** Since Cyclospasmol is a vasodilator, it should be used with caution in patients having glaucoma. Consult direction circular before prescribing. **ADVERSE REACTIONS:** Gastrointestinal distress (pyrosis, pain and eructation) may occur with Cyclospasmol. These symptoms occur infrequently and are usually mild. Relief can often be obtained by taking the medication with meals or by the concomitant use of antacids. Mild flush, headache, feeling of weakness or tachycardia may occur, especially during the first weeks of administration. **SUPPLIED:** 200 mg. blue capsules in bottles of 100 and 500; 100 mg. orange tablets in bottles of 100 and 500.

May we send you reprints, detailed literature or professional samples?

IVES LABORATORIES INC.
685 Third Avenue, New York, N.Y. 10017

Ives®

WICHITA FALLS CLINIC-HOSPITAL

GENERAL SURGERY
W. E. Crump, M.D., F.A.C.S.
James T. Lee, M.D.
Charles H. Wilson, M.D., F.A.C.S.

ORTHOPEDIC SURGERY
Jack E. Maxfield, M.D., F.A.C.S.
Clyde W. Parsons, M.D.
Mark E. Huff, Jr., M.D.
David G. Borman, M.D.

ORAL SURGERY
R. A. Mitchell, D.D.S.
Larry J. Cason, D.D.S.

RADIOACTIVE ISOTOPES
Claude D. Wilson, M.D., F.A.C.R.
Joe D. Steed, M.D., D.A.B.R.
Julian H. Acker, M.D.
David D. Salmon, M.D., D.A.B.R.

PEDIATRICS
George W. Slaughter, III, M.D., F.A.A.P.
Joseph Bilder, Jr., M.D.

LABORATORIES
Claude D. Wilson, F.A.C.R., Radiology
Joe D. Steed, M.D., D.A.B.R., Radiology
David D. Salmon, M.D., D.A.B.R., Radiology

MEDICINE
W. B. Whiting, M.D., Cardiology
R. F. Knox, M.D., Endocrinology
P. K. Smith, M.D., F.A.C.P., Diagnosis & Internal Medicine
I. L. Humphrey, Jr., M.D., Diagnosis & Internal Medicine
Julian H. Acker, M.D., Diagnosis & Internal Medicine
Preston McCall, M.D., Diagnosis & Internal Medicine
Julian C. Sleeper, M.D., Cardiology
Eugene Jackson, M.D., Diagnosis & Internal Medicine

GENERAL PRACTICE
J. B. Hathorn, Jr., M.D.
Melvin Horany, M.D.
John E. Worthen, Jr., M.D.

UROLOGY
Owen C. Berg, M.D., F.A.C.S.

OBSTETRICS AND GYNECOLOGY
W. L. Parker, M.D., F.A.C.S.
Warren T. Kable, M.D.
Frank J. Lee, M.D.

ADMINISTRATIVE OFFICER
Bertha McNeill, Administrator
Jesse E. Dobbs, Jr., Asst. Administrator

T. ROWE PRICE GROWTH STOCK FUND, INC.

Est. 1950

A NO-LOAD FUND

Investing in stocks carefully selected for long term growth possibilities

Individuals & institutions are invited to request free prospectus

NO SALES CHARGE

T. Rowe Price Growth Stock Fund, Inc.
One Charles Center, Dept. F-1
Baltimore, Md. 21201 Phone (301) 539-1992

Name _____

Address _____

_____ Zip _____

THE TEXAS CANCER INFORMATION SERVICE

A PROPOSED STATEWIDE SERVICE-ORIENTED TUMOR REGISTRY

DANIEL J. SCHNEIDER, MD
ROBERT E. ROBERTS, PhD
EUN SUL LEE, PhD

The Texas Cancer Information Service will result in better care for the cancer patient. In addition to providing cumulative statistical data, it will enable local cancer registries to devote more attention to work with physicians and individual patients in follow-up services. Many kinds of data will be available to assist in a variety of efforts to control cancer.

THE PRIMARY FUNCTION of a tumor registry is *service to the patient* by assuring that he receives appropriate follow-up care.[1,2] Although tumor registries have been operating for a considerable time, few have realized their maximum potential.[3]

Two major factors limiting the service capabilities of tumor registries have been that they serve only part of the population, and often they have insufficient personnel, money, and technology to achieve their maximum potential.

One method of improving the functional capabilities of tumor registries is to provide a centralized cancer information exchange service whereby all participating physicians and facilities can receive information they need quickly, easily, economically, and consistently regarding a patient's treatment history and current status.[4]

The Texas Cancer Information Service is an attempt to develop a central, computerized information system on cancer for the state of Texas. The goal is to improve the care of cancer patients by (1) assisting physicians in providing better follow-up and aftercare, and (2) accumulating valid and reliable information.

Initiated in 1968, the project is being conducted by The University of Texas School of Public Health at Houston with funds provided by the Regional Medical Program of Texas.

Objectives and Activities: Objectives of the project are (1) to support existing tumor registry programs in Texas by augmenting their activities with centralized computer capabilities; (2) to extend the information network by assisting in the establishment of additional local registries, thus including more of the population-at-risk; (3) to provide continuous and rapid dissemination of information from the central registry to all participating local registries, physicians, and hospitals; and (4) to provide accurate and reliable cancer data for use by cancer researchers.

Activities are oriented around the accumulation, retrieval, and processing of cancer data

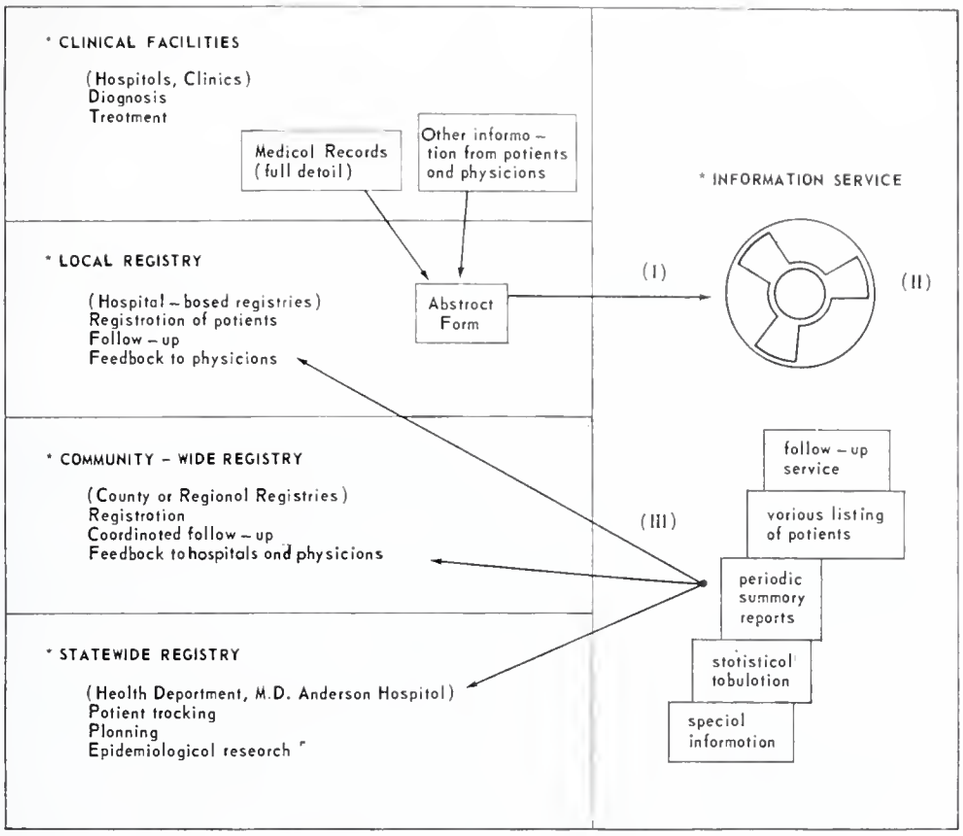


Fig 1. Schematic shows the flow of information between all levels of cancer registries and the cancer information service. The service center receives abstracted data from local registries (I, Data Input), processes the data (II, Data Processing and Storage), and prepares various rosters and reports (III, Data Retrieval) for all levels of cancer registries.

to provide: (1) a record of the follow-up schedule of each patient in the central registry; (2) notification of follow-up visit due; (3) notification of follow-up visit missed; (4) routing of missed follow-up visits through designated channels to insure contacts; (5) patient location tracing; (6) periodic cumulative treatment profiles for attending physicians; and (7) referral service for patients, if needed.

It needs be stressed that this centralized cancer information service, which is projected to eventually serve the entire state, is not intended to displace current registries. On the contrary, it is intended to permit them to be more effective and expand their facilities by applying technology and resources which heretofore have not been available routinely to local registries. The objective is to allow the local registry to forego those functions which can most efficiently and effectively be performed by utilizing central computer services. These functions include such things as the follow-up outputs, the updating of records, record reviews and researches, and linking of information from widely separated geographic areas[5] (Fig 1).

As a user-oriented information service, the nature of both input and output will be determined by the physicians and hospitals providing cancer treatment. The system is being designed to have maximum flexibility so the participants may specify exactly what they need in the form of information feedback.

Participation of hospitals and clinics should be entirely voluntary and each should be independent in the organization and operation of its own registry. Its staff will be involved in the initial abstracting of data and in the important follow-up of each patient. As presently conceived, the central service would handle all coding, compiling, sorting, reporting, follow-up notification, publication, etc. Relieved of these tedious tasks, the local staff would function in the more valuable role of interacting with physicians and patients in follow-up services.

In addition to the primary "output" information relating to patient follow-up and current patient status, the physician/user also will have a number of secondary elective services available to him. Upon request, he will be able to obtain (1) a comprehensive analysis of his own cancer treatment experiences (total or selective), (2) a comprehensive review of the local, regional, and national scene in regard to selected cancer topics, and (3) special literature searches related to cancer diagnoses, treatment modality, etiology and epidemiology, etc. *However, an individual physician's patient listing will be strictly confidential and available on request only by that physician.*

Information such as local registry reports to hospitals and other local registries can be provided routinely, but will be available upon request whenever the need arises. To further provide dissemination of useful information, users may designate that data from the central registry and from other sources which can be utilized to prepare special reports on specific cancer sites.

The importance of joint efforts to control cancer cannot be overemphasized. The cooperative posture and interaction of the proposed cancer information service with various agencies and organizations is illustrated in Fig 2. The Texas Cancer Information Service is designed not only to provide significant services to various levels of cancer registries, but also to facilitate more meaningful cooperative arrangements among medical societies, professional organizations, academic institutions, and treatment facilities. The interagency interactions in cancer control programs in Texas indicate that a cancer information service needs to be nurtured and supported by various agencies and organizations. Then it can operate effectively and provide significant service, collecting meaningful cancer patient information for the local registries, physicians, hospitals, and others involved.

Expected Outcomes: The ultimate outcome of this information program will be better care of all cancer patients through a standard information service to local programs. The applications of the best available knowledge, coupled with accurate and more complete follow-up of cancer patients, should result in a better survival rate and improved quality of survival. After the program has been operating for several years, population-based incidence and prevalence studies, treatment-outcome comparisons, and other research efforts will provide much more useful data than is currently available.

As data continue to accumulate on incidence and prevalence of cancer by site, along with the characteristics of the cancer patients themselves, the core of a health information planning system will emerge. Geographical location of patients by city and county will allow for meaningful inclusion of environmental factors such as natural radiation, geophysical and climatic conditions, types of industry, and pollution by type and source, as well as community factors such as socioeconomic conditions and demographic characteristics. When coupled with information on health personnel and facilities available in an area, a comprehensive health information system can be generated from which service needs for future cancer programs can be projected. Additionally, this will permit development of integrated comprehensive planning for health in terms of more general health needs of Texas.

The success of the Texas Cancer Information Service will be heavily dependent upon the participation and cooperation of all physicians, hospitals and clinics, as well as existing registries; and in due course new local registries can be established making it possible for the majority of the people of Texas to be served by regional and local cancer programs. Physicians, being committed to providing better care for their patients, should find the Texas Cancer Information Service an important and useful tool in helping to realize these goals.

REFERENCES

1. Southwick HW, Mayer A: The role of the liaison fellow. Chicago, American College of Surgeons, 1969.

2. Macdonald EJ: Evaluation of statewide cancer record registries. Acta Unio internat contra cancrum 9:341-343, 1953.

3. Mayer A: Cancer programs approved by the college in 1968. Bull Amer Coll Surg 54:35-47, 1969.

4. Sloan MH: Present status of regional medical programs. Ad Hoc Committee on Regional Medical Programs, American Cancer Society, New York City, Jan 12, 1969, pp 15-28.

5. Smart CR, Altman SJ, Moslander V: Computerized tumor registries: An experiment in patient care. CA 19:9-17, 1969.

The authors, The University of Texas School of Public Health, P O Box 20186, Astrodome Station, Houston, Tex 77025.

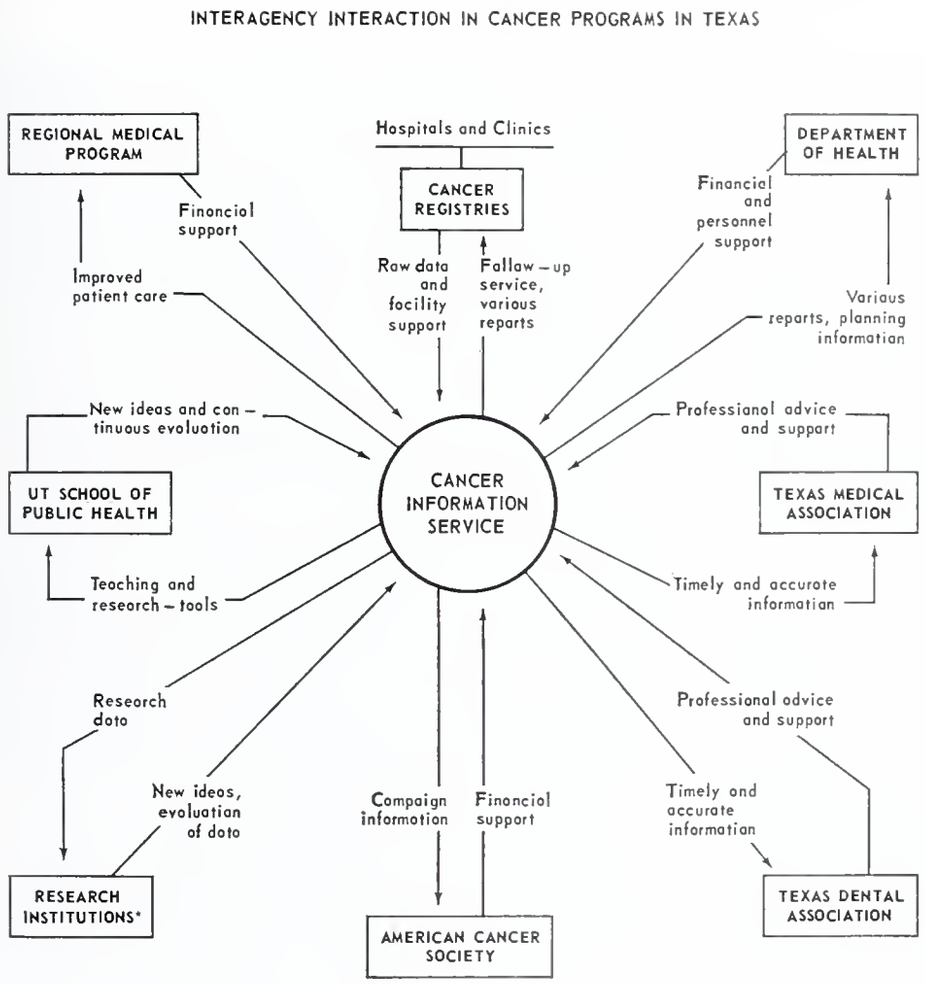


Fig 2. Interaction of various agencies in Texas cancer programs.

* M.D. Anderson Tumor Institute, medical schools, and other research institutions.

IRA L. SHANNON, DMD, MSD

Fluoride Levels in

Drinking water samples were collected from 262 sites throughout Texas. Fluoride concentration ranged from 0.07 ppm in Hemphill to 5.00 in Midland. The mean for the entire state was 0.84 ppm (SD=0.89). Water fluoride concentration is significantly higher in West Texas (1.35 ppm) than in Central Texas (0.63 ppm), and the latter is significantly higher than that in East Texas (0.36 ppm). Knowledge of water fluoride concentration is important to dentists, who are interested in its prophylactic effects. It is also clear that the physician who evaluates skeletal status should be aware of his patient's history as it relates to fluoride ingestion.

THE PRACTICING physician, as well as the dentist, should know the fluoride concentration of the drinking water in the area from which his patients are drawn. While it is well established that an optimal level of fluoride in the drinking water (approximately 1.0 ppm) brings about a remarkable reduction in the incidence of dental caries, only during recent years has it been observed that the concentration of fluoride in drinking water exerts a significant effect on the degree of mineralization of bone.[1-5]

In 1955 it was reported that the ingestion of fluoride in the drinking water at a level of 8.0 ppm might have a beneficial effect on adult bone, such as in counteracting the osteoporotic changes of the aged.[1] It had been established in the same population that fluoride at this concentration produced no deleterious bone changes[2] but that dental fluorosis was a significant complication.[6]

It has also been reported that persons ingesting fluoride at the concentration of 8.0 ppm in drinking water in Texas presented substantially less osteoporosis than did residents of a Massachusetts community where the level was 0.09 ppm.[3] Bernstein and Guri[4] observed that fluoride dosage in the range of 1.0-3.0 mg daily, either in drinking water or as tablets, was of value in either reducing the incidence or alleviating postmenopausal osteoporosis. Bernstein and associates[5] found that evidence of osteoporosis, reduced bone density, and collapsed vertebrae was increased in association with a low (0.15-0.30 ppm) fluoride level in drinking water.

Since the fluoride content of drinking water has thus become increasingly important in the provision of health care, both oral and systemic, a survey of water supplies within the state of Texas was carried out.

Materials and Methods: The state was divided into squares with linear measurements of approximately 27 miles. Water samples were sought in all of these areas and an effort was made to sample near the center of each area. Population distribution is such that this was impossible in some instances, but a total of 262 water sources were sampled in a relatively well-dispersed geographic distribution.

Dentists were sent three plastic sampling vials along with a mailing tube and were asked to collect the samples after allowing the tap to run freely for at least 30 seconds. In areas with no practicing dentist, physicians were contacted and, if this was not productive, the postmaster was asked to collect the specimens.

Fig 1 outlines arbitrarily assigned geographic limits dividing Texas into eight sections. The number of sites sampled in the different areas were as follows: Northwest 34; West Central 32; Southwest 32; North Central 34; Central 35; South Central 35; Northeast 29; and Southeast 32.

The analysis of water samples and fluoride standards was performed with a specific ion electrode.[7] This highly sensitive procedure was carried out by diluting the sample with an equal volume of buffer solution to bring the final volume to at least 20 ml. The electrodes

Drinking Water in Texas

were then lowered into the sample and magnetic stirring was continuous until stabilization occurred. This usually required about 5 minutes. The millivolt reading was then taken from the pH meter and the fluoride content of the sample estimated from a semilogarithmic plot of comparable readings for fluoride standards. The usual standard curve extended from 0.10 to 4.00 mg of fluoride per liter (ppm). If the concentration of the unknown sample was more than 4.00 ppm, an appropriate dilution was made and the analysis repeated.

Results: The mean fluoride concentration for the entire state was 0.84 ppm (SD = 0.89).

Table 1 presents values for fluoride in mg/liter (ppm) for the 98 sampling sites in West Texas. For the Northwest area the mean was 1.50 ppm (SD = 1.01); for the West Central the mean was 1.65 ppm (SD = 1.44); and for the Southwest the mean was 0.89 ppm (SD = 0.78). Means for the Northwest and West Central did not differ significantly, but that for the Southwest was significantly less than the other two. The mean for the entire West Texas area was 1.35 ppm (SD = 1.14).

Fluoride values for the 103 sites in Central Texas are outlined in Table 2. The mean for North Central towns was 0.45 ppm (SD = 0.35); for the Central area the mean was 0.61 ppm (SD = 0.6); and for the South Central section the mean was 0.83 ppm (SD = 0.56). Means for the North Central and South Central sections differed at the 0.01 level, but no other mean differences were significant. The mean for Central Texas was 0.63 ppm (SD = 0.54).

Table 3 provides observations for the 61 towns in East Texas. The mean for Northeast Texas was 0.34 ppm (SD = 0.29), while that for Southeast Texas was 0.37 ppm (SD = 0.26). These means did not differ significantly. The mean for the entire East Texas sampling area was 0.36 ppm (SD = 0.27).

Fig 1. Geographic divisions of Texas.

Discussion: It has been known for approximately 40 years that ingested fluorides exert a dramatic effect on the human skeleton. Moller and Gudjonsson,[8] in 1932, reported a curious sclerotic affection of bones, ligaments, and muscular attachments in 30 of 78 workers engaged in the crushing and refining of cryolite. On the basis of the observed bone changes, these investigators suggested the possibility of treating rarefying bone disease with fluorine compounds.

Roholm,[9] in 1937, prepared a classic presentation of the remarkable bone changes due to fluoride ingestion by cryolite workers. Others[10-15] have reported bone alterations under varying conditions of fluoride intake. Inordinate bone changes were observed consistently, but these alterations were a consequence of extremely high levels of fluoride intake. Unfortunately, the results of studies

FLUORIDE LEVELS

NORTHWEST		WEST CENTRAL		SOUTHWEST	
Amarillo	0.72	Andrews	4.30	Abilene	0.22
Canadian	1.20	Aspermont	0.29	Alpine	2.14
Canyon	3.00	Big Spring	0.82	Ballinger	0.41
Channing	0.74	Brownfield	0.85	Big Lake	2.40
Childress	0.44	Colorado City	0.78	Brackettville	0.29
Clarendon	0.35	Crosbyton	1.38	Carrizo Springs	0.33
Claude	1.62	El Paso	0.61	Crane	0.31
Dalhart	1.39	Gail	1.20	Crystal City	0.26
Dimmitt	1.80	Guthrie	0.11	Del Rio	0.32
Dumas	1.15	Jayton	0.27	Dryden	1.34
Farwell	2.20	Kermit	1.22	Eagle Pass	0.77
Floydada	3.00	Lamesa	0.68	Eldorado	2.01
Groom	1.02	Levelland	0.72	Ft. Davis	2.10
Hale Center	3.75	Lubbock	0.66	Ft. Stockton	1.31
Hereford	2.41	Mentone	0.85	Garden City	1.62
Lipscomb	0.56	Midland	5.00	Junction	0.26
Littlefield	1.73	Monahans	2.08	Laredo	0.58
Matador	0.55	Morton	4.70	Leakey	0.16
Memphis	0.40	Odessa	0.90	Marathon	1.80
Miami	0.42	Pecos	2.95	Marfa	2.70
Muleshoe	2.30	Plains	3.48	Menard	0.51
Paducah	0.40	Post	1.70	Mertzon	0.45
Pampa	0.79	Roby	0.75	Ozona	0.98
Panhandle	1.40	Salt Flat	1.50	Paint Rock	0.45
Perryton	2.22	Seminole	3.80	Rankin	1.98
Plainview	1.28	Sierra Blanca	4.60	Robert Lee	0.17
Silverton	4.20	Snyder	0.67	Rocksprings	0.25
Spearman	1.84	Spur	1.05	San Angelo	0.42
Stinnett	1.38	Stanton	0.93	Sheffield	0.68
Stratford	1.34	Sweetwater	0.96	Sonora	0.28
Tulia	1.81	Tahoka	0.74	Sterling City	0.86
Vega	2.73	Van Horn	2.22	Uvalde	0.17
Wellington	0.46				
Wheeler	0.36				

Table 1. Fluoride levels in West Texas water supplies.

such as these may be unthinkingly reported to the lay public as contraindicating the fluoridation of a communal water supply.

In 1943, a ten-year study was undertaken by the National Institutes of Health to study the physiologic effects of fluoride in drinking water. Test cities in Texas were Bartlett (8.0 ppm F) and Cameron (0.40 ppm F). Primary reports of this study[1,2] pointed out that, except for dental mottling, the ingestion of the higher concentration of fluoride produced no deleterious bone changes: no unusual incidence of bone fractures, arthritis, hypertrophic bone changes or exostoses, or interference with fracture healing; no cases of "poker spine," and no evidence of associated functional or systemic effects. There was an increased bone density with an increased thickening of cortical bone and periosteum associated with the higher fluoride intake. These observations bore no resemblance to the bizarre findings in cases of long exposure to cryolite or rock phosphate dust, nor to those attributed by some to excessive fluoride levels in domestic water supplies. The indication was that the ingestion of excessive fluoride in water may, on occasion, have a beneficial effect in adult bone, as in counteracting the osteoporotic changes of aging.

Radiologic comparisons were then made between the subjects in Bartlett, Tex (8.0 ppm F) and those in Framingham, Mass (0.09 ppm F).[3] The Framingham subjects were found to have an unusual incidence of severe osteoporosis (77 of 556), a considerable number of younger participants being thus involved. Instances of increased bone density were significantly fewer than those found in Bartlett, but were comparable to the rate in Cameron. It was concluded that the disadvantageous effects on the bone structure of the adult population might be associated with the pro-

NORTH CENTRAL		CENTRAL		SOUTH CENTRAL	
Albany	0.27	Austin	0.36	Alice	0.48
Anson	0.54	Bandera	0.31	Beeville	1.58
Archer City	0.29	Bastrop	0.48	Brownsville	0.68
Baird	0.28	Belton	2.70	Corpus Christi	1.05
Benjamin	1.55	Boerne	2.21	Cotulla	0.45
Bowie	0.23	Brady	0.70	Cuero	1.50
Breckenridge	0.24	Brownwood	0.29	Edinburg	0.56
Cleburne	0.41	Burnet	0.46	Edna	0.89
Crowell	0.44	Caldwell	0.23	Falfurrias	0.64
Dallas	0.73	Cameron	0.20	Falls City	0.78
Decatur	0.17	Coleman	0.36	Floresville	0.37
Denton	0.58	Columbus	0.24	Freer	1.17
Eastland	0.25	Comanche	0.29	George West	1.02
Ft. Worth	0.78	Franklin	0.14	Goliad	0.54
Gainesville	0.33	Fredericksburg	0.38	Gonzales	0.32
Glen Rose	0.23	Gatesville	1.85	Hallettsville	0.47
Graham	0.32	Georgetown	0.44	Hebbronville	2.60
Granbury	0.37	Giddings	0.23	Hondo	0.11
Haskell	1.38	Goldthwaite	0.82	Jourdanton	0.27
Henrietta	0.14	Hamilton	0.32	Karnes City	2.45
Jacksboro	0.13	Hillsboro	1.60	Kingsville	0.89
McKinney	0.32	Johnson City	0.39	Pearsall	0.74
Montague	0.22	Kerrville	0.67	Port Lavaca	1.18
Quanah	0.48	La Grange	1.25	Raymondville	0.84
Rockwall	0.34	Lampasas	0.32	Refugio	1.27
Seymour	1.30	Llano	0.34	Rio Grande City	0.78
Sherman	0.63	Lockhart	0.45	Rockport	0.75
Stephenville	0.39	Marlin	0.41	San Antonio	0.18
Throckmorton	0.14	Martindale	0.23	San Diego	1.05
Vernon	0.52	Mason	0.49	Sarita	0.51
Waxahachie	0.49	Meridian	0.31	Seguin	0.15
Weatherford	0.21	New Braunfels	0.21	Sinton	0.84
Wichita Falls	0.29	San Marcos	0.16	Tilden	0.77
		San Saba	0.31	Victoria	0.35
		Waco	1.02	Zapata	0.79

Table 2. Fluoride levels in Central Texas water supplies.

longed use of drinking water containing an insufficient concentration of fluoride.

Bernstein and Guri[4] discussed the use of sodium fluoride in the treatment of osteoporosis and explained the rationale supporting such treatment. They concluded that 1 to 3 mg of fluoride ingested daily would be of benefit in reducing the incidence or alleviating postmenopausal osteoporosis. It was also felt that higher dosages of fluoride would be of great potential benefit in treating patients with various types of osteoporosis as well as other metabolic bone diseases.

Bernstein and associates[5] studied roentgenograms of the lateral lumbar area of the spine from 1,015 North Dakota subjects over 45 years of age. Of these, 300 lived in an area with a high-fluoride water supply (4.0-5.8 ppm), and 715 lived in an area with a low fluoride water supply (0.15-0.30 ppm). In the high-fluoride area, the prevalence of reduced bone density in women was significantly less; men showed a similar but not statistically significant trend. Women in this area showed a significantly decreased prevalence of collapsed vertebrae, the difference becoming more conspicuous with advancing age, but the number of collapsed vertebrae in men was not affected by fluoride consumption. There was a significant difference between the two areas in the number of calcified aortas in men. Men living in the high-fluoride area had 40% fewer calcified aortas, and women in the same area showed a similar trend.

It is not completely clear how much fluoride must be present in the communal water supply to bring about these highly desirable systemic findings. One report[16] indicates that the incidence of femoral fractures in women 60 years of age or older did not change within five years after fluoridation of the drinking water at a level of 1.0 ppm. The authors point

NORTHEAST		SOUTHEAST	
Athens	0.11	Anahuac	0.30
Bonham	1.30	Anderson	0.37
Canton	0.08	Angleton	0.77
Carthage	0.09	Bay City	0.66
Clarksville	0.47	Beaumont	0.18
Cooper	0.09	Bellville	0.55
Corsicana	0.66	Brenham	0.30
Daingerfield	0.21	Bryan	0.44
Emory	0.17	Center	1.40
Fairfield	0.19	Centerville	0.10
Gilmer	0.35	Coldspring	0.21
Greenville	0.25	Conroe	0.36
Groesbeck	0.27	Crockett	0.08
Henderson	0.76	Galveston	0.63
Jefferson	0.14	Groveton	0.47
Kaufman	0.23	Hemphill	0.07
Linden	0.88	Hempstead	0.46
Longview	0.12	Houston*	0.52
Marshall	0.46	Huntsville	0.23
Mt. Pleasant	0.11	Jasper	0.44
Mt. Vernon	0.18	Kountze	0.10
New Boston	0.10	Liberty	0.46
Palestine	0.12	Livingston	0.44
Paris	0.53	Lufkin	0.31
Pittsburg	0.40	Madisonville	0.11
Quitman	0.23	Nacogdoches	0.18
Rusk	0.57	Newton	0.11
Sulphur Springs	0.65	Orange	0.53
Tyler	0.27	Richmond	0.33
		San Augustine	0.14
		Wharton	0.25
		Woodville	0.45

*59 separate sample sites

Table 3. Fluoride levels in East Texas water supplies.

Water Fluoride (ppm)	GEOGRAPHIC AREA — West Texas (%)	Central Texas (%)	East Texas (%)
< 0.5	26.5	58.2	78.7
0.51 - 1.00	25.5	23.3	19.7
1.01 - 2.00	24.5	14.6	1.6
2.01 - 3.00	15.3	3.9	—
3.01 - 4.00	3.1	—	—
4.01 - 5.00	5.1	—	—
Total	100.0	100.0	100.0

Table 4. Percentage distribution of water fluoride values in Texas.

out, however, that the studies were probably too short and that the amount of fluoride in the water may be too low to produce change. On the other hand, Ansell and Lawrence,[17] in studying the incidence of rheumatic disorders in Great Britain, found a decreased incidence of osteoporosis in women drinking water with 1.0 ppm fluoride as compared to a group drinking water with fluoride at the 0.2 ppm level. No differences were found between roentgenograms (cervical and hand) of men in the two areas.

While it is not possible to conclude that the recommended level of fluoride in drinking water to provide maximal dental benefit (approximately 1.0 ppm) is optimal from the standpoint of skeletal status, it is beyond doubt that fluoride ingestion produces a much more caries-resistant tooth and that extremely low levels of fluoride in the drinking water are asociated with a high incidence of deleterious bone changes. A level must be established that will offer balanced oral and systemic preventive benefits.

The results of the present study of the state of Texas indicate a significant west-to-east decrease in water fluoride concentration. The means for all three of the western areas exceed any comparable values in either Central or East Texas. In a similar fashion the means from the three Central Texas sections are all higher than the means for East Texas. The mean for the entire Western area (1.35 ppm) was significantly higher ($P < .01$) than that of 0.63 ppm for Central Texas, and the latter was significantly higher ($P < .01$) than that of 0.36 ppm for East Texas. The pattern of this distribution is shown in Table 4. The incidence of higher values decreases from west-to-east while exactly the opposite holds true for the concentration of less than 0.5 ppm.

The Texas State Department of Health provides specific recommendations[18] on fluoride

Annual Average Maximum Daily Air Temperatures*			Recommended Control Limits for Fluoride Concentration (mg/liter)		
			Lower	Optimum	Upper
50.0	to	53.7	0.9	1.2	1.7
53.8	to	58.3	0.8	1.1	1.5
58.4	to	63.8	0.8	1.0	1.3
63.9	to	70.6	0.7	0.9	1.2
70.7	to	79.2	0.7	0.7	1.0
79.3	to	90.5	0.6	0.7	0.8

*Based on temperature data obtained for a minimum of five years.

Table 5. Recommended water fluoride levels.

levels of drinking water. Table 5 is taken from this report and may be applied as follows:

Where fluoridation (supplementation of fluoride in drinking water) is practiced, the average fluoride concentration shall be kept within the upper and lower control limits in the table. When fluoride is naturally present in drinking water, the concentration should not average more than the appropriate upper limit in the table. The presence of fluoride in average concentrations greater than two times the optimum values in the table shall constitute grounds for rejection of the supply.[18]

There was a wide spread in fluoride values in these 262 Texas sampling sites. The range extended from 0.07 ppm for Hemphill to 5.00 for Midland. Heterogeneity also is apparent even within the confines of the eight subsections. Some areas should be adding fluoride to the water supply to provide optimal dental prevention, while others exceed the usually accepted limits and actually qualify for rejection under the provisions stated above. Correction, where indicated, is the province of the water engineer working in close collaboration with dentists, physicians, the Texas State Department of Health, and others knowledgeable in the fluoride field.

REFERENCES

1. Leone NC, Stevenson CA, Hilbish TF, et al: A roentgenologic study of a human population exposed to high-fluoride domestic water. A ten-year study. Amer J Roentgenol 74:874-885, 1955.

2. Leone NC, Shimkin MD, Arnold FA, Jr, et al: Medical aspects of excessive fluoride in a water supply; a ten-year study, in: Shaw JH, Ed: Fluoridation as a public health measure, Washington, DC, AAAS, 1954, p 110.

3. Leone NC, Stevenson CA, Besse B, et al: The effects of the absorption of fluoride: II. A radiological investigation of five hundred and forty-six human residents of an area in which the drinking water contained only a minute trace of fluoride. Arch Industr Health 21:326-327, 1960.

4. Bernstein DS, Guri CD: Osteoporosis: etiology and therapy. Postgrad Med 34:407-409, 1963.

5. Bernstein DS, Sadowsky N, Hegsted DM, et al: Prevalence of osteoporosis in high- and low-fluoride areas in North Dakota. JAMA 198:499-504, 1966.

6. Zimmermann ER, Leone NC, Arnold FA, Jr: Oral aspects of excessive fluorides in a water supply. J Amer Dent Ass 50:272-277, 1955.

7. Frant MS, Ross JW: Electrode for sensing fluoride ion activity in solution. Science 154:1553-1554, 1966.

8. Moller PF, Gudjonsson SV: Massive fluorosis of bones and ligaments. Acta Radiol 13:269-294, 1932.

9. Roholm K: Fluorine intoxication: a clinical-hygienic study. London, H K Lewis, 1937.

10. Bauer JT, Bishop PA, Wolff WA: Pathologic changes of bone in chronic fluorine poisoning. Bull Ayer Clin Lab, Pennsylvania Hosp 3:67-72, 1937.

11. Wolff WA, Kerr EG: The composition of human bone in chronic fluoride poisoning. Amer J Med Sci 195-493-497, 1938.

12. Ockerse T: Endemic fluorosis in pretoria district. S African Med J 15:261, 1941.

13. Black MM, Kleiner IS, Bolker H: The toxicity of sodium fluoride in man. NY St J Med 49:1187-1188, 1949.

14. Kilborn LG, Outerbridge TS, Lei HP: Fluorosis with report of advanced case. Canad M A J 62:135-141, 1950.

15. Murthi GVS, Rao DN, Venkateswarlu P: Studies of endemic fluorosis (Visakhapatnam and suburban areas): spinal compression due to skeletal fluorosis. J Indian Med Ass 22:396-399, 1953.

16. Goggin JE, Haddon W Jr, Hambly GS, et al: Incidence of femoral fractures in postmenopausal women; before and after water fluoridation. Pub Health Rep 80:1005-1012, 1965.

17. Ansell BM, Lawrence JS: Fluoridation and the rheumatic diseases: A comparison of rheumatism in Watford and Leigh. Ann Rheum Dis 25:67-75, 1966.

18. Chemical Analyses of Public Water Systems, 1965 revision, Austin, Division of Sanitary Engineering, Texas State Department of Health, p 5.

Dr. Shannon, Veterans Administration Hospital, 2002 Holcombe Blvd, Houston Tex 77031.

Supported in part by Contract No. NAS 9-10566 from the National Aeronautics and Space Administration, Manned Spacecraft Center, Houston.

HYPERBARIC OXYGEN AS AN ADJUNCT TO RADIATION THERAPY

ROBERT LINDBERG, MD

Studies in the early 1950s showed molecular oxygen to be a powerful radiosensitizer. Since a small percentage of tumor cells exist under severely hypoxic conditions, the theoretical basis for combining high-pressure oxygen and radiation therapy was established. Studies have shown that there is an "oxygen effect" in tumors in man using nonconventional fractionation, but the results are not as good as conventional fractionation using air-breathing conditions. At present, a randomized study is under way to test the efficacy of high-pressure oxygen and radiation therapy using the five days per week treatment plan with conventional doses as given in the air-breathing group.

THE USE OF HYPERBARIC oxygen or compressed air in medicine is by no means new. In the 18th and 19th centuries, hyperbaric conditions were used to treat acute disease and hypobaria was used for chronic diseases. The first modern use of hyperbaric oxygen was in 1932, as an adjunct to cardiac surgery.

Physiology: Oxygen is carried in the blood both bound to the red cells and dissolved in the plasma. When breathing air at one atmosphere, there is approximately 19 ml of oxygen per 100 ml of blood, of which 18.75 ml is carried as oxyhemoglobin, and only 0.25 ml is dissolved in the plasma. By breathing oxygen at three atmospheres of pressure absolute, the amount of oxygen dissolved in the plasma increases from 0.25 to 6.0 ml. This represents a highly significant increase in the blood oxygen content. The oxygen tension in the individual cells depends on (1) the diffusion coefficient of oxygen; (2) the partial pressure of oxygen in the capillary feeding the cell; (3) the distance of the cell from the capillary; and (4) the metabolic rate of the intervening cells.

Radiobiological Considerations: One of the earliest radiobiological experiments which clearly showed the influence of oxygen was by Holthusen in 1921.[1] He observed that the dose of x-rays required to prevent the hatching of *Ascaris* eggs was three times greater when the eggs were anaerobic at the time of irradiation. In 1932, Mottram and Eidinow[3] showed that radiation damage in the tails of rats was reduced if the blood supply was occluded at the time of irradiation. Thoday and Read, in 1947,[3] reported a spectacular reduction in the effects of radiation on broad bean roots if they were deprived of oxygen at the time of irradiation. In 1954, Gray and colleagues[4] published their classical work showing that the relationship between oxygen and radiosensitivity applied to a wide variety of living cells. The radiosensitivity changes rapidly as the partial pressure of oxygen increases from 0 to 10 mm of Hg, ie, a two- to threefold increase, but it is essentially independent of the oxygen tension when the level is greater than 20 mm of Hg (Fig 1). In 1955, Thomlinson and Gray[5] studied the cords of tumor cells of bronchogenic carcinoma. They

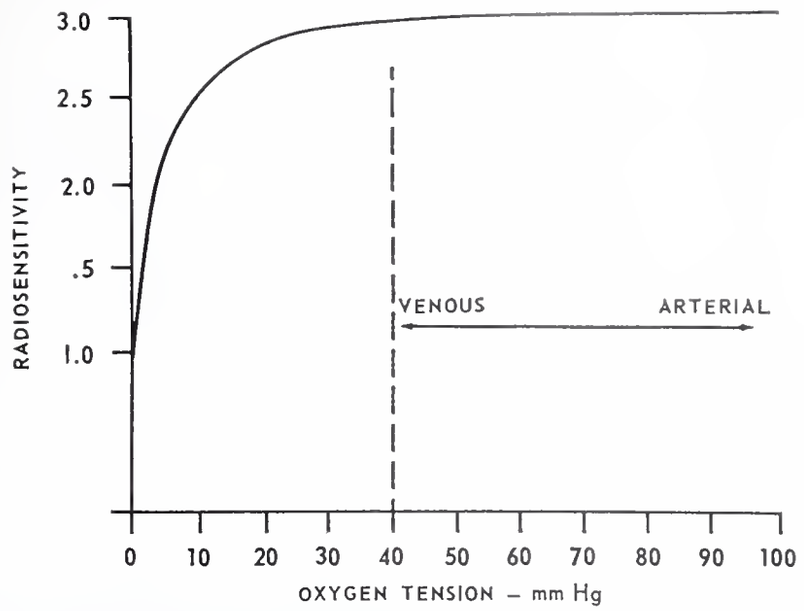


Fig 1. The relationship of the radiosensitivity of living cells to the oxygen tension present at the time of irradiation.

showed that if the tumor cells were more than 200 μ away from a capillary, the cells were necrotic. There were no areas of necrosis if the distance was less than 160 μ. They concluded that cells between 180 and 200 μ from a capillary are severely hypoxic, and therefore are relatively radioresistant. The percentage of severely hypoxic cells increases as the size of the tumor increases. A small increase in the fraction of hypoxic cells drastically increases the radiation dose necessary to render all cells nonviable. For instance, one can calculate for an experimental tumor system that a dose of 3,910 rads given in a single treatment will control 90% of the tumors composed of 10^9 aerobic cells; whereas if 1 cell in 100 is anoxic, the dose must be increased to 7,600 rads to produce the same result. Therefore, it is evident that much less radiation is required to control microscopic or subclinical aggregates of cancer cells than to control palpable masses. Large masses, especially the infiltrative ones with extensive connective tissue reaction and poor vascularization, require enormous doses to be eradicated. Thus, although the mechanism of action of oxygen as a radiation sensitizer remains unknown today, the rationale for high-pressure oxygenation as an adjunct to radiation therapy was firmly established by the mid-1950s.

Clinical Trials: The first clinical trial was started by Churchill-Davidson[6] at St Thomas Hospital in London in late 1954. Because of the time-consuming nature of the pressurization, conventional fractionation (ie, five fractions per week delivering 200 rads tumor dose per fraction) was not used initially. The first patients were treated with one fraction per week for three weeks, delivering 1,000 rads tumor dose in each fraction. A multiplicity of techniques were used as more experience was gained. One of the more common schedules is two fractions per week for three weeks, delivering 600 rads tumor dose in each fraction. Thus, 3,600 rads tumor dose is delivered in six fractions in 18 to 19 days.

These early clinical trials showed that, although normal tissues are considered fully oxygenated and the addition of oxygen should cause little if any increased radiation effect, certain structures were in fact sensitive to hyperbaric radiation therapy. Churchill-Davidson[6] reported a high incidence of radionecrosis of laryngeal cartilages (16/94), usually occurring six to nine months after treatment. Van den Brenk[7] reported that using 1,000 rads tumor dose per week for three weeks produced a high incidence of brain necrosis and spinal cord damage.

After the initial studies were completed, randomized studies comparing high-pressure oxygen and air breathing at one atmosphere utilizing the same dose fractionation schedule were initiated. Van den Brenk[8] reported that when advanced head and neck lesions were treated using nonconventional dose fractionation schedules, hyperbaric radiation therapy is definitely more effective than similar treatment techniques in air. A comparison of the hyperbaric radiation therapy with nonconventional techniques and conventional air-breathing techniques (ie, daily fractionation totaling 6,000 to 7,000 rads tumor dose in six to seven weeks) showed that the tumor control rate was better with the conventional technique.

In the mid-1960s, clinical studies were started using hyperbaric radiation therapy with con-

ventional fractionation—five treatments per week. In 1967, Cade and McEwen[9] reported a series of patients with either bronchogenic carcinoma or carcinoma of the bladder. In 1968, Johnson[10] reported on patients with carcinoma of the cervix, stages III and IV. In these random control studies, patients were treated in either air or hyperbaric oxygen at three atmospheres of pressure with a cobalt-60 unit, using daily fractionation, and received about 6,000 rads tumor dose in eight weeks. The results of both studies were inconclusive at the time of publication.

MD Anderson Clinical Trials: In September 1968, a clinical trial was started at The University of Texas MD Anderson Hospital and Tumor Institute at Houston. Since hyperbaric radiation therapy is considered to be most useful in patients with large, bulky tumors, the patients selected for our clinical trial had advanced lesions of the uterine cervix, urinary bladder, or breast. This report deals with our first year's experience. Initially, a pilot study was performed to ascertain the patients' reaction to hyperbaric radiation therapy. Once the safety of the procedure was assured, a random study was started (Table 1).

The patients are pressurized in a Vickers plastic chamber to three atmospheres absolute, using 100% pure oxygen. Each patient is in the tank for approximately 45 minutes a day: 10 minutes for compression, 20 minutes at pressure to allow maximum diffusion of oxygen through the tumor, 5 minutes for radiation treatment, and approximately 10 minutes for decompression.

The radiation techniques utilized are the conventional policies at our insitution, with one exception. At the present time, the hyperbaric capabilities are limited to cobalt-60 teletherapy. By November 1970, a new facility housing a 25 MEV linear accelerator will be complete, thus allowing us to use the 25 MEV x-ray beam in hyperbaric conditions. Using our standard treatment policies allows individualization of the treatment technique to fit the patient's particular disease. In advanced carcinoma of the cervix, for instance, the treatment fields are outlined not only by findings at the pelvic examination, but also by the presence or absence of lymph node metastasis as shown on the lymphangiogram. This individualization of technique also allows use of intracavitary radium when indicated. The intracavitary radium is delivered in the usual manner under air-breathing conditions.

During the first year, 61 patients were entered into the random clinical trial. Twenty-five were treated in air, 36 in hyperbaric oxygen, and an additional 42 were excluded (Table 1). Hyperbaric treatment was terminated on eight patients for the following reasons: two patients had convulsions, three patients developed fear of the tank during treatment, one patient had severe ear pain and refused further compression, one patient developed a pelvic abscess during treatment, and one patient had an unrelated cerebral vascular accident during the first week of treatment. Two additional patients had generalized convulsions, but both completed treatment. Because of our high incidence of convulsions, all patients have received Dilantin routinely as of May 1969. Since then, there has been only one convulsion. Initially, this patient did not take the prescribed Dilantin, but was able to complete treatment with proper medication.

In order to judge the efficacy of high-pressure oxygen as an adjunct to radiation therapy, the

STUDY		ENTERED Air	ENTERED HPO	PATIENTS EXCLUDED >70 yrs	Medical	>22 cm*	Fear	Misc.
Squamous Cell Carcinoma	IIB	6	6	1	2	1	1	6
Cervix	IIIA	5	16	6	2	3	2	
	IIIB	8	6	3	2	1	1	1
	IVA	0	2					1
Bladder	D_1	1	2					
Breast		5	4	2	3			4
Total		25	36	12	9	5	4	12

*Due to limitations of cobalt 60, patients having >22 cm thickness were excluded.

Table 1. High-pressure oxygen random study; anatomical sites and staging. Sept 1, 1968-Sept 1, 1969.

random study has the following end-points for comparison: (1) survival rate, free of disease; (2) tumor control within the irradiated area (ie, comparison of the recurrence time distribution of the hyperbaric and control groups); and (3) the incidence of complications of normal tissues in the irradiated volume. At this time, too few patients have sufficient follow-up for a valid comparison of high-pressure oxygen at three atmospheres versus air-breathing using conventional radiotherapeutic techniques.

REFERENCES

1. Holthusen H: Beitraege zue biologie der strahlenwirkung. Untersuchungen an askarideneiern. Pfluegers Arch ges Physiol 187:1, 1921.

2. Mottram JC, Eidinow, A: On the effect of anaemia on the reactions of the skin and of tumours to radium exposure. Brit J Surg 19:481-487, 1932.

3. Thoday JM, Read J: Effect of oxygen on the frequency of chromosome aberrations produced by x-rays. Nature, London 160:608, 1947.

4. Gray LH, Conger AD, Ebert M, et al: The concentration of oxygen dissolved in tissues at the time of irradiation as a factor in radiotherapy, Brit J Radiol 26:638-648, 1953.

5. Thomlinson RH, Gray LH: The histological structure of some human lung cancers and possible implications for radiotherapy. Brit J Cancer 9:539-549, 1955.

6. Churchill-Davidson I: Hyperbaric oxygen and radiotherapy: clinical experiences. Front Radiation Ther Onc 1:156-161, 1968.

7. Van den Brenk HA, et al: Experience in Melbourne with use of hyperbaric oxygen combined with megavoltage radiation in 614 cases of advanced malignant disease. Front Radiation Ther Onc 1:162-174, 1968.

8. Van den Brenk HA: Hyperbaric oxygen in radiation therapy. An investigation of dose-effect relationships in tumor response and tissue damage. Amer J Roentgen 102:8-26, 1968.

9. Cade IS, McEwen JB: Megavoltage radiotherapy in hyperbaric oxygen. A controlled trial. Cancer 20:817-821, 1967.

10. Johnson RJR: Gynecological cancer treated with cobalt under hyperbaric conditions. Front Radiation Ther Onc 1:149-155, 1968.

Dr. Lindberg, Department of Radiotherapy, The University of Texas MD Anderson Hospital and Tumor Institute at Houston, 6723 Bertner Ave, Houston, Tex 77025.

PRESENT STATUS OF SELECTIVE CORONARY CINEARTERIOGRAPHY:

GEORGE W. BARCLAY, JR, MD
WILLIAM SHAPIRO, MD

Coronary arteriography has become important in the evaluation of ischemic heart disease. Visualization of the coronary arteries is necessary for decisions concerning coronary surgery should these techniques become more widely applied in therapy. The indications for this diagnostic procedure are wide because of its impressive diagnostic accuracy and low complication rate. Normal coronary arteriograms in patients with otherwise typical angina pectoris, the significance of visualizable coronary collateral circulation, and the evidence correlating the presenting clinical symptoms with visualizable lesions are discussed. Also, recent reports describing this procedure in patients with acute or recent myocardial infarction are summarized.

This work was supported in part by Social and Rehabilitation Service Grant RD-2858-M-70-C1 and by VA Cooperative Study of Surgical Treatment for Coronary Arterial Disease VA 4-70C.

BEFORE ADEQUATE METHODS were developed for visualizing the anatomy of coronary arteries, the diagnosis of coronary arterial disease depended on indirect evidence. Specific anatomic diagnosis, selection of appropriate treatment, and evaluation of alterations produced by medical or surgical therapy are expedited by coronary arteriography. Since the complication rate is low in skilled hands, coronary arteriography now may be considered necessary for the complete evaluation of patients suspected of having debilitating angina pectoris.

The purpose of this review is to summarize briefly the present status of this increasingly available diagnostic procedure.

Diagnostic Accuracy: Accurate interpretation of results requires excellent technique and experience. Kemp and associates[1] compared interpretations of premortem coronary arteriograms with the postmortem findings in 29 patients. There was slight underestimation of lesions of the left main coronary artery, left anterior descending and right coronary arteries. There was even distribution of overestimation and underestimation of lesions in the diagonal branches of the left anterior descending artery and in the left circumflex artery. Two arteries, the diagonal branch of the left coronary and the left circumflex, vary greatly in size and distribution in normal hearts. When the right coronary artery is large, the virtual absence of the left circumflex in the posterior atrioventricular sulcus may be normal. The only instances of overestimation of disease were in the diagonal branches of the left coronary artery and in the left circumflex artery. Since an arterial lumen may appear of normal caliber in the presence of crescentic lesions when viewed in one plane, errors will be lessened if all major arteries are

A REVIEW

viewed in both right anterior oblique and left anterior oblique positions during cinearteriography. Aortic root "flush" has not been consistently adequate for the evaluation of distal portions of the coronary arteries; therefore, selective techniques have been preferred. Routine administration of nitroglycerin prior to coronary ostial catheterization avoids the mechanical induction of spasm which may be grossly misleading in interpretation. Present radiographic methods limit accurate visualization to vessels with lumen diameters greater than 0.1 mm.[2]

Significance of Coronary Collateral Circulation: The visualization of collateral vessels not included in the normal variations in coronary anatomy may be considered a reliable indication of severely obstructive coronary arterial lesions, but may explain normal electrocardiograms (ECG) when present in such patients. Such coronary anastomoses via collateral vessels have not been demonstrated by coronary arteriography in normal subjects. Although on microscopic examination of autopsy specimens coronary collaterals have been demonstrated, they are apparently functionally inoperative or, at least, not visualizable in the normal heart in life. Fergusson and others found 90% reductions of vessel lumen diameter to be associated with collateral vessel development.[3] In a review of 100 coronary arteriograms, Gensini and da Costa[4] found 53 to show either normal arteries or less than 50% obstruction, and 47 to show obstructions from greater than 50% to complete occlusion. In this latter group, collateral vessels were demonstrated in 37. Five of the 37 had normal resting ECGs. The following criteria for evidence of collateral vessels were suggested by these authors:[4] (1) opacification of the opposite coronary artery or its branches after selective injection of a main artery; (2) opacification of a segment of an artery distal to a complete occlusion after injection of contrast material proximal to that occlusion; (3) distinct visualization of a vessel joining the segments of the same artery proximal and distal to an almost complete or complete occlusion.

In the first two situations, the collateral channels themselves may not be visualized.

Correlation of Clinical with Anatomic Findings: Proudfit and colleagues[5] studied more than 300 patients and found only rough correlations between clinical characteristics and demonstrated coronary artery lesions. Most of their patients who had pain localized to the right side of the chest had obstructive lesions in the circumflex or right coronary arteries, but site of pain was not a consistently reliable indication of the location of coronary artery disease. About 50% of their patients who had both angina decubitus and postprandial pain, and half of those who had pain when first supine, had severe obstructions of three or four coronary arteries. Those with pain of less than a year's duration constituted their largest subgroup, and had the greatest incidence of single-vessel disease. Congestive heart failure frequently was associated with multiple severe obstructions. Men less than 40 years old had a distribution of obstructive lesions similar to that of patients not selected on the basis of age. Duration of symptoms was not consistently related to lesion distribution. In contrast, Cohen and associates[6] and Elliot and Gorlin[7] found that anginal pain of more than three years' duration, pain in at least two sites in addition to the chest, angina decubitus, postprandial pain, and pain at rest correlated well

with severe obstruction in three or four main coronary arteries.

In our own patients, it is evident that the most severe clinical disease usually is associated with the most widespread anatomical disease. Nevertheless, it is not rare to see good ventricular function with multiple-vessel disease, and severe congestive failure and aneurysm formation in the presence of occlusion of a single vessel. Thus, it appears that the propensity for development of visualizable or nonvisualizable adequate collateral vessels is highly variable. The mode of presentation of a given patient may, therefore, depend on this factor as much as on the distribution and severity of large-vessel disease. Presently available correlations of symptoms and anatomic distribution of disease appear to be quite imprecise.

Correlations Between Exercise Electrocardiography and Coronary Arteriography: Exercise electrocardiography is in a transitional state. Demany and associates[8] performed double Master two-step exercise tests and coronary arteriograms on 75 patients with histories of chest pain. They found 57% (24 of 42) false negative results in patients with symptomatic coronary artery disease confirmed by selective coronary arteriography, and 30% (10 of 33) false positive results in patients with normal coronary arteriograms. They pointed out, however, that coronary arteriography is not yet able to reveal the smaller branches of the coronary arteries, and therefore it is possible that some of the false positive results of postexercise ECGs may be truly positive after all. They proposed that selective coronary arteriography has reinforced previous doubts regarding the diagnostic reliability of this type of postexercise ECG test in persons with history of chest pain. In their study, only S-T depression of 1 mm or greater of the plateau, sagging, or downslope configuration was considered as positive. Cohen and associates,[6] using flat S-T depression in excess of 0.5 mm as abnormal, found 80% (27 of 34) of their postexercise ECGs to be abnormal in patients with coronary heart disease documented by selective coronary arteriography. They concluded that Master two-step and postexercise ECGs were useful in evaluation of their patients.

Maximal stress electrocardiographic tests are still under investigation and promise more consistent evaluation of patients with angina pectoris both before and after treatment.[9-13] At present, we consider the conventional (Master) tests as probably inadequate for consistently accurate evaluation of the severity of coronary disease.

Angina Pectoris in Patients with Normal Coronary Arteriograms: A small but definite group of patients with typical angina pectoris and normal arteriograms has been described by several authors.[14,15] They tend to be under 50 years of age and a high proportion are women. Ultimate prognosis is thought to be better than for patients with visualizable lesions. No one maneuver, short of arteriography, can identify these cases accurately. Factors such as smoking, abnormal hemoglobin-oxygen dissociation curves, and small-vessel disease have been implicated, but proof of their importance is not yet available. Postmortem findings in a few such patients have ranged from negative[14] to subendocardial infarctions,[15] but thus far examination of small vessels have been negative.

Complications of Coronary Arteriography: The morbidity and mortality of coronary arteriography have been strikingly low. Reported mortality rates range from 0.09 to 0.25%.[6,7]

A 16-laboratory survey covering the years 1963-1965 and reporting on 3,312 studies found a 1.9% complication rate. Arrhythmias comprised 0.8% and included 25 instances of ventricular fibrillation, all of which were terminated successfully by countershock with no serious sequelae. Five patients had myocardial infarction during or immediately after study (two deaths). Two instances of dissection of the wall of a coronary artery occurred; 15 patients had thrombosis of the brachial artery.[16]

Judkins[17] reviewed his experience with a percutaneous transfemoral technique in 600

patients (ages 7-77); 40% were performed as outpatient examinations. Complications related to the procedural hazards incident to a percutaneous approach occurred in 1%. Of these, minor femoral artery complications occurred in 0.7%. Two patients (0.3%) required major femoral-iliac surgery for aggravation of obstructive disease thought to have been present previously. Cardiac complications, prolonged spasm, or infarction occurred in 0.5%. One death (0.2%), in a patient with extensive coronary artery disease, occurred after the patient sustained a cerebral embolus during ventriculography. Selection of contrast medium and scrupulous avoidance of anoxia were thought to be important in avoiding arrhythmias other than transient bradycardia in more than 7,000 injections into the coronary arteries. Our laboratory prefers this approach in most cases because of its rapidity, reliability, and simplicity. Despite the high frequency of associated femoral vascular disease in our hospital population, failure and vascular complications have been acceptably infrequent.

Miller and Flasdick,[18] also using the percutaneous transfemoral approach, have summarized their experience with 400 cineangiograms performed in a small community hospital during the past four years. They had one death (0.25%), four instances of ventricular fibrillation (1%) which were defibrillated successfully, one instance of complete heart block (0.25%) responding promptly to drugs, one acute myocardial infarction (0.25%) occurring 18 hours after catheterization, and two instances of thrombosis of the femoral artery occurring at the puncture site (0.5%) which were easily evacuated by prompt arteriotomy and thrombectomy. They believed that careful choice of catheter size might prevent the latter complication.

Indications and Selection of Patients: Coronary arteriography may be considered in the following:

1. In significant angina pectoris, especially in young patients (< 50 years of age) and in patients being considered for surgical therapy for angina pectoris.
2. In valvular heart disease when corrective surgery is being considered or when there is evidence of associated coronary artery disease, or both.
3. In congenital heart disease (when feasible) when surgery is being considered, to rule out anomalous coronary artery.
4. In all patients subjected to left heart catheterization, unless there is some specific contraindication (eg, rapid deterioration of patient's condition during procedure).
5. In cases of atypical chest pain possibly caused by coronary heart disease.
6. To evaluate the results of coronary surgery.
7. In cases of heart failure of unknown etiology.

Contraindications: Recent myocardial infarction has been considered a major contraindication to coronary arteriography. Nevertheless, severe, relentless progression of disease associated with persistent pain or severe angina, heart failure, or mitral insufficiency may provide indications for an acute diagnostic study. Two recent reports explored the feasibility of studies under these circumstances. Miller and Mymin[20] studies 24 patients by selective coronary arteriography ten days to four weeks following acute myocardial infarction. Good correlation was present between electrocardiographic and anatomic findings. Begg and others[21] studied five patients by means of cardiac catheterization, including left ventriculography and cine coronary arteriography, within 10-24 hours following admission to a coronary care unit. Forty-six additional patients had coronary arteriography performed three to six weeks following an episode of prolonged pain consistent with acute infarction without untoward complications.

The feasibility of diagnostic studies at these times, and the possibility that surgical therapy occasionally may be indicated soon after development of certain complications, are being in-

vestigated and promise some salvage in a previously hopeless group of patients.

Acknowledgement: Dr. Seymour Eisenberg assisted in the preparation of this manuscript.

REFERENCES

1. Kemp HG, Evans H, Elliott WC, et al: Diagnostic accuracy of selective coronary cinearteriography. Circulation 36: 526-533, 1967.

2. Sones FM Jr: Cine-coronary arteriography, in: Hurst JW, Logue RB, Eds: The Heart. New York, McGraw-Hill, 1966, pp 702-704.

3. Fergusson DJ, Shirey EK, Sheldon WC, et al: Left internal mammary artery implant—postoperative assessment. Circulation 37: Supp 2:24-26, 1968.

4. Gensini GG, Bruto da Costa BC: The coronary collateral circulation in living man. Amer J Cardiol 24:393-400, 1969.

5. Proudfit WL, Shirey EK, Sheldon WC, et al: Certain clinical characteristics correlated with extent of obstructive lesions demonstrated by selective cine-coronary arteriography. Circulation 38:947-954, 1968.

6. Cohen LS, Elliott WC, Klein DK, et al: Coronary heart disease. Clinical, cinearteriographic and metabolic correlations. Amer J Cardiol 17:153-168, 1966.

7. Elliott WC, Gorlin R: The coronary circulation, myocardial ischemia, and angina pectoris. Mod Conc Cardiov Dis 35: 117-122, 1966.

8. Demany MA, Tambe A, Zimmerman HA: Correlation between coronary arteriography and the postexercise electrocardiogram. Amer J Cardiol 19:526-530, 1967.

9. Kassebaum DG, Judkins MP, Griswold HE: Stress electrocardiography in the evaluation of surgical revascularization of the heart. Circulation 40:297-313, 1969.

10. Sheffield LT: Electrocardiography at rest and during exercise; symposium, studies of coronary artery disease in man. 42nd scientific session, American Heart Association, 1969.

11. Bruce RA, Hornsten TR: Exercise stress testing in evaluation of patients with ischemic heart disease. Prog Cardiov Dis 11:371-390, 1969.

12. Ellestad MH, Allen W, Wan MCK, et al: Maximal treadmill stress testing in cardiovascular evaluation. Circulation 39:517-522, 1969.

13. Blomqvist G: The frank lead exercise electrocardiogram. Acta Med Scand 178:440, 1965.

14. Dwyer EM, Wiener L, Cox JW: Angina pectoris in patients with normal and abnormal coronary arteriograms; hemodynamics and clinical aspects. Amer J Cardiol 23:639-646, 1969.

15. Eliot RS, Bratt G: The paradox of myocardial ischemia and necrosis in young women with normal coronary arteriograms; relation to abnormal hemoglobin-oxygen dissociation. Amer J Cardiol 23:633-638, 1969.

16. Ross RS, Gorlin R: Cooperative study on cardiac catheterization. Coronary arteriography. Circulation 37:Suppl 3:67-73, 1968.

17. Judkins MP: Percutaneous transfemoral selective coronary arteriography. Radio Clin N Amer 6:467, 1968.

18. Miller ER, Flasdick RM: Selective cine-coronary arteriography; an improved technique. Southern Med J 63:62-65, 1970.

19. Hultgren HN, Abrams HL: Coronary arteriography. Amer Heart J 74:737-740, 1967.

20. Miller A, Mymin D: Selective coronary arteriography following acute myocardial infarction. (Abstr) Circulation 38: Suppl 4:139, 1968.

21. Begg FR, Kooros MA, Magovern GJ, et al: The hemodynamics and coronary arteriography patterns during acute myocardial infarction. J Thor Cardiov Surg 58:647-654, 1969.

Dr. Barclay, 3155 Stagg Drive, Beaumont, Tex 77701.

Reprint requests to Dr. Shapiro, Veterans Administration Hospital, 4500 S Lancaster Road, Dallas, Tex 75216.

PROTEIN CONTENT / 7 oz. Serving*

Bean with Bacon	6.8	Green Pea with Ham (Frozen)	7.6
Beef	8.0	Hot Dog Bean	8.4
Chicken Broth	5.5	Pepper Pot	6.1
Chicken 'N Dumplings	5.8	Split Pea with Ham	10.2
Chili Beef	6.2	Vegetable Beef	5.0
Green Pea	6.9	Vegetable with Beef (Frozen)	5.4

When protein is the focal point in your patients' special diets, Campbell's Soups can be a convenient supplementary source of that essential nutrient.

* From "Nutritive Composition of Campbell's Products" which gives values of important nutritive constituents of all Campbell's Products. For your copy, write to Campbell Soup Company, Dept. 365, Camden, New Jersey 08101.

There's a soup for almost every patient and diet ...for every meal and, it's made by Campbell

You Can't Blame a Girl...

(when her husband's at fault)

Flagyl® brand of metronidazole

Cures Trichomoniasis in Both Women and Men

About half of all husbands of infected women harbor *Trichomonas vaginalis.**

Few of these men have symptoms. Even so, all are capable of perpetuating the infection and rendering treatment of a woman alone futile.

Only a systemically active medication like Flagyl is capable of reaching the hidden reservoirs of infection in the genitourinary tracts of both men and women.

Only Flagyl has been able to achieve rates of cure consistently above 90 per cent and often up to 100 per cent in trichomonal infections in both men and women.

Indications: For the treatment of trichomoniasis in both male and female patients and the sexual partners of patients with a recurrence of the infection provided trichomonads have been demonstrated by wet smear or culture.

Contraindications: Evidence of or a history of blood dyscrasia, active organic disease of the central nervous system and the first trimester of pregnancy.

Warnings: Use with discretion during the second and third trimesters of pregnancy and restrict to patients not cured by topical measures. Flagyl (metronidazole) is secreted in the breast milk of nursing mothers. It is not known whether this can be injurious to the newborn.

Precautions: Mild leukopenia has been reported during Flagyl use; total and differential leukocyte counts are recommended before and after treatment with the drug, especially if a second course is necessary. Avoid alcoholic beverages during Flagyl therapy because abdominal cramps, vomiting and flushing may occur. Discontinue Flagyl promptly if abnormal neurologic signs occur. There is no accepted proof that Flagyl is effective against other organisms and it should not be used in the treatment of other conditions. Exacerbation of moniliasis may occur.

Adverse Reactions: Nausea, headache, anorexia, vomiting, diarrhea, epigastric distress, abdominal cramping, constipation, a metallic, sharp and unpleasant taste, furry or sore tongue, glossitis and stomatitis possibly associated with a sudden overgrowth of *Monilia,* exacerbation of vaginal moniliasis, an occasional reversible moderate leukopenia, dizziness, vertigo, drowsiness, incoordination and ataxia, numbness or paresthesia of an extremity, fleeting joint pains, confusion, irritability, depression, insomnia, mild erythematous eruptions, "weakness," urticaria, flushing, dryness of the mouth, vagina or vulva, vaginal burning, pruritus, dysuria, cystitis, a sense of pelvic pressure, dyspareunia, fever, polyuria, incontinence, decrease of libido, nasal congestion, proctitis, pyuria and darkened urine have occurred in patients receiving the drug. Patients receiving Flagyl may experience abdominal distress, nausea, vomiting or headache if alcoholic beverages are consumed. The taste of alcoholic beverages may also be modified.

Dosage and Administration: *In the Female.* One 250-mg. tablet orally three times daily for ten days. Courses may be repeated if required in especially stubborn cases; in such patients an interval of four to six weeks between courses and total and differential leukocyte counts before, during and after treatment are recommended. Vaginal inserts of 500 mg. are available for use, particularly in stubborn cases. *When the vaginal inserts are used* one 500-mg. insert is placed high in the vaginal vault each day for ten days and the oral dosage is reduced to two 250-mg. tablets daily during the ten-day course of treatment. Do not use the vaginal inserts as the sole form of therapy. *In the Male.* Prescribe Flagyl only when trichomonads are demonstrated in the urogenital tract, one 250-mg. tablet two times daily for ten days. Flagyl should be taken by both partners over the same ten-day period when it is prescribed for the male in conjunction with the treatment of his female partner.

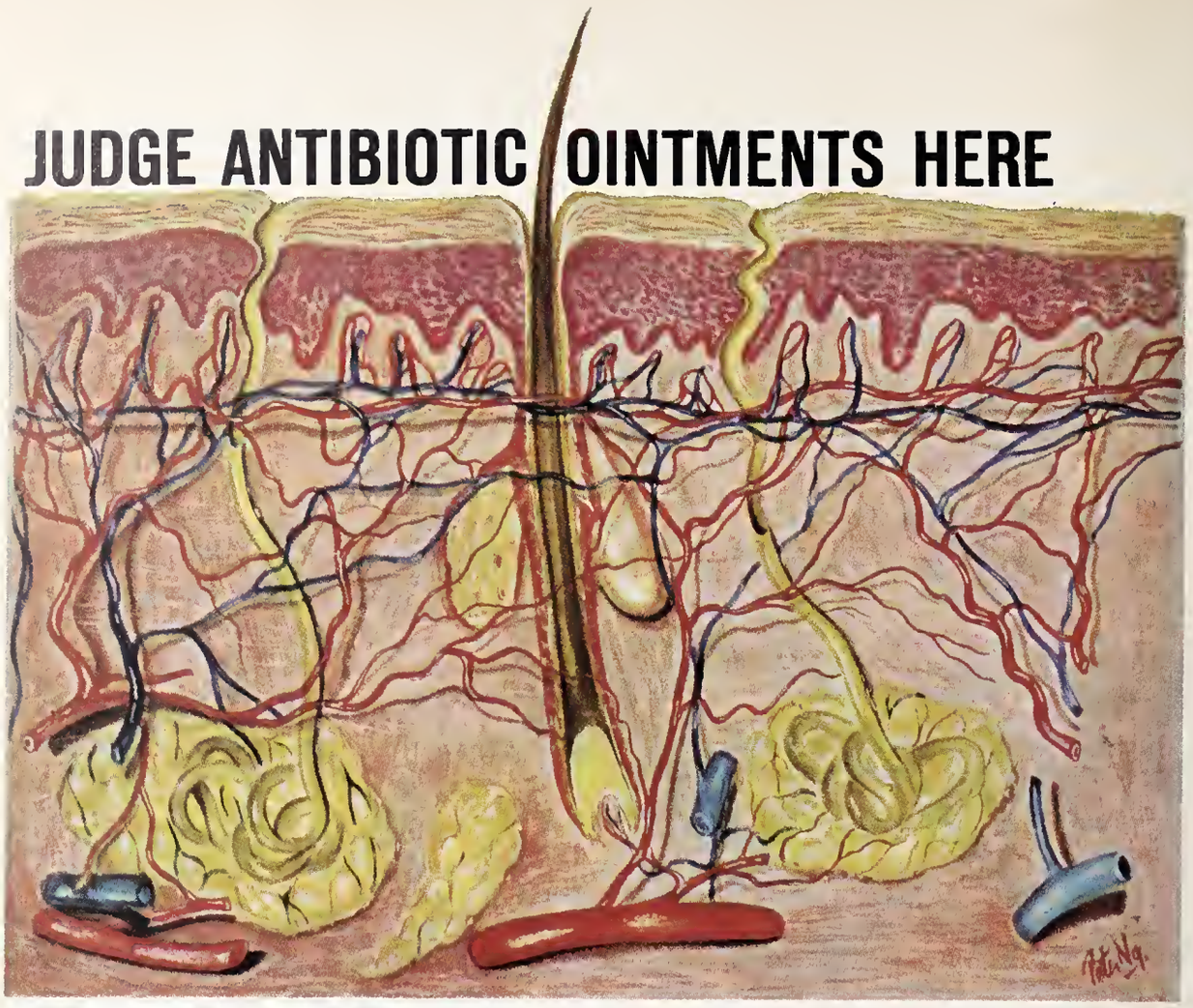
Dosage Forms: Oral tablets . . . 250 mg.
Vaginal inserts . . 500 mg.

*References available on request.

SEARLE P. O. Box 5110 Chicago, Illinois 60680 942

Research in the Service of Medicine

JUDGE ANTIBIOTIC OINTMENTS HERE



Results on skin are final proof of any topical antibiotic's effectiveness

No in vitro test can duplicate a clinical situation on living skin. 'Neosporin' (polymyxin B—bacitracin—neomycin) Ointment has consistently proven its effectiveness in thousands of cases of bacterial skin infection. The spectra of the three antibiotics overlap in such a way as to provide bactericidal action against most pathogenic bacteria likely to be found topically. Diffusion of the antibiotics from the special petrolatum base is rapid since they are insoluble in the petrolatum, but readily soluble in tissue fluids. The Ointment is bland and nonirritating.

Caution: As with other antibiotic preparations, prolonged use may result in overgrowth of nonsusceptible organisms and/or fungi. Appropriate measures should be taken if this occurs. Articles in the current medical literature indicate an increase in the prevalence of persons allergic to neomycin. The possibility of such a reaction should be borne in mind.

Contraindications: This product is contraindicated in those individuals who have shown hypersensitivity to any of its components.

Supplied: Tubes of 1 oz., ½ oz. with applicator tip, and ⅛ oz. with ophthalmic tip.

Complete literature available on request from Professional Services Dept. PML.

'NEOSPORIN'®
brand

POLYMYXIN B-BACITRACIN-NEOMYCIN OINTMENT

BURROUGHS WELLCOME & CO. (U.S.A.) INC., Tuckahoe, N.Y.

Taste!

Dicarbosil.®
ANTACID

Your ulcer patients and others will love it. Specify DICARBOSIL 144's—144 tablets in 12 rolls.

ARCH LABORATORIES
319 South Fourth Street, St. Louis, Missouri 63102

VECTORCARDIOGRAPHY — A WORKSHOP

October 19-22, 1970

Mountain Shadows Resort

Scottsdale, Arizona

This is an intensive four-day program covering the field of vectorcardiography and related areas. Major emphasis is placed on theoretical and practical applications of the technique as related to the patient's diagnostic problems. Half of the program is dedicated to individual analysis of the routine vectorcardiograms by the participants under the orientation of the guest and local faculty. This program is intended for those physicians who already have a basic understanding of electrocardiography and wish a close exposure to the values and limitations of vectorcardiography. Registration is limited to a maximum of 60.

PROGRAM DIRECTOR: A. Benchimol, M.D., F.A.C.C., Director, Institute for Cardiovascular Diseases, Good Samaritan Hospital, Phoenix, Arizona

GUEST FACULTY: Marvin Dunn, M.D., F.A.C.C., Paul Hugenholtz, M.D., F.A.C.C. and Ronald Selvester, M.D., F.A.C.C.

ADVANCE REGISTRATION IS REQUIRED.

FOR INFORMATION WRITE:

American College of Cardiology
9650 Rockville Pike
Bethesda, Maryland 20014

The

DOCTORS OF INDIA

invite the

DOCTORS OF TEXAS

Fahin Tours, in cooperation with the Doctors of India, proudly announces its exclusive "People of India" 22 day tour for Texas Doctors.

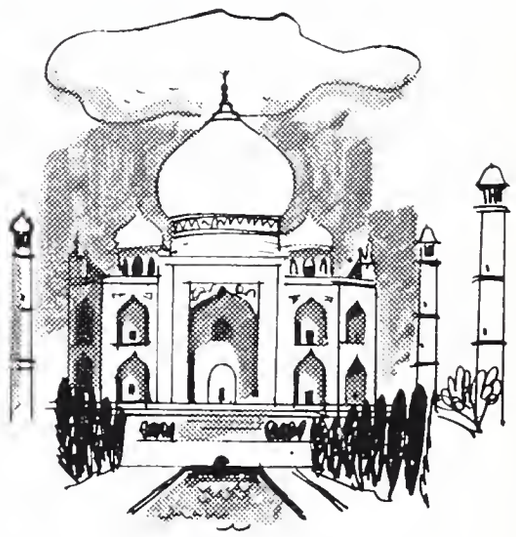
It's as if you're visiting old friends; not only do you sightsee with professional guides, shop, stay in deluxe hotels and do everything you'd normally do on a tour, but you also meet and get to know Indian Doctors and their families—your personal "hosts" throughout your stay in India. They show you an India few tourists ever get to see.

The itinerary is designed for the discriminating traveler. You spend most of your time in Delhi and Bombay. Many special activities are planned, including visits to local hospitals and clinics, briefings from Indian physicians, medical conferences, concerts, etc. Available too are a number of optional trips including Agra, the home of the famed Taj Mahal, and Kashmir, the source of much of India's exotic treasures!

INCLUDES: Round trip 707 jet flight economy class from Dallas or Houston, deluxe hotels, 2 meals daily, transfers, airport taxes, sightseeing, personal host families, tour escort.

3 Weeks
OCT. 19 to NOV. 9

$1360
FROM DALLAS OR HOUSTON



ITOAI1156

Fahin Tours, 4205 Hildring Dr. E., Fort Worth, Texas 76109

RESERVATION:

Name_____

Address_____

City_____ State_____ Zip_____

Accompanying me will be:

_____

_____

Enclosed is my check for $_____ ($100/person)

BERT A. DeBORD, MD

The Tack Operation

The tack operation relieved vertigo in six patients with Meniere's disease; five, however, had further hearing loss after surgery. These preliminary results are encouraging but not conclusive. Patients with unilateral, intractable, and incapacitating Meniere's disease may benefit from this treatment, but careful selection is necessary in view of the possibility of hearing loss.

MORE THAN 100 YEARS ago, Meniere stated, "I could not forget that beyond the drum there is an apparatus which, as mysterious as it is, has not revealed to us all the phenomena taking place therein."[1]

Today, all of the mysteries of the inner ear have not been solved; however, through the efforts of Hallpike and Cairns,[2] in 1938, we know that the cochlear duct and saccule are dilated in patients with Meniere's symptom complex. Because of these findings, treatment of Meniere's disease has been directed toward reducing the endolymphatic pressure. Medical management has utilized diuretic agents and salt-free diets, whereas surgical treatment has included decompression of the endolymphatic system and total destruction of the vestibular end-organ.

In 1926, Portman[3] reported the alleviation of vertiginous attacks in Meniere's disease by operating on the endolymphatic sac and decompressing the endolymphatic system. More recently, House[4] proposed decompression of the labyrinth by utilizing a shunt in the endolymphatic sac.

In 1938, Cawthorne[5] advocated destruction of the endolymphatic system through a fenestra in the lateral semicanal. In 1943, Day[6] attempted to destroy the vestibular end-organs with low-voltage electrocoagulation, but maintain the hearing. Although this technique was unsuccessful, other otosurgeons have been challenged to devise procedures that will reduce endolymphatic pressure yet preserve hearing. To date, however, none of the surgical procedures devised for Meniere's disease have been completely successful. In 1956, both Cawthorne[7] and Schuknecht[8] recommended ablation of the saccule through the oval window.

Van Fick,[9] in 1964, reported successful decompression of the labyrinth by a procedure which he learned from Plester (Dusseldorf). In this procedure, the footplate of the stapes is

for Meniere's Disease

perforated (approximately 2 mm) with a Schuknecht needle. A fenestra (1 mm in diameter) is made in the footplate. The mucosa which previously was eased toward the promontory is returned across the fenestra. The meatal flap is then replaced. Vertigo stopped in 86% and hearing improved in 58% of 50 treated patients.

In 1967, Cody and others[10] reported results of a procedure that they called automatic repetitive decompression of the saccule in endolymphatic hydrops. This has been called the tack operation because a stainless steel tack is inserted through the footplate of the stapes and allowed to penetrate 1.6 to 1.8 mm into the vestibule. At the onset of Meniere's disease, as the saccule becomes distended, it ruptures itself on the point of the tack and the vertiginous attack is aborted.

Scott and White Series: During the past two years at the Scott and White Clinic, six patients with intractable Meniere's disease have been treated with the tack operation. These patients had typical manifestations of Meniere's disease—severe, sudden vertiginous attacks accompanied by nausea and vomiting, fullness and noises in the affected ear, and fluctuating cochlear deafness. Clinical investigations included roentgenograms of the skull; electronystagmography; and audiometric tests with pure-tone audiograms, discrimination and short-increment sensitivity index scores, loudness balance, and Bekesy's tracings.

Procedure: After the ear was prepared and anesthetized, an incision (stapedectomy type) was made in the ear canal. The skin flap of the posterior canal and tympanic membrane was elevated and folded forward to expose the middle ear, and the inner portion of the posterior osseous canal was curetted to expose the stapedial footplate. The head of the Cody tack was placed on the tack inserter and introduced through the ear speculum; then the tack was inserted using microscopic visualization through the anterior-inferior portion of the footplate. (A tiny film of Gelfoam may be placed over the head of the tack.) The skin flap was returned to its normal position.

Results: All six patients were relieved of their vertiginous attacks. Their tinnitus remained, but was less annoying. All of these patients had nonserviceable hearing preoperatively. One patient's hearing improved slightly after surgery, but hearing was decreased in five. Postoperative infections did not occur.

Conclusion: The postoperative period is too short to draw any valid conclusions from such a small series, but the complete relief of vertigo in all six patients is encouraging. In view of the audiometric results, I recommend that the tack operation be reserved for patients who have unilateral, incapacitating Meniere's disease with nonserviceable hearing in the affected ear, provided the hearing in the other ear is serviceable.

REFERENCES

1. Meniere P: Auricular pathology; report on lesions of the inner ear giving rise to symptoms of apoplectiform cerebral congestion. A reproduction and English translation of the original published description of Meniere's syndrome by Prosper Meniere. Morriston, NJ, Unimed, Inc, p 598.

2. Hallpike CS, Cairns H: Observations on the pathology of Meniere's syndrome. J Laryng Otol 53:625-654, 1938.

3. Portman G: Recherches sur le sac endolymphatique: resultats et applications chirurgicales. Collegium Oto-Rhino-Laryngolicum. Grinegen, vol 89, 1926.

4. House WF: Subarachnoid shunt for drainage of hydrops: a report of 63 cases. Arch Otolaryng 79:338-354, 1964.

5. Cawthorne T: Labyrinthectomy. Ann Otol Rhin Laryng 69:1170-1176, 1960.

6. Day KM: Labyrinth surgery for Meniere's disease. Laryngoscope 53:617-630, 1943.

7. Cawthorne TE: Membranous labyrinthectomy via the oval window for Meniere's disease. J. Laryng Otol 71:524-527, 1957.

8. Schuknecht HF: Ablation therapy for relief of Meniere's disease. Laryngoscope 66:859-870, 1956.

9. Van Fick IA: Decompression of the labyrinth: a new surgical procedure for Meniere's disease. Arch Otolaryng 79:447-458, 1964.

10. Cody D, Simonton KM, Hallberg OE: Automatic repetitive decompression of the saccule in endolymphatic hydrops (tack operation). Laryngoscope 77:1480-1501, 1967.

Dr. DeBord, Scott and White Clinic, Temple, Tex 76501.

CARCINOMA OF THE AMPULLA OF VATER

Experience with 32 cases of carcinoma of the ampulla of Vater is reviewed. Pancreatoduodenectomy was performed on 22 patients; there were three postoperative deaths. Of those operated upon three or more years ago, nine (50%) survived for three years while seven (39%) of those operated upon more than five years ago are alive and well. No five-year survivals occurred following any other type of surgery. Pancreatoduodenectomy is recommended as the treatment of choice for carcinoma of the ampulla of Vater.

CARCINOMA OF THE AMPULLA of Vater is an uncommon lesion; the entire experience of a large community hospital will include only a few cases. The recognition of malignancies in this site, however, is extremely important because they are amenable to surgical therapy, and even after palliative procedures some patients survive for long periods.[3,5] There is general consensus that the Whipple operation is the procedure of choice, even though some lesions are small and technically can be removed by transduodenal resection.[3-6] The present study consists of an analysis of the total experience at the Ben Taub General Hospital and Veterans Administration Hospital in Houston during the past 20 years; a few private patients also are included.

Materials and Method: The records of 32 consecutive patients treated for carcinoma of the ampulla of Vater were studied; 31 were males and 1 was female. The clinical features and results of laboratory examinations were not significantly different from those reported by others.[1] It was of interest, however, that one patient who was jaundiced when first seen had complete resolution of jaundice while undergoing medical therapy. This led to the conclusion that the patient did not have a malignant lesion. Operation was required subsequently, however, because of massive gastrointestinal hemorrhage caused by the ampullary cancer.

Treatment: Two patients had no surgical treatment and the diagnosis was made at necropsy. Of those patients operated upon, only three had lesions which were nonresectable at the time of surgery. These were treated by an internal biliary anastomosis and gastrojejunostomy. Four patients underwent wedge resection because the tumors appeared to be small and localized to the ampullary region. Pancreatoduodenectomy was performed in 22 cases, and a total pancreatectomy in one (Table 1).

Mortality and Complications: Two of the three patients treated by internal biliary drainage died in the postoperative period, as did one of the four patients who underwent wedge resection. The mortality was lower in patients undergoing pancreatoduodenectomy, as there were only three deaths among these 22 patients (Table 2). In fact, in this group there were only five major complications which included two pancreatic fistulas, one wound infection, and one case of renal failure (Table 3). The fifth patient,

GEORGE L. JORDAN, JR., MD
BRYAN E. SIMONS, MD

who had previously been treated elsewhere, had a pancreatic fistula in the preoperative period. An intra-abdominal abscess developed postoperatively, and the patient died of massive hemorrhage. The other two deaths occurred in the patient with renal failure and one of the patients who developed a pancreatic fistula; thus, the overall mortality in this group was 14%. The patient treated by total pancreatectomy died of aspiration pneumonia on the sixth postoperative day.

Survival: The one surviving patient treated by biliary bypass and gastrojejunostomy lived only a few months. In contradistinction, all three patients treated by wedge resection who survived the postoperative period lived longer than one year. All were dead in less than three years, however, the longest survival being 26 months.

The best results were obtained with pancreatoduodenectomy, as almost 75% of those surviving the operation lived longer than one year (Table 4). Among the 18 patients operated upon three or more years ago, 75% survived more than one year and 9 (50%) survived longer than three years. Of patients operated upon more than five years ago, 39% have survived for five years. Eight patients were still alive at the last follow-up contact, and none had evidence of recurrent disease. One was 15 months postoperative while the remaining seven had survived more than five years (5, 6, 7, 10, 12, 13, and 17 years, respectively).

Developments of interest in the late postoperative period include a single wound metastasis in one patient which was treated by wide local excision. This patient is one of the five-

Operation	No. Cases	%
None	2	6
Biliary drainage and gastrojejunostomy	3	10
Resection	27	84
Wedge	4	12
Pancreatoduodenectomy	22	69
Total pancreatectomy	1	3
Total	32	100

Table 1. Treatment of 32 patients with cancer of the ampulla of Vater.

Operation	No. Cases	Deaths No.	Deaths %
Biliary drainage and gastrojejunostomy	3	2	67
Resection	27	5	19
Wedge	4	1	25
Pancreatoduodenectomy	22	3	14
Total pancreatectomy	1	1	100

Table 2. Mortality according to procedure.

Complication	No. Cases	Deaths
Pancreatic fistula	2	1
Wound infection	1	0
Intra-abdominal hemorrhage and intra-abdominal abscess	1	1
Renal failure	1	1
Total	5	3

Table 3. Complications following pancreatoduodenectomy in 22 patients.

Survival (Years)	No. Patients
0-1	6
1-3	4
3-5	2
5-17	7

Table 4. Length of survival following pancreatoduodenectomy.

year survivors. A second patient developed cholecystitis eight years following his Whipple operation for carcinoma of the ampulla of Vater. Cholecystectomy was performed and the patient was alive and well when last contacted some nine years later. This was the only patient in whom problems related to the biliary tract developed. Patients who have survived for long periods have been able to live useful lives, and in most instances have not required dietary supplements to maintain adequate weight.

Discussion: Although an astute clinician may correctly diagnose carcinoma of the ampulla of Vater in some cases, the diagnosis usually is not made until operation is undertaken. Most of these tumors are not large enough to present a filling defect which can be visualized on roentgenograms of the upper gastrointestinal tract; and the differences between clinical features and laboratory findings of this lesion as compared to those of carcinoma of the pancreas, duodenum, or common bile duct are not sufficiently great to allow a definite preoperative diagnosis. In fact, the findings are virtually identical with the exception of the extent of weight loss. Weight loss is almost universally present in carcinoma of the pancreas, while many patients with carcinoma of the ampulla of Vater have little or no weight loss at the time of surgery. This is partly because carcinoma of the ampulla of Vater, in general, seems to be a lower grade of malignancy; and jaundice occurs relatively early, often causing the patient to see a physician while the lesion is still quite small.

Almost all patients are candidates for surgical exploration; 93% in this series were operated upon. More than 80% were candidates for resection. Undoubtedly, the five-year survival rate for this entire group could have been improved if all resectable lesions had been treated by pancreatoduodenectomy. Furthermore, in all probability, the overall operative mortality would have been less. As experience has been gained with this lesion, the mortality for this procedure has decreased. In this series, for example, there has been only one operative death following pancreatoduodenectomy since 1954. The mortality following the Whipple operation by the senior author, including only patients with pancreatic and peripancreatic malignancies, is 12%; Howard recently reported 41 consecutive cases with no postoperative deaths.[2]

The long-term survival obtained in these patients following pancreatoduodenectomy compares well with other reported series, and confirms the impression that the Whipple operation is the procedure of choice for patients with this lesion. Results obtained are more gratifying than are the results of gastrectomy for carcinoma of the stomach or pneumonectomy for carcinoma of the lung insofar as long-term comfortable survival is concerned. The 39% five-year survival rate is gratifying, and the prognosis for the patient operated upon less than one year ago is favorable in that the lesion was extremely small and there was no invasion of the pancreas or evidence of metastasis at the time of operation. No patient with spread of tumor to lymph nodes or elsewhere survived as long as three years, but the three-year survival

in patients with negative nodes has been 70%.

Although carcinoma of the ampulla of Vater is not a common lesion, the response to pancreatoduodenal resection is such that there are more patients who have survived five years following treatment of this carcinoma than for any other malignant lesion producing obstructive jaundice. A survey done by one of us in 1961 showed 51 patients who had survived five years following pancreatoduodenectomy for carcinoma of the ampulla of Vater, as compared to only 23 for carcinoma of the pancreas and 13 for carcinoma of the duodenum.

These data support the concept that pancreatic resection can be performed with reasonable safety for carcinoma of the ampulla of Vater, and that the results of surgery are better than those following treatment of any other lesion producing obstructive jaundice.

REFERENCES

1. Hayden WG, Hightower NC Jr: Primary adenocarcinoma of the ampulla of Vater. Southern Med J 51:730-738, 1958.

2. Howard JM: Pancreatico-duodenectomy: forty-one consecutive Whipple resections without an operative mortality. Ann Surg 168:629-640, 1968.

3. Hunt VC, Budd JW: Transduodenal resection of the ampulla of Vater for carcinoma of the distal end of the common duct. Surg Gynec Obstet 61:651-661, 1935.

4. Mongé JJ, Judd ES, Gage RP: Radical pancreatoduodenectomy: 22 year experience with complications, mortality rate, and survival rate. Ann Surg 160:711-722, 1964.

5. Salmon PA: Carcinoma of the pancreas and extrahepatic biliary system. Surgery 60:554-565, 1966.

6. Warren KW, Braasch JW, Thum CW: Carcinoma of the pancreas. Surg Clin N Amer 48:601-618, 1968.

Drs. Jordan and Simons, Cora and Webb Mading Department of Surgery, Baylor College of Medicine, Houston, Tex 77025.

Air Embolism Following Subclavian Vein Catheterization

KENNETH L. MATTOX, MD
DONALD L. BRICKER, MD

A previously unreported complication of percutaneous subclavian vein catheterization is described. Massive air embolism was produced from positive-pressure ventilation, forcing air through a laceration in a pleural bleb into a puncture wound of the subclavian vein. The value of subclavian vein catheterization is recognized. However, one should be alert to this possible, but remote, complication if a patient receiving positive-pressure ventilation suffers a cardiac arrest following subclavian venotomy.

PERCUTANEOUS CATHETERIZATION of the subclavian vein has been a valuable clinical asset since 1952;[3] however, several complications secondary to this procedure have been reported.[6,10,11,20,24]

One potential complication is air embolism. This may occur when the syringe is removed from the catheter hub before the intravenous tubing is connected.[4,30] This should be prevented or minimized by placing the patient in the Trendelenburg position.[25] Defalque has suggested that, in any case, the few milliliters of air which might inadvertently enter the vein should be harmless.[10]

In the following case, massive air embolism occurred secondary to percutaneous subclavian vein catheterization from a previously undescribed mechanism.

Case Report: On March 31, 1969, a 25-year-old Negro woman was brought to the emergency room of Ben Taub General Hospital one hour after having sustained a .22 caliber gunshot wound to the left upper quadrant of the abdomen. She was in profound shock with agonal respirations and faint heart sounds. Her blood pressure and pulse rate were unobtainable, and her abdomen was distended.

Resuscitative efforts were instituted immediately. Endotracheal intubation and positive-pressure ventilation were accomplished. Simultaneously, venous portals were sought. With the patient in the Trendelenburg position, a needle was inserted into the left subclavian vein. The first attempt at vein penetration was successful, but attempts to thread a polyethylene catheter through the needle to the superior vena cava were unsuccessful. A right subclavian catheter was then placed successfully in the superior vena cava.

Heart sounds disappeared and a left thoracotomy was performed. There were pleural adhesions. The heart was massaged and the descending thoracic aorta was cross-clamped. The pericardium was entered and internal cardiac massage continued. The ventricles, especially the right, were filled with air and air beading was noted in the coronary arteries. The heart was in ventricular fibrillation. The apex of the

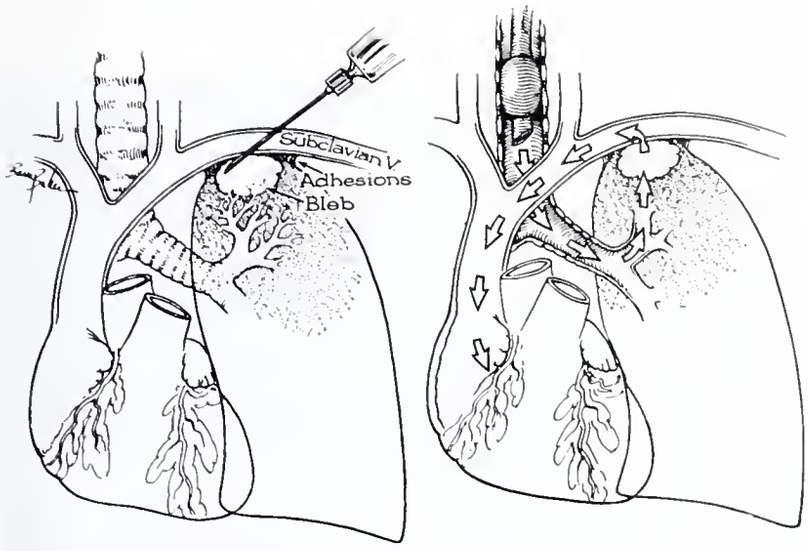


Fig 1. Mechanism of massive air embolism.

heart was elevated and a 16-gauge needle was inserted into the apex of the right ventricle. A large amount of air was aspirated. Despite vigorous resuscitative efforts, cardiac action could not be restored.

A medicolegal autopsy was performed. There was a gunshot wound to the left upper quadrant of the abdomen with the missile traversing the stomach, pancreas, and abdominal aorta, to lodge in the body of the second lumbar vertebra. There were 2,000 cc of blood in the retroperitoneal space. There were numerous left pleural adhesions with a 1 cm bleb in the left upper lobe. A 0.5 cm laceration was present in the bleb adjacent to a needle puncture wound in the left subclavian vein.

Discussion: In recent years, subclavian vein catheterization has gained popularity in monitoring the central venous pressure, blood sampling, drug injection, pacemaker insertion, hypercaloric alimentation, massive fluid replacement, heart catheterization, angiopneumocardiography, and cases with a paucity of peripheral veins.* Previously reported complications from this procedure include pneumothorax, hemothorax, arterial puncture, pleural laceration, thrombophlebitis, malposition of the catheter, catheter embolism, septicemia, dermatocellulitis, and brachial plexus injury.†

The case presented demonstrates another complication of percutaneous subclavian vein catheterization. In this instance the lacerated pleural bleb, pleural adhesions, and a venous penetration coupled with positive-pressure ventilation contributed to the production of massive air embolism (Fig 1). Air was forced under positive pressure from the bleb into the adjacent venous defect, the structures being held in approximation by surrounding adhesions. Other sources of air embolism were sought but discounted. There was no air in the intravenous tubings, and blood administered was in plastic containers. There were injuries to large veins produced by the gunshot wound, but those were not adjacent to hollow viscera. The patient was in the Trendelenburg position at the time of the subclavian vein catheterization and brisk back bleeding occurred immediately upon insertion of the needle into the vein and persisted until all connections were established.

Immediate resuscitation following gunshot wounds limited to the abdomen is attended by a high percentage of success in this hospital.[5] Unfortunately, even though this patient arrived with heart sounds, the addition of massive air embolism to an already compromised situation prevented restoration of cardiac action.

*1-4, 7, 9, 10, 13-24, 28-30

†2-4, 6-12, 14, 16, 17, 20, 21, 24, 25, 27-30

REFERENCES

1. Ashbaugh D, Thomson JW: Subclavian-vein infusion. Lancet 2:1138-1139, 1963.

2. Atik M: Application and proper interpretation of central venous pressure monitoring in the management of shock. Amer Surg 33:118-127, 1967.

3. Aubaniac R: L'injection intraveineuse sous-claviculaire; avantages et technique. Presse Med 60:1456, 1952.

AIR EMBOLISM

4. Baden H: Perkutan kateterisation af v. subclavia. Nord Med 71:590-593, 1964.

5. Beall AC Jr, Diethrich EB, Cooley DA, et al: Surgical management of penetrating cardiovascular trauma. Southern Med J 60:698-704, 1967.

6. Christensen KH, Nerstrom B, Baden H: Complications of percutaneous catheterization of the subclavian vein in 129 cases. Acta Chir Scand 133:615-620, 1967.

7. Corwin JH, Moseley T: Subclavian venipuncture and central venous pressure, technique and application. Amer Surg 32:413-415, 1966.

8. Davis WS, Akers DR: Catheterization of the subclavian vein: An unusual complication. Rocky Mountain Med J 64: 72-73, 1967.

9. Davidson JT, Ben-Hur N, Nathen H: Subclavian venepuncture. Lancet 2:1139-1140, 1963.

10. Defalque RJ: Subclavian venipuncture: A review. Anesth Analg 47:677-682, 1968.

11. Doering RB, Stemmer EA, Connolly JE: Complications of indwelling venous catheters, with particular reference to catheter embolus. Amer J Surg 114:259-266, 1967.

12. Druskin MS, Siegel PD: Bacterial contamination of indwelling intravenous polyethylene catheters. JAMA 185:966-968, 1963.

13. Dudrick SJ, Wilmore DW, Vars HM, et al: Can intravenous feeding as a sole means of nutrition support growth in the child and restore weight loss in an adult? An affirmative answer. Ann Surg 169:974-984, 1969.

14. Eastridge CE, Hughes FA Jr, Prather JR, et al: Use of central venous pressure in the management of circulatory failure. Review of indications and technic. Amer Surg 32:121-125, 1966.

15. Kalcev B: Subclavian venepuncture. Lancet 1:45, 1964.

16. Keéri-Szántó M: The subclavian vein. A constant and convenient intravenous injection site. Arch Surg 72:179-181, 1956.

17. Longerbeam JK, Vannix R, Wagner W, et al: Central venous pressure monitoring. A useful guide to fluid therapy during shock and other forms of cardiovascular stress. Amer J Surg 110:220-230, 1965.

18. Loskot F, Michaljanic A, Musil J: Right and left heart catheterization via the subclavian veins. Cardiologia (Basel) 46:114-128, 1965.

19. Malinak LR, Gulde RE, Faris AM: Percutaneous subclavian catheterization for central venous pressure monitoring. Application in obstetrics and gynecologic problems. Amer J Obstet Gynec 92:477-482, 1965.

20. Matz R: Complications of determining the central venous pressure. New Eng J Med 273:703, 1965.

21. Mogil RA, DeLaurentis DA, Rosemond GP: The infraclavicular venipuncture. Value in various clinical situations including central venous pressure monitoring. Arch Surg 95: 320-324, 1967.

22. Nordlund S, Thorén L: Catheter in the superior vena cava for parenteral feeding. Acta Chir Scandinav 127:39-45, 1964.

23. Schapira M, Stern WZ: Hazards of subclavian vein cannulation for central venous pressure monitoring. JAMA 201:327-329, 1967.

24. Smith BE, Modell JH, Gaub ML, et al: Complications of subclavian vein catheterization. Arch Surg 90:228-229, 1965.

25. Swinton NW Jr, Edgett JW, Hall RJ: Primary subclavian-axillary vein thrombosis. Circulation 38:737-745, 1968.

26. Tofield JJ: A safer technique of percutaneous catheterization of the subclavian vein. Surg Gynec Obstet 128:1069, 1969.

27. Vandeghen P, Daigneux D, Mutsers A: Le cathetérisme veineux par la vie sous-claviculaire (technique d'Aubaniac modifiée). Rex Franc Geront 10 (suppl):86-87, 1964.

28. Wilson JN, Grow JB, Demong CV, et al: Central venous pressure in optimal blood volume maintenance. Arch Surg 85:563-578, 1962.

29. Yarom R: Subclavian venepuncture. Lancet 1:45, 1964.

30. Yoffa D: Supraclavicular subclavian venepuncture and catheterisation. Lancet 2:614-617, 1965.

Dr. Mattox, 4614 Pin Oak, Bellaire, Tex 77401.

Dr. Bricker, Baylor College of Medicine, Houston, Tex 77025.

Senior Consultants
Perry C. Talkington, M.D.
Charles L. Bloss, M.D.

Psychiatrist-in-Chief
Howard M. Burkett, M.D.

Medical Director
James K. Peden, M.D.

Associate Psychiatrists
Jerry M. Lewis, M.D.
Claude L. Jackson, M.D.
Dode Mae Hanke, M.D.
Thomas H. Allison, M.D.
Maurice S. Green, M.D.
Doyle I. Carson, M.D.
Stanley L. Seaton, M.D.
Keith H. Johansen, M.D.
Charles G. Markward, M.D.
Joe W. King, M.D.
Claude R. Nichols, M.D.
Larry E. Tripp, M.D.
Aretta J. Rathmell, M.D.
Donald N. Offutt, M.D.

Clinical Psychology
David H. Lipsher, Ph.D.
John T. Gossett, Ph.D.
Dale R. Turner, Ph.D.
Robert W. Hagebak, Ph.D.

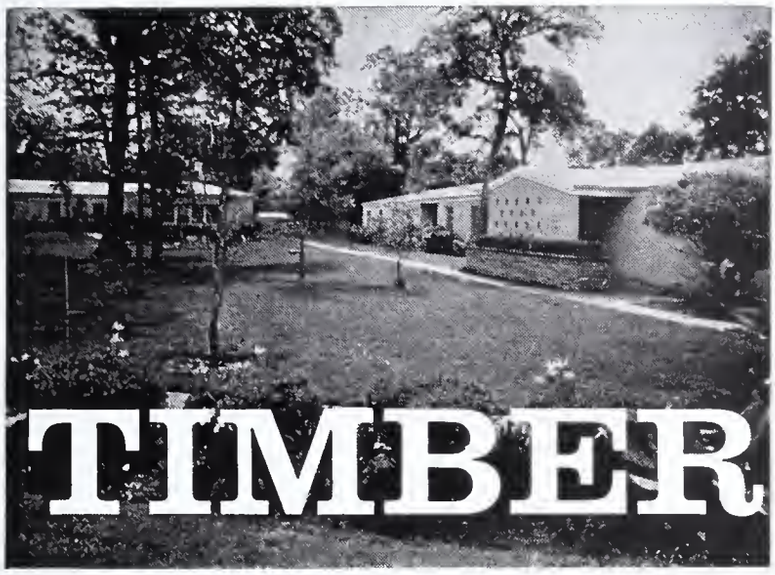
Social Work
Sally Stansfield, M.S.W.
Kathleen Wood, M.S.W.
Robert P. Stewart, M.S.S.W.
Margie W. Buell, M.S.S.W.
Cecilia Coffelt, M.S.S.W.
Lionel C. Landry, M.S.W.

Occupational Therapy
Geraldine Skinner, B.S., O.T.R., Director

Recreational Therapy
Lois Timmins, Ed.D., Director

Director of Nurses
Mae Belle James, R.N.

Administrator
Ralph M. Barnette, B.B.A.



PSYCHIATRIC HOSPITAL

DAY HOSPITAL

DEPARTMENT OF OUT PATIENT PSYCHIATRY

DEPARTMENT OF ADOLESCENT PSYCHIATRY

Narcotic Cases Not Admitted

TIMBERLAWN
PSYCHIATRIC HOSPITAL

381-7181 Dallas, Texas 75223 P. O. Box 11288

KELSEY-SEYBOLD CLINIC

6624 FANNIN STREET HOUSTON, TEXAS 77025

526-2671

INTERNAL MEDICINE

Endocrine and Metabolic Diseases
Mavis P. Kelsey M.D., F.A.C.P.
Alfred E. Leiser, M.D., F.A.C.P.

Pulmonary Diseases
Stanton P. Fiscber, M.D., F.A.C.P.

Gastrointestinal Diseases, Gastroscopy
John R. Kelsey, M.D., F.A.C.P.
Philip S. Bentlif, M.D., F.A.C.P.
Ralph D. Eichhorn, M.D., F.A.C.P.
F. Scott O'Neil, M.D., F.A.C.P.
James W. McBee, M.D., F.A.C.P.

Heart Disease and Cardiac Catheterization
Earl F. Beard, M.D., F.A.C.P.
Efrain Garcia, M.D., F.A.C.P.

Arthritis and Rheumatic Diseases
James W. Kemper, M.D., F.A.C.P.
Martin S. Fischer, M.D.

Hypertension and Peripheral Vascular Diseases
Gene E. Burke, M.D.

Cancer Chemotherapy
Carlos F. Taboada, M.D.

Nephrology
Francis X. Schloeder, M.D., F.A.C.P.

Hematology
Jerome B. Bart, M.D.

Infectious Diseases
Stuart Riggs, M.D., F.A.C.P.

Occupational Health Services
Paul E. Wright, M.D., M.P.H., F.A.C.P.
Maurice B. Johnston, M.D., F.A.C.Pr.M.
Richard M. Fenno, M.D., M.P.H., F.A.C.P.
Cannon A. Owen, M.D., F.A.C.S.
Edward A. Anderson, M.D., F.A.C.Pr.M.
William E. Froemming, M.D., F.A.C.Pr.M.

GENERAL & THORACIC SURGERY
William D. Seybold, M.D., F.A.C.S.
James D. McMurrey, M.D., F.A.C.S.
Jerry L. Doggett, M.D., F.A.C.S.

OBSTETRICS & GYNECOLOGY
Melville L. Cody, M.D., F.A.C.S.
William A. Johnson, III, M.D., F.A.C.O.G.

PSYCHIATRY
Chester G. Cochran, M.D.
*Ricardo Daichman, M.D.
William H. Boylston, M.D.
Manuel C. Ramirez, M.D.

PEDIATRICS

Rheumatology
Earl J. Brewer, Jr., M.D., F.A.A.P.

Allergy
Charles W. Ewing, M.D., F.A.A.P.
George D. Ferry, M.D.

OTO-LARYNGOLOGY
J. Charles Dickson, M.D., F.A.C.S.
James L. Smith, M.D., F.A.C.S.

NEUROLOGY
Robert R. Pierce, M.D.

DERMATOLOGY
Wilson M. Fraser, M.D., F.A.A.P.
Donald W. Owens, M.D.

UROLOGY
Don W. Pranke, M.D., F.A.C.S.
J. David Wright, M.D.

ORTHOPEDIC SURGERY
W. Malcolm Granberry, M.D.
Jesse H. Dickson, M.D.

OPHTHALMOLOGY
Henry E. Wahlen, M.D., D.A.B.O.

RADIOLOGY
David M. Rulfs, M.D.

PATHOLOGY
Robert A. Jordan, M.D.

DENTISTRY
Eugene W. Gray, D.D.S.

PSYCHOLOGY
Mrs. Ruth Blackman, M.A.
Cheryl Greathouse, M.A.

SPEECH PATHOLOGY AND AUDIOLOGY
Donna R. Fox Ph.D.
Carolyn C. Garcia, M.S.

CONSULTANTS

Maxillo Facial Surgery
Edward C. Hinds, M.D., D.D.S., F.A.C.S.

Psychiatry
Albert Owers, M.D.

Pulmonary Diseases
H. Irving Schweppe, Jr., M.D., F.A.C.P.

Nuclear Medicine
John A. Burdine, Jr., M.D.

Gastrointestinal Diseases, Gastroscopy
Theodore Hersh, M.D.

Occupational Medicine
Valliant C. Baird, M.D., F.A.C.Pr.M.

Podiatry
Levitt A. Peters, D.P.M.

SPECIAL FACILITIES
Radioisotope Laboratory
Registered Dietitian
Electroencephalography
Electrocardiography
Vectorcardiography
Registered Physiotherapist
Pulmonary Function Laboratory
Regional Immunization Center
FAA Examinations
Complete Endoscopy
Audiology Laboratory
Electrolysis

ADMINISTRATOR
James A. Bakken

*Military Service

HELP STAMP OUT THE HIGH COST OF SICKNESS

THE TEXAS MEDICAL ASSOCIATION'S GROUP OFFICE OVERHEAD PLAN WILL HELP PAY EXPENSES SUCH AS • **RENT** • **EMPLOYEES' SALARIES** • **PROPERTY TAXES** • **UTILITIES** • **MAINTENANCE SERVICES AND OTHER EXPENSES** WHICH YOU MUST STILL PAY WHEN DISABLED.

WRITE THE TEXAS MEDICAL ASSOCIATION FOR INFORMATION ON THE BROAD COVERAGE AVAILABLE THROUGH THE ASSOCIATION'S GROUP OFFICE OVERHEAD PLAN.

THE TMA OFFICE IS LOCATED AT 1230 WEST 19TH, AUSTIN, TEXAS 78701.

Underwritten By

Prudential

NEWS

Family Practice Board Sets Second Exam

The American Board of Family Practice will give its second examination for certification in various centers throughout the United States on Feb. 27-28, 1971.

Information regarding the examination and eligibility for the examination can be obtained by writing: Nicholas J. Pisacano, M.D., Secretary-Treasurer, American Board of Family Practice, Inc., University of Kentucky Medical Center, Annex No. 2, Room 229, Lexington, Ky. 40506.

Deadline for receiving completed applications in the board office is Nov. 1, 1970.

Hippocrates' Birthplace On Tour Itinerary

An 18-day European tour, geared especially for physicians, is being sponsored by The Alumni Association of The University of Texas Medical Branch.

Highlights will be a tour of the island where Hippocrates was born, and a dinner at the Royal College of Surgeons in London.

Departing from New York on Sept. 21, travelers will arrive the next day in Rome and continue to Athens for two full days of sightseeing. An overnight trip to the island of Kos will give physicians an opportunity to visit the remains of Hellenistic and Byzantine sanctuaries, the castle of the Knights, Turkish mosques and fountains. By the 18th century mosque is an ancient plane tree named for Hippocrates, the "Father of Medicine," who was born on the island.

From Kos the tour will proceed to Rome, Florence, Venice, Paris, and finally to London; just before the flight home, tour participants will attend a dinner being given for them at the Royal College of Surgeons.

Cost of the tour is $995 per person; it departs New York Sept. 21, 1970, and returns there Oct. 8. For further information contact Mildred M. Robertson, Executive Secretary, Alumni Association, The University of Texas Medical Branch, Galveston, Texas 77550.

Research To Continue On Artificial Heart

A $1,047,000 grant from the National Heart and Lung Institute will be awarded to Baylor College of Medicine over a three-year period for the interscience research program project conducted by Baylor, Rice University, and Methodist Hospital to continue research on an artificial heart.

The research is conducted in the Taub Laboratories for Mechanical Circulatory Support. Principal investigator is Dr. John Hines Kennedy, director of the Taub Laboratories and professor of surgery. He said the program will involve 31 faculty members at Baylor and the Bioengineering Laboratories at Rice University, where Dr. Kennedy serves as adjunct professor of biomedical engineering.

Correction

Dr. Ronald J. Catanzaro's correct address is 244 Eighth Street, West Palm Beach, Fla 33401. In the July issue his address appeared incorrectly at the end of his article, "Group Therapies in the Problem Habit, Alcoholism."

Fellowships Available

Cardiopulmonary Institute of Methodist Hospital, in conjunction with The University of Texas (Southwestern) Medical School at Dallas, reports that one-month full-time fellowships are available in pulmonary physiology and pulmonary medicine. The fellowships carry a stipend of $1,000 and the opportunity to achieve additional training in the field. Applications and curriculum vitae should be sent directly to: William F. Miller, M.D., Professor of Medicine, Cardiopulmonary Institute of Methodist Hospital, P.O. Box 5999, Dallas, Texas 75222.

Task Force Studies Medical Curricula

Chancellor-elect Charles A. LeMaistre of The University of Texas System has appointed a task force which will make "definitive recommendations" in reducing the time required of students to complete medical and dental curricula.

There are two basic elements involved in reorganization of students' time, Dr. LeMaistre said.

The first is development of an appropriate program at the general academic institutions in the UT System which will allow the preprofessional school requirements to be completed in two years for exceptional students, in three years on a routine basis, and in four years at the discretion of the student.

The second aspect of the program is development of revised curricula at the medical schools which will routinely allow the completion of that curriculum in no more than 36 months.

Dr. LeMaistre said that each medical school is currently developing programs along this line, but the task force will expedite the implementation of this accelerated program.

The group is headed by Dr. P. O'B. Montgomery, special assistant to Dr. LeMaistre. Dr. Kenneth H. Ashworth, UT System vice chancellor for academic affairs, Dr. Donald A. Larson, UT Austin professor of botany and director of education for the health professions in the College of Arts and Sciences, and Frank Graydon, System budget officer, will serve as ex officio members.

Members of the task force are Dr. Richard Timmer, associate dean at the Galveston Medical School; Dr. Fred Taylor, associate dean at the San Antonio Medical School; Dr. Ronald Estabrook, professor and chairman of biochemistry at the Dallas Medical School, and Dr. Cheves Smythe, dean of the Houston Medical School.

★

Specialized Service

IN

PROFESSIONAL LIABILITY INSURANCE

is a high mark of distinction

THE

MEDICAL PROTECTIVE COMPANY

FORT WAYNE, INDIANA

Professional Protection Exclusively since 1899

AUSTIN OFFICE: Robert F. Reiman, Representative
3201 Clearview, Austin 78703 Telephone: 512-472-9603
DALLAS OFFICE: Gayle Nelson and Arthur F. Ennis, Jr., Representatives
816 Medical Arts Building, Dallas 75201 Telephone: 214-742-4980
HOUSTON OFFICE: Richard B. Ross and William A. Orsburn, Representatives
525 Hermann Professional Bldg., Houston 77025 Telephone: 713-523-1127

Turner's Clinical & X-Ray Laboratories

Medical Center

El Paso, Texas

Telephone 532-4689

☆

SURGICAL PATHOLOGY
CLINICAL PATHOLOGY
RADIOLOGY

☆

GEORGE TURNER, M.D.
JEANNE TURNER BOWMAN, M.D.
DAVID LIBMAN, M.D.
DAVID STERCK, M.D.

The Martin X-Ray and Radium Clinic

3501 Gaston Ave. Dallas, Texas

ADJOINING
GASTON EPISCOPAL HOSPITAL

For X-ray diagnosis and the X-ray and radium treatment of cancer and other conditions suitable for radiation therapy.

Chas L. Martin, M.D. James A. Martin, M.D.

Public Health Positions Confirmed by State Board

The Texas State Board of Health has appointed three physicians to fill public health posts.

Dr. George A. Hurst has been named superintendent of the East Texas Tuberculosis Hospital at Tyler. Since the resignation of Dr. Sam Topperman in February, Dr. Hurst has served as acting superintendent. He has been on the hospital staff since 1964.

Dr. Robert B. Skinner of Austin is the new acting director for the statewide tuberculosis control program, and Dr. Albert G. Randall of Austin has been appointed director of the Houston City Health Department.

Basic Science Exam Set

The next examination of the Texas Board of Examiners in the Basic Sciences has been set for Monday and Tuesday, Oct. 12-13, 1970, in Austin.

Details on time and place may be obtained by writing to the executive secretary, 1012 State Office Building, Austin 78701.

Applications for the October examination must be complete and in this office by Sept. 15, 1970, and all necessary information and documents required of examinees by the Board must be completed and in the applicant's file by that date. Those interested in participating in this examination should act immediately.

It should be noted that the certificate which is acquired by examination is the only one which is valid for reciprocity with other state basic science boards. The Texas Basic Science Board has reciprocity with the following states: Alabama, Alaska, Arkansas, Colorado, Iowa, Michigan, Minnesota, Nebraska, Nevada, Oklahoma, Oregon, Rhode Island, South Dakota, Tennessee, Washington and Wisconsin.

Family Planning Funded

The American College of Obstetricians and Gynecologists has received a grant of $615,457 from the Office of Economic Opportunity to fund and administer pilot family planning programs in selected hospitals across the country.

The ACOG plans to contract with ten geographically distributed hospitals to set up postpartum programs in family planning to serve as pilot-demonstration models.

What Makes TMA Annual Sessions Run?

Dale Willimack
TMA Coordinator
of Annual Sessions

Back-stage efforts before the final production make the Annual Session of Texas Medical Association one of the best-attended medical meetings in the country.

The physician has plenty to leave home for—some 300 speakers, many symposiums, seminars, and conferences; some 175 exhibits; an art show; film program; sports; and entertainment. Approximately 4,500 persons attend each year.

Prior to the four-day spring session, months of planning and preparations have taken place. The Council on Annual Session, which supervises preparations of the annual session program, actually begins arrangements for the current meeting five years before with the selection of dates and host city. The program planners have found use of the calendar is vital when selecting dates. Local celebrations, religious observances, national holidays, elections—all have an influence on travel itineraries, menus, entertainment, and attendance. Selecting an appropriate date for the TMA meeting often becomes a challenge because of numerous other medical meetings scheduled throughout the year. Surveys show that Texas Medical Association members prefer to meet in the spring, and Thursday through Sunday during the second week in May is now being sought whenever possible.

Plan: Set date that will be convenient five years hence. Avoid conflicts.

In selecting the host city, the Council on Annual Session has established guidelines for evaluating convention facilities to meet the requirements of the Session. To date, facilities in three cities have met these guidelines; Dallas, Houston, and San Antonio host the convention in rotation now. Austin, Fort Worth, Galveston, and other cities are periodically inspected in the interest of adding these cities to the rotation schedule. The Inspection Committee, composed of Council and staff members, seeks facilities that are in a central location and readily accessible to a great number of physicians. Accessibility for travel from outside and inside the city is important. Specifically, an attempt is made to secure facilities to meet the following requirements:

1. Scientific Convention Center

The facility which will be the site of scientific programs should have a minimum of 14 meeting rooms. These rooms should accommodate groups ranging from 75 to 400 people. Ideally, the convention facility should have 18-20 meeting rooms in order to provide accommodations for the Association's 13 scientific sections and the 28 specialty and related medical societies. The Convention Center must provide a minimum of 25,000 square feet of space for exhibits. Meeting rooms should have good acoustics, and it should be possible to darken these rooms for slide and film presentations.

2. Guest Rooms

The Texas Medical Association requires 1,500 first-class hotel or motel rooms for its members and guests. These rooms should be located in hotels or motels within reasonable commuting distance of the convention facility.

3. Headquarters Hotels

The Association likes to have three separate headquarters hotels—one for the scientific meeting, a second for business meetings of the House of Delegates, and a third for the convention of the Woman's Auxiliary. The headquarters hotel for scientific meetings should be located adjacent to or very near the convention facility where the scientific program will be held. Ideally, the three headquarters hotels should be located within reasonable proximity of each other, and near the site of the convention facility.

The headquarters hotel for the House of Delegates must have a minimum of 250 guest rooms which it can commit to the Association. Ideally, 500 guest rooms are needed for delegates, alternate delegates, the official family of the Association, the headquarters staff, and officers of county societies. The headquarters hotel for delegates must have at least 10 meeting rooms, each seating 40 or more. It also should have a large ballroom adequate for meetings of the House of Delegates.

The headquarters hotel for scientific meetings should commit a minimum of 400 guest rooms; ideally 500-600 rooms or more can be used. This hotel should have at least six good-sized meeting rooms.

The headquarters hotel for the Woman's Auxiliary requires 150 guest rooms minimally; ideally, 250 guest rooms or more are desired. This hotel should provide at least three rooms

Plan: Find enough of the right kind of space. Put it all pretty close together.

which can accommodate 100 persons each as well as a ballroom for 400.

In evaluating facilities, various hotels and convention centers are visited. Although the Inspection Committee is appreciative of such things as Irish linen hand towels, floor-to-ceiling windows, an electric shoe buffer and a personal alarm clock in each room, practical considerations such as expeditious parking garage service, fast and convenient check in-check out; early opening of hotel restaurant for breakfast; ample elevators to handle crowds at peak convention periods; well lighted and clearly-identified meeting rooms are investigated. Special attention is given to meeting rooms that can be sufficiently blacked out for movies and slide presentations that are particularly important for the TMA meeting.

In addition to considering these requirements, program planners check on such items as storage space for equipment and supplies, rehearsal time privileges, sound systems, lights, podiums, adequate hotel staffs, room rates, union relations, food and beverage prices. Legal regulations and license requirements can affect a meeting and these are determined from city, hotel, and chamber of commerce officials. Alcoholic beverage service, community practices restricting meeting activities, specific policies regarding convention groups, special loading or unloading hours at hotels and licenses or permits needed are considered.

Once the day and place are established, development of the program begins. Internally, of course, word is passed along to the program chairmen working on the meeting. Three or four planning meetings are held throughout the year to check progress and coordinate arrangements. Much of the work is done through correspondence. Out-of-state guest speakers are invited by the majority of the groups, and letters regarding topics, photographs, biographical information, summaries, manuscripts, hosts, expenses, and special considerations are written. Each year, some 35 out-of-state guests, sponsored by sections, committees, and related organizations, participate in the meeting. In addition, approximately 60 special speakers (nonmembers such as Ph.D.'s, technicians, nurses, attorneys) take part in the Session. And, in addition, the TMA Annual Session provides a forum for some 200 members to present their work to colleagues.

Organizations, such as the chamber of commerce and the convention bureau, are notified of the date and place of the TMA meeting. These groups are greatly interested in its success. Most large cities have convention bureaus and their personnel want to help; they often provide registration equipment and supplies; clerical help to assist with registration; promotional items

Plan: Program carefully. Respect mechanical, spatial, electrical, legal, temporal, and human limits.

regarding the host city; handling of housing for registrants; and assistance with auxiliary programs. Definite commitments are made for services needed.

Details regarding meeting room assignments for the various meeting and meal functions are worked out with the headquarters hotels. Physical setup of the room, including such items as podium, platform, blackboard, mike, seating capacity; flowers; menu; guarantees are discussed. Receptions and cocktail parties often present a challenge. Deciding just how much liquor and how many hors d'oeuvres will be consumed can be difficult. Clues, such as knowing that an average person will have three drinks in an hour and a half; a fifth of liquor will make 17 1-1/2 ounce drinks, etc., will help in setting guarantees with hotels and assuring that you get your money's worth.

The host city plays a major role in the success of the Session. Meetings are held with the host medical society's general arrangements committee to work out details on special entertainment for registrants; tours; sports; alumni, fraternity and class reunions; and information on the host city.

Promotion of the meeting begins about eight months prior to the Session, publicizing the meeting in general and highlighting outstanding features of the Session. Special mailings regarding housing and encouraging advance registration and ticket sales are sent out. Realizing that no one comes 500 or 600 miles just to go to a convention, the promotional appeals are varied—from visiting with colleagues or voicing an opinion of personal concern to achieving an educational experience.

Recognizing the importance of providing a good technical and scientific exhibition for physicians, much attention is given to the exhibit areas of the TMA Session. Representatives from the pharmaceutical industry, business equipment companies, insurance and investment companies are invited to present information and demonstrations—providing the physician some valuable short courses in continuing education. Staff members in charge of the exhibit hall are alert to provide ample time for move in-move out of exhibits. Other items such as the following must be determined: freight elevator limits, city ordinances on loading and unloading, electrical system, outlets (electrical, gas, water), security, theft and liability insurance, janitor service, special registration of exhibitors, courtesy functions for exhibitors, promotion during the meeting to visit exhibits, signs, availability of restrooms and telephones, traffic flow, and liaison with decorator and drayage firms.

The pitfalls of planning an Annual Session are great. But the rewards are greater. In the beginning, some meeting planners feel they are working against insurmountable odds in achieving a successful meeting. There *is* a pyramid of details to handle and it

Plan: Enjoy it—but make notes for next year!

is a slow, tedious climb to convention time. But when we have done our program homework, handled the details, picked effective speakers, informed all concerned, we know we will have a successful meeting. And, when the convention actually begins to unfold, the task is a pleasant one—serving as host and welcoming the registrants to the Annual Session.

1970 Conference on Medical Practice and Orientation Program

Saturday, September 19 • 9 am to 1 pm • TMA Building • Austin

WHO	WHAT	WHERE	WHEN
	Registration, Coffee	Reading Room	8:30 a.m.
Walter Walthall, MD, San Antonio President Texas Medical Association	Goals and Challenges for Medicine	Sam Thompson Room	9:00 a.m.
John R. Kernodle, MD Burlington, N C Vice Chairman, Board of Trustees American Medical Association	Medicine's Positive Response to Public Criticism Against Physicians	Sam Thompson Room	9:20 a.m.
Michael J. Halberstam, MD Washington, D C Practicing Physician	America's "Non-System" of Medical Care; the Individual Physician's Response	Sam Thompson Room	9:50 a.m.
George J. Lawrence, Jr, MD Flushing, N Y Chairman, Board of Directors AMPAC	The 1970 National Election; Its Potential Impact Upon Shaping Medical Practice in the Future	Sam Thompson Room	10:20 a.m.
Max Wildman, LLB, Chicago Senior Partner Wildman, Harrold, Allen & Dixon	Medical Trials and Tribulations	Sam Thompson Room	10:50 a.m.
	Coffee Break	Reading Room	11:20 a.m.
*	The Physician and the Hospital; Current Issues and Interests	Sam Thompson Room	11:35 a.m.
*	Orientation Program	Library Stack Area	11:35 a.m.
Compliments of TMA	Luncheon	Basement	1:00 p.m.
Texas vs California	Football Game	Memorial Stadium	4:00 p.m.
Host: TMA Group Insurance Plans	Evening Cruise on Lake Austin, Riverboat Commodore	3700 Block, Lake Austin Blvd.	7:30 p.m.

*COMPLETE PROGRAMS ON NEXT PAGE →

The Physician and the Hospital; Current Issues and Interests

WHO	WHAT	WHERE	WHEN
G. V. Brindley, Jr, MD Temple, TMA Past President	**Presiding**	Sam Thompson Room	11:35 a.m. until
Robert Mayo Tenery, MD Waxahachie, Chairman, TMA Council on Constitution and By-Laws	**1. Staffing Patterns for Hospital Emergency Rooms**	Sam Thompson Room	1:00 p.m.
Philip R. Overton, LLB, Austin TMA General Counsel	**2. Consideration of Osteopaths for Hospital Staff Privileges**	Sam Thompson Room	
Charles Max Cole, MD, Dallas TMA Immediate Past President	**3. Physician Representation on Hospital Governing Boards; Medical Staff Rights and Responsibilities**	Sam Thompson Room	
William F. Ross, MD, San Benito Chairman, TMA Committee on Hospital Accreditation	**4. The Revised Standards of Hospital Accreditation; Their Impact upon Practicing Physicians and Medical Staffs of Hospitals**	Sam Thompson Room	
Panelists, Audience	**Questions, Answers, Group Discussion**	Sam Thompson Room	

Orientation Program

WHO	WHAT	WHERE	WHEN
Wendell H. Hamrick, MD, Houston Speaker, TMA House of Delegates	**Presiding**	Library Stack Area	11:35 a.m.
James A. Hallmark, MD, Fort Worth Member, TMA Board of Trustees	**An Accounting of Stewardship; What Happens to Your Dues**	Library Stack Area	11:35 a.m.
Charles B. Dryden, Jr, MD Wichita Falls, Chairman, TMA Board of Councilors	**Medical Ethics—Obligations of the Physician to His Colleagues and to the Medical Profession**	Library Stack Area	11:55 a.m.
C. Lincoln Williston, Austin TMA Executive Secretary	**The Role of the Texas Medical Association in Representing the Physicians of the State**	Library Stack Area	12:15 p.m.
Donald M. Anderson, Austin TMA Assistant Executive Secretary	**Serving the Doctors of Texas**	Library Stack Area	12:40 p.m.

THE LEADING MANUFACTURER OF INSULIN SYRINGES

B-D

BECTON, DICKINSON AND COMPANY
RUTHERFORD, NEW JERSEY 07070

FREE CLINICAL SUPPLY

PLASTIPAK
INSULIN SYRINGE/NEEDLE UNITS

Send samples to:

Name _____
(Physician's Signature

Address _____

City _____ State _____ Zip _____

Clip out postcard on dotted line . . . no stamp required

Now you can lower the risk of insulin error when your patient is home . . . and alone

B-D

SINGLE-USE
PLASTIPAK
INSULIN SYRINGE/NEEDLE UNIT

8401 RED CAP u40

8406 GREEN CAP u80

as specific as insulin itself

Postage will be paid by Addressee

No postage stamp necessary if mailed in the United States

BUSINESS REPLY MAIL
First Class Permit No. 134, Fairview, N.J.

Becton-Dickinson and Company
Consumer Products Division
P.O. Box 183
Fairview, New Jersey 07022

THE LEADING MANUFACTURER OF INSULIN SYRINGES

B-D

BECTON, DICKINSON AND COMPANY
RUTHERFORD, NEW JERSEY 07070

Clip coupon on dotted line . . . fill out other side send for physician's free samples

color-coded caps and numbers—red for U40, green for U80

presterilized—consistently dependable, and sterility is assured until cap is opened

easy-to-hold, easy-to-handle—even for child diabetics with small hands or adults with stiff fingers

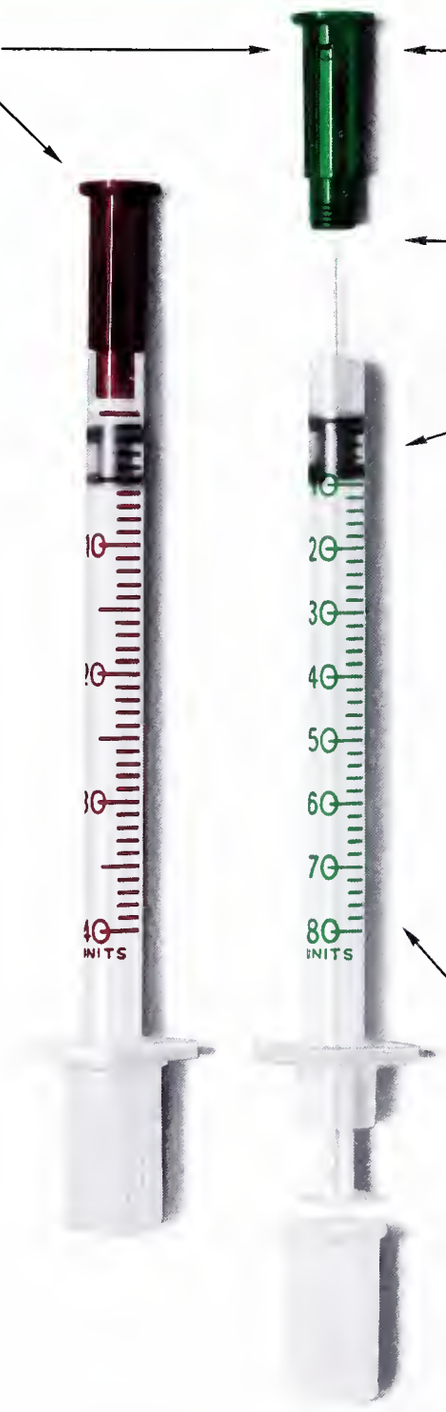
the sharpest needle your patient can buy—far sharper than any reusable needle

pocket-or-purse portable—sturdy from tip to top

integral cannula reduces air bubbles

single-scale PLASTIPAK insulin syringe needle units eliminate the hazard of reading the wrong scale

the first insulin syringe so low in cost your patient can use a new one every time



low cost—barely pennies higher than old-fashioned disposable needles without syringe . . . about as low as a cup of coffee

its single-scale—U40 or U80—minimizes the risk of measurement errors. Your patient *can't* read the wrong scale.

big numbers, wide spaces for easy reading

Supplied: in packages of 10—PLASTIPAK syringe U-40 (red) or PLASTIPAK syringe U-80 (green) Prescription required in most states.

BECTON DICKINSON B-D
Consumer Products Division
Becton, Dickinson and Company
Rutherford, New Jersey 07070

U40 U80

-D and PLASTIPAK are trademarks.

Printed in

Increased Number Of Physicians Licensed

Medical licensure statistics show that 212 more physicians received their first licenses in 1969 than in 1968. Figures cited in the 68th annual report of the AMA Council on Medical Education show that 9,978 new physicians were licensed last year in the U. S., including 2,307 graduates of foreign medical schools.

As of Dec. 31, 1969, there were 328,726 physicians in the United States, of which 259,046 were licensed; this is a net gain after deaths and retirements of 7,554 since the same date in 1968.

New York State had the greatest number of new physicians (1,318) receiving their first licenses, and four other states including Texas issued more than 300 initial licenses in 1969.

Baylor Fills Posts

Two newly-created positions have been filled at Baylor College of Medicine in Houston. Dr. Joseph Merrill has been elected as executive vice president and Ralph E. Frede has been named director of development and public relations.

Dr. Merrill will also continue as associate dean for scientific affairs and professor of medicine. His new position places him as second in authority behind Dr. Michael E. DeBakey, president of Baylor.

PAMPHLETS

Drug Abuse and Your Child discusses some of the reasons why young people turn to drugs; alerts parents to signs of drug abuse; summarizes basic information about various drugs; and suggests what can be done to prevent drug use and to help a child get off drugs if he is using them. Copies of this Public Affairs Pamphlet (no. 448) are 25 cents each and are available from the Public Affairs Committee, 381 Park Avenue South, New York, N. Y. 10016.

Another pamphlet, *A Summary for Parents and Students on the Subject of Teenage Drug Abuse,* presents in outline form some of the dangerous drugs, narcotics, and volatile chemicals that are being used, and briefly describes some of their harmful results. Use of vivid color and cartoon-type drawings provides visual impact which may attract youngsters who would not read the material in a more conventional format. Useful for parents and students alike, the booklet contains sound information and a definite message: Drug abuse is illegal, harmful, and stupid. Copies are available from Linda Lamb Non-profit Enterprises, P. O. Bin No. 56, Pasadena, Calif. 91109. The price is 50 cents each, or 20 cents each for 100 or more, plus 5% sales tax.

Quiet Cries is a new play about suicide and suicide prevention, and is designed for presentation by amateur drama groups at community group meetings, PTA meetings, schools churches, YMCA workshops, conferences, etc. Published by the National Institute of Mental Health, Health Services and Mental Health Administration, the play is intended to give the public a greater awareness of the extent and seriousness of the problem of suicide, and to help people recognize the factors involved in suicide prevention. A reading copy will be sent free on request to the Center for Studies of Suicide Prevention (Information Services), National Institute of Mental Health, 5454 Wisconsin Ave., Chevy Chase, Md. 20015.

The newly revised 16th edition of the *Report of the Committee on Infectious Diseases* is now available from the American Academy of Pediatrics. The new edition includes more detailed information concerning active and passive immunization, special requirements for foreign travel, and immunization information such as personal records, simultaneous administration of live virus vaccines, immunizations of children in institutions and day care centers, and immunization of children with neurologic disorders. The following diseases appear for the first time in the publication: blastomycosis, botulism, cryptococcosis, hemorrhagic fevers, listeriosis, malaria, nocardiosis, giardiasis, schistosomiasis, and plague. Copies of the manual may be obtained from the academy for $2, and a 10% discount is allowed for the purchase of six or more copies. Quantity prices are available upon request. Write to Publications, American Academy of Pediatrics, P. O. Box 1034, Evanston, Ill. 60204.

PERSONALS

Dr. John V. Connolly has been appointed medical director of Project HOPE in Laredo, and will work with the paramedical teaching team there.

Three El Paso physicians have received outstanding civilian service medals and certificates from the Department of the Army. Since 1946, all three have been consultants at William Beaumont General Hospital: **Dr. Willard W. Schuessler,** plastic surgery; **Dr. Wickliffe R. Curtis,** urology and urological surgery; and **Dr. Louis Breck,** orthopedic surgery.

Dr. Charles A. LeMaistre of Austin has been named chancellor-elect of The University of Texas System. Dr. LeMaistre is a member of the Texas Medical Association's Council on Medical Education and Hospitals.

Dr. J. Richard Crout of Dallas has been named a member of a scientific advisory committee established by the Food and Drug Administration.

Dr. Daniel W. Foster, associate professor of internal medicine at The University of Texas (Southwestern) Medical School at Dallas, has been appointed chairman of the metabolism study section of the Division of Research Grants, National Institutes of Health. The appointment for the two-year term began July 1.

Newly-elected chairman of the National Medical Advisory Board of The Myasthenia Gravis Foundation, **Dr. William S. Fields** of Houston, presided during the board's semi-annual meeting in Atlantic City in June.

Dr. Mary Ann South, assistant professor of pediatrics at Baylor College of Medicine, Houston, has been granted the third renewal of a $21,500 grant to continue research on lack of immunity to disease. The National Institutes of Health awarded the grant.

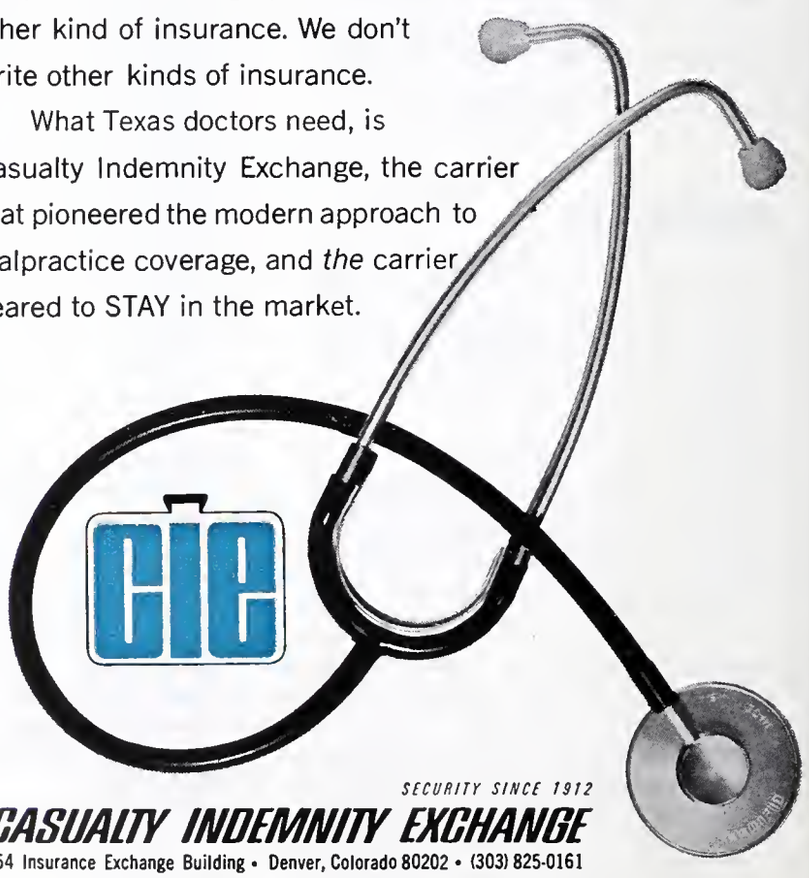
Dr. Joseph L. Melnick, chairman of the Baylor Department of Virology and Epidemiology, has received an annual grant of $127,400 for the development and application of methods by which laboratories could monitor viruses in surface waters anywhere in the nation or the world. The Federal Water Pollution Control Administration, US Department of the Interior, made the grant.

What Texas doctors need, is a Malpractice Liability Carrier that won't fade when trouble comes.

Contact your local agent or
RUSSELL GRACE INSURANCE
2304 W. 7th St.
Ft. Worth, Texas 76107
(817) 332-9269
In Dallas, Call
(214) 264-4300

This means the up-to-date carrier. The one that's replete with innovations and new developments in this clouded, sensitive area of liability protection. And the one that doesn't talk malpractice coverage just to get a foot in the door for every other kind of insurance. We don't write other kinds of insurance.

What Texas doctors need, is Casualty Indemnity Exchange, the carrier that pioneered the modern approach to malpractice coverage, and *the* carrier geared to STAY in the market.



SECURITY SINCE 1912
CASUALTY INDEMNITY EXCHANGE
754 Insurance Exchange Building • Denver, Colorado 80202 • (303) 825-0161

Fractures, Dislocations: Atlas Useful for Nonspecialists

The Management of Fractures and Dislocations, Anthony DePalma, 1714 pp., illus., Philadelphia, W. B. Saunders Co., 1970, $52.

IN THE SECOND edition of this widely used atlas on fractures and dislocations, the original format is unchanged—simple sentence outline forms of the management of common orthopedic problems. However, added to this cookbook style have been discussions on the mechanism of injury and associated local conditions in fractures. A large section on hyperextension cervical spine injuries also is an addition.

The chief weakness is a lack of any radiographic reproductions, which is unfortunate for an orthopedic surgery atlas. Somewhat mitigating this lack is the quality of the medical illustrations, more than 1,000 of which have been added to this second edition. Another weakness is the author's tendency to present only one way to handle each problem. For example, only the Magnuson procedure is described for recurrent anterior shoulder dislocation, and only a modification of Kocher's method for acute dislocations.

Nevertheless, DePalma's book is a convenient, how-to-do-it reference for the physician not trained in orthopedic surgery. It is widely used by beginning orthopedic house staff members, and is recommended for any general physician who will be handling fractures and dislocations.

FRANK W. BERTRAM, M.D.,
Austin.

A Way of Life, William Osler, 41 pp., Springfield, Ill., Charles C Thomas, 1969, $3.95.

IN APRIL, 1913, Sir William Osler delivered a lecture to the undergraduates of Yale University, which urged them to " . . . live in day-tight compartments." This philosophy, unique in its day, advocates a new concept for coping with the mounting strains of living. He concluded his address, " . . . Perhaps this slight word of mine may help some of you to number your days that you may apply your hearts unto wisdom." It is well worth reading and rereading.

ROBERT W. PAPE, M.D.,
Austin.

Basic Mechanisms of the Epilepsies, Herbert H. Jasper, Arthur A. Ward, Jr., and Alfred Pope, eds., 814 pp., Boston, Little, Brown and Company, 1969, $30.

THIS MONOGRAPH attempts to bring together on a current basis a body of data and concepts relevant to epilepsy.

The articles are written primarily by authors of research background. Clinicians without such a background will have difficulty digesting the tremendous quantity of material; condensed in this publication are some 30 articles from more than 60 contributors. Frequent use of abbreviations, labels, and formulas makes the publication especially difficult to read.

Basic material involving anatomy, chemistry, and theory are discussed and referred to throughout the monograph. Reports of research in the field of basic cell function are tremendously impressive as to the quantity and quality of the research being done. It is emphasized that with newer and more sophisticated research techniques, many of the heretofore unanswered questions of chemistry, cellular physiology, action of anticonvulsants, and basic mechanisms in epilepsy are being answered.

This collection is an extremely valuable source of information for the serious student of epilepsy with a strong research background. It is doubtful that the average practitioner would find extensive use for these well-written but highly technical presentations.

JAMES D. MALONE, M.D.,
Fort Worth.

NEW BOOKS IN TMA LIBRARY

Ackerman, N.: *The Psychodynamics of Family Life,* New York, Basic Books, 1958.

American Medical Association: *Drug Dependenee: A Guide For Doctors,* Chicago, American Medical Association, 1969.

Annan, G. L., and Felter, J. W.: *Handbook of Medieal Library Practice,* Chicago, Medical Library Association, 1970.

Baker, J. J., and Allen, G.: *The Process of Biology: Primary Sourees,* Reading, Mass., Addison-Wesley, 1970.

Boesen, E., and Davis, W.: *Cytotoxic Drugs in tlie Treatment of Caneer,* London, Edward Arnold, 1969.

Cole, W. H., ed.: *Chemotherapy of Caneer,* Philadelphia, Lea & Febiger, 1970.

Cowan, C., ed.: *Basie Human Bioehemistry,* New York, G. P. Putnam's Sons, 1963.

Craig C. F., and Faust, E. C.: *Clinical Parasitology,* Philadelphia, Lea & Febiger, 1970.

Daniel, W. A.: *The Adolescent Patient,* St. Louis, C. V. Mosby, 1970.

Department of Health, Education, and Welfare: *Independent Praetitioners Under Medieare,* Washington, D.C., Department of Health, Education, and Welfare, 1967.

Division of Planning Coordination: *Intergovernmental Relations and Regional Planning Workshop,* Austin, Division of Planning, 1969.

Easson, W. M.: *The Severely Disturbed Adolescent,* New York, International Universities Press, 1969.

Fallis, B. D., and Ashworth, R. D.: *Textbook of Human Histology,* Boston, Little, Brown and Co., 1970.
Faulkner, W. R., and King, J. W., eds.: *Manual of Clinical Laboratory Procedures,* ed. 2, Cleveland, Chemical Rubber Co., 1970.
Giannestras, N. J.: *Foot Disorders: Medical and Surgical Management,* Philadelphia, Lea & Febiger, 1967.
Goulett, H. M.: *The Insanity Defense in Criminal Trials,* St. Paul, West Publishing Co., 1965.
Guyton, A. C.: *Textbook of Medical Physiology,* Philadelphia, W. B. Saunders Co., 1969.
Haj, F.: *Disability in Antiquity,* New York, Philosophical Library, 1970.
Hassler, R., and Walker, E.: *Trigeminal Neuralgia,* Philadelphia, W. B. Saunders Co., 1970.
Hentoff, N.: *A Doctor Among the Addicts,* Chicago, Rand McNally, 1968.
Heseltine, G.F.D., ed.: *Psychiatric Research in Our Changing World,* Amsterdam, Excerpta Medica Foundation, 1969.
Hueper, W. C.: *Occupational and Environmental Cancers of the Urinary System,* New Haven, Yale University Press, 1969.
Kempe, L. G.: *Operative Neurosurgery,* vol. 2, New York, Springer-Verlag, 1970.
Kubik, S.: *Surgical Anatomy of the Thorax,* Philadelphia, W. B. Saunders Co., 1970.
Kugelmass, I. N.: *The Autistic Child,* Springfield, Ill., Charles C Thomas, 1970.
Kwapinski, J. B. G., ed.: *Analytical Serology of Microorganisms,* vol. 2, New York, Interscience, 1969.
Loomis, W. P., ed.: *Papers on Regulation of Gene Activity During Development,* New York, Harper & Row, 1970.
MacInnis, A., and Voge, M.: *Experiments and Techniques in Parasitology,* San Francisco, W. H. Freeman & Co., 1970.
Margulis, A. R., and Burhenne, H. J., eds.: *Alimentary Tract Roentgenology,* 2 vols., St. Louis, C. V. Mosby Co., 1967.
Meynell, G. G., and Meynell, E.: *Theory and Practice in Experimental Bacteriology,* ed. 2, Cambridge, University Press, 1970.
Mitchell, S. W.: *Injuries of Nerves and Their Consequences,* New York, Dover, 1965.
Olson, R. E.: *Perspectives in Biological Chemistry,* New York, Marcel Dekker, Inc., 1970.
Paul, J.: *Cell and Tissue Culture,* ed. 3, Baltimore, Williams & Wilkins Co., 1965.
Paulson, M.: *Gastroenterologic Medicine,* Philadelphia, Lea & Febiger, 1969.
Peter, L. J., and Hull, R.: *The Peter Principle,* New York, William Morrow, 1969.
Racker, E., ed.: *Membranes of Mitochondria and Chloroplasts,* New York, Van Nostrand Reinhold Co., 1970.
Rafferty, K. A., Jr.: *Methods in Experimental Embryology of the Mouse,* Baltimore, Johns Hopkins Press, 1970.
Rhoads, J. E., et al.: *Surgery; Principles and Practice,* ed. 4, Philadelphia, J. B. Lippincott, 1970.
Rita, G., ed.: *The Interferons,* New York, Academic Press, 1968.
Scheinfeld, A.: *The Basic Facts of Human Heredity,* New York, Washington Square Press, 1961.
Schiff, L., and Carey, J., eds.: *Bile Salt Metabolism,* Springfield, Ill., Charles C Thomas, 1969.
Siim, J. C., ed.: *Human Toxoplasmosis,* Baltimore, Williams & Wilkins Co., 1960.
Schwarzrock, S. P., and Ward D.: *Effective Medical Assisting,* Dubuque, Iowa, William C. Brown Co., 1969.
Thenebe, C.: *A Physician's Living Thoughts,* New York, Philosophical Library, 1970.
Urry, D. W., ed.: *Spectroscopic Approaches to Biomolecular Conformation,* Chicago, American Medical Association, 1970.
Wang, Y., ed.: *Handbook of Radioactive Nuclides,* Cleveland, Chemical Rubber Co., 1969.
Whitfield, R. C.: *A Guide to Understanding Basic Organic Reactions,* Boston, Houghton Mifflin, 1966.
Wittenborn, J. R.: *The Response to Meprobamate, A Predictive Analysis,* New York, Raven, 1970.
Wolstenholme, G. E. W., and O'Conner, M.: *Foetal Autonomy,* London, J. & A. Churchill, Ciba Foundation, 1969.

Recent Deaths

Dr. V. E. Schulze

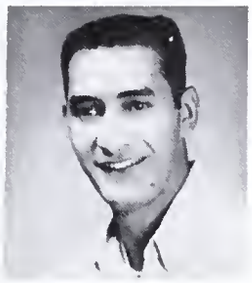
Dr. Victor Ewald Schulze, Sr., 66, San Angelo specialist in internal medicine, died July 8, 1970, in St. Luke's Episcopal Hospital in Houston.

The son of Adolph and Martha Wemken Schulze, Dr. Schulze was born Jan. 16, 1904, in Shiner, Tex. He attended The University of Texas at Austin from 1922-1924 and received an MD degree in 1928 from The University of Texas School of Medicine at Galveston. He interned at John Sealy Hospital in Galveston from 1928-1929, served as an instructor in medicine at The University of Texas School of Medicine at Galveston from 1929-1930, and served a fellowship in internal medicine at The Mayo Clinic, University of Minnesota, Rochester, Minn., from 1931-1933. He had practiced in San Angelo since 1935.

A diplomate of American Board of Internal Medicine and a fellow of American College of Physicians, Dr. Schulze was a member of the board of governors of American College of Physicians from 1957-1963. He was a member of Texas and American Medical Associations, American Heart Association, and American Diabetes Association. He was a member and past president of Tom Green Eight Counties Medical Society, and was also a past president of Fourth District Medical Society, Texas Heart Association, and Texas Club of Internists. He had served as president of the medical staffs at Clinic-Hospital of San Angelo, Shannon West Texas Memorial Hospital and St. John's Hospital in San Angelo, and had been chairman of the public health and internal medicine scientific sections of Texas Medical Association. Dr. Schulze was a member of

DR. SCHULZE

DR. CASIAS



DR. CRUMP

DR. TURBEVILLE

Calvary Lutheran Church in San Angelo.

Survivors include Dr. Schulze's wife, the former Esther Viola Golden; a son, Dr. Victor E. Schulze, Jr., of San Angelo; a daughter, Mrs. Mary Jean Fowler of Austin; his mother of San Angelo; two brothers, Elmer F. Schulze of Houston and Dr. Gene Schulze of Flatonia; and three grandchildren.

Dr. D. T. Casias

Bastrop general practitioner Dr. Dan Tijerina Casias, 31, died May 24, 1970, when his car struck two horses. He had practiced in Bastrop for five years. Also killed in the accident were his wife, the former Lorraine Gotsch, and their infant son, Nicholas.

Born Sept. 30, 1938, in Somerset, Tex., Dr. Casias was the son of Pete and Anita Tijerina Casias. He was graduated from St. Mary's University in San Antonio with a BA degree in 1961. His MD degree was obtained at The University of Texas Medical Branch at Galveston in 1965 and his internship was served at Robert B. Green Memorial Hospital in San Antonio. In 1966, Dr. Casias moved to Bastrop.

Dr. Casias was a member of Bastrop-Lee Counties Medical Society, Texas Medical Association, and American Medical Association. He was chief of staff and chairman of the board of the Bastrop Memorial Hospital and was a partner in the Bastrop Clinic. He belonged to Ascension Catholic Church, the Lions Club, and the Jaycees.

Surviving Dr. Casias is a daughter, Lacy Ann; his parents of Somerset; two sisters, Mrs. Gloria Gomez of San Antonio and Mrs. Mary Alice Arguello of Somerset; a brother, Pete Casias, Jr., of San Antonio; and his grandparents, Mr. and Mrs. Rutilo Tijerina of Pasadena, California.

Dr. T. E. Crump

Retired Cameron, Tex., general practitioner Dr. Thomas Eugene Crump died in a Waco hospital May 5, 1970. He was 88.

Dr. Crump, who had taught school for seven years prior to studying medicine, had served as trustee, president, and secretary of the Cameron school board; as city health officer for 12 years; as county health officer for 7 years; and received the Selective Service Medal for serving as examiner from 1942-1944. He taught at Cameron Hospital's school of nursing for 14 years.

Born Nov. 19, 1881, on a farm near Rockdale, Tex., Dr. Crump was the son of Jefferson Walker and Augusta Snodgrass Crump. He attended Southwestern University at Georgetown, Tex., and in 1915 received his MD degree from the University of Tennessee College of Medicine in Memphis. From 1915-1916, Dr. Crump served an internship at Memphis General Hospital, Memphis, Tenn., and in 1917 served a residency at Shreveport Charity Hospital, Shreveport, La.

Dr. Crump, a retired World War I lieutenant colonel, graduated from the Army School of Aviation Medicine at Mitchell Field, Long Island, N. Y., in 1926. He was practicing in Cameron at the time of his retirement in 1965.

A past president and secretary of the Milam County Medical Society, he was named Outstanding Senior Citizen of Milam County in 1965, and was awarded the Golden T Certificate and Medal by the University of Tennessee. Dr. Crump was elected to honorary membership in Texas Medical Association and American Medical Association in 1966. On July 12, 1969, he was named commanding general of the Army of the Republic of Texas, and on May 30, 1970, Dr. Crump received a Memorial Certificate, signed by President Richard M. Nixon, honoring him for service in the U. S. Army and the Army Reserve. He was a Mason and a member of the Knights of Pythias.

Surviving Dr. Crump are his wife of Cameron, the former Myrtle Johnston; and a sister, Mrs. Frances Roberts of Rockdale.

Dr. L. R. Turbeville

Dr. Louis Richard Turbeville, Jr., 43, died June 8, 1970, in Dallas.

Born in Fort Worth, Tex., Oct. 26, 1926, Dr. Turbeville was the son of Louis Richard and Mary Taliaferro Turbeville. He attended The University of Texas at Austin and was graduated from Tulane University School of Medicine at New Orleans in 1948 with an MD degree. He interned at Baylor University Medical Center in Dallas from 1948 to 1949 and served a residency in pediatrics at Children's Medical Center in Dallas from 1949 to 1951. A founder of the Doctors Hospital in Dallas, Dr. Turbeville served as administrator there from 1959 until his death. He had practiced in Dallas since 1951.

A diplomate of the American Board of Pediatrics, Dr. Turbeville held memberships in Dallas Pediatric Society, Texas Pediatric Society, Dallas County Medical Society, Texas Medical Association, and American Medical Association. He had served on the board of the First Citizens State Bank in Dallas and was a former deacon of the Casa Linda Presbyterian Church.

Dr. Turbeville is survived by his wife, the former Jayne Hodge; three daughters, Julia, Mary Jayne, and Ann Turbeville; a son, Robert Turbeville; his father, Louis Turbeville, Sr., all of Dallas; and a sister, Mrs. Susan Grigsby of Richardson, Tex.

Dr. J. R. Ellis

El Paso anesthesiologist Dr. Jack Reese Ellis, 50, died June 9, 1970.

The son of John R. Ellis and Tessa Timmons Ellis, Dr. Ellis was born Nov. 1, 1919, in Carrollton, Mo. He attended Texas College of Mines, now The University of Texas at El Paso, from 1937-1940. In 1943, he was graduated from The University of Texas Medical Branch at Galveston with an MD degree. Dr. Ellis served an internship at John Sealy Hospital in Galveston from 1943-1944 and a general residency at El Paso City-County Hospital from 1946-1947. He served a residency in anesthesiology at UT Medical Branch from 1950-1952. He was a battalion surgeon in Europe during World War II, attaining the rank of captain.

Dr. Ellis was a member of El Paso County Medical Society, Texas Medical Association, and American Medical Association. He also belonged to the Asbury Methodist Church in El Paso.

Surviving are his wife, the former Doris Anne Beckley, and a daughter, Jean Anne Ellis, both of El Paso; three sons, Alfred B. Ellis and James L. Ellis, both of El Paso, and Sgt. John Reese Ellis, serving in the US Air Force at Loring AFB, Maine.

Dr. R. L. Daily

Wichita Falls general practitioner Dr. Robert Wilson Lee Daily, 58, died June 17, 1970, in a Fort Worth hospital. Cause of death was myocardial infarction.

Born May 5, 1912, in Andrew County, Mo., Dr. Daily was the son of Charles M. and Maude Selecman Daily. He attended St. Joseph's College in St. Joseph, Mo., and was graduated from Baylor University College of Medicine, then located in Dallas, in 1936 with an MD degree. He interned at Baylor Hospital in Dallas from 1936-1937; served a residency at Parkland Memorial Hospital in Dallas from 1938-1939; and began practicing medicine in Wichita Falls in 1939. Serving in the Medical Corps during World War II, Dr. Daily was discharged with the rank of major in 1946 and returned to his practice in Wichita Falls.

A past president of Wichita County Medical Society, Dr. Daily was a member of Wichita County Hospital Board, City Health Board, the local Heart Association, and Citizens Advisory Commission on Drug Education and Abuse of Wichita Falls. A member of Texas Medical Association, he had served on TMA's Committee on Liaison with Texas Hospital Association, and was chairman of TEXPAC in 1964 when he received a citation for dedication, leadership, and devotion. At the time of his death, Dr. Daily was a member of the TMA Council on Medical Jurisprudence. He was a member of American Medical Association, Southern Medical Association, Texas State Board of Medical Examiners, and Governor's Advisory Commission on Aging. He had served as president of Bethania and Wichita General hospitals and the Community Action Agency, and as vice-chairman and administrator of Colonial Manor nursing home. He was a former chairman of the Water Resources Committee of Wichita Falls, had served as medical director of American Trust Life Insurance Co., and had been a member of Texas Society of Life Insurance Medical Directors, State Hospital Advisory Council, and Board of Wichita Mental Health Association. Dr. Daily was a member of Faith Lodge No. 1158 Ancient Free and Accepted Masons, Dallas Consistory of Scottist Rite, Maskat Temple Shrine, Royal Order of Jesters, and was a member of First Christian Church in Wichita Falls.

Surviving Dr. Daily are his wife, the former Eloise Wyatt; a son, Michael Daily of Fort Worth; two daughters, Mrs. Carl Milstead and Mrs. Michael Faraon, both of Wichita Falls; and a step-son, Terry Leffingwell, also of Wichita Falls.

Dr. R. B. Alexander

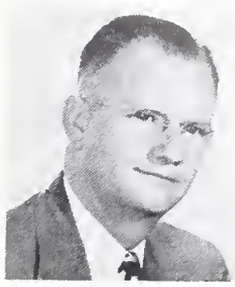
Robert Burney Alexander, 74, retired Waco surgeon, died June 10, 1970, in a Waco hospital.

Before receiving his MD degree from The University of Texas Medical Branch at Galveston in 1921, Dr. Alexander obtained an AB degree in 1917, and an MA degree in 1918 from Baylor University in Waco. After serving an internship at Cleveland City Hospital, Cleveland, Ohio, from 1921-1922, he was an instructor of medicine at the UT Medical Branch from 1922-1923. In 1923, he moved to Waco where he practiced medicine until his retirement.

Dr. Alexander, born May 8, 1896, in New Boston, Tex., was the son of Robert Jasper and Alice Burney Spencer Alexander.

A past president of McLennan County Medical Society, he was elected to honorary membership in Texas Medical Association and American Medical Association in 1965. He was a member of St. Paul's Episcopal Church in Waco.

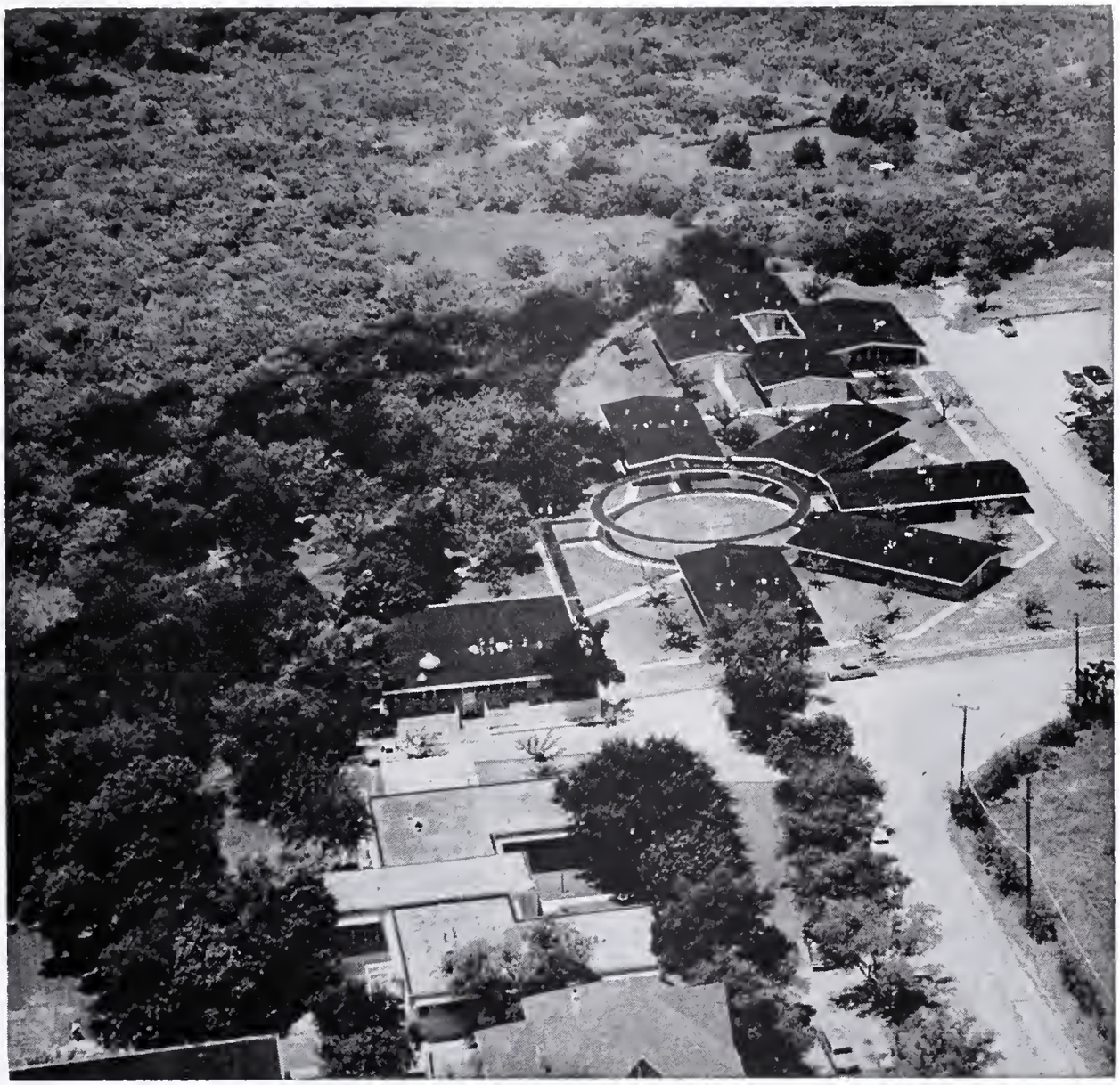
Surviving Dr. Alexander are a son, Robert Burney Alexander, Jr., of Miami, Fla.; a daughter, Mrs. Mary Russell McFarland of San Antonio; a sister, Mrs. Carlene Barnes of St. Petersburg, Fla.; and a brother, Dr. Boyd D. Alexander of Waco.



DR. ELLIS

DR. DAILY

DR. ALEXANDER



BEVERLY HILLS HOSPITAL
BEVERLY HILLS CLINIC

PSYCHIATRY
INPATIENT – OUTPATIENT

Multiple-approach treatment of thinking disorders. Established diagnostic procedures available. Secluded in-town location convenient to the medical community.

Psychiatry

Joseph L. Knapp, M.D.
Jackson H. Speegle, M.D.
Fred H. Jordan, M.D.
Joseph H. Lindsay, M.D.
Jack R. Tomlinson, M.D.

Psychology

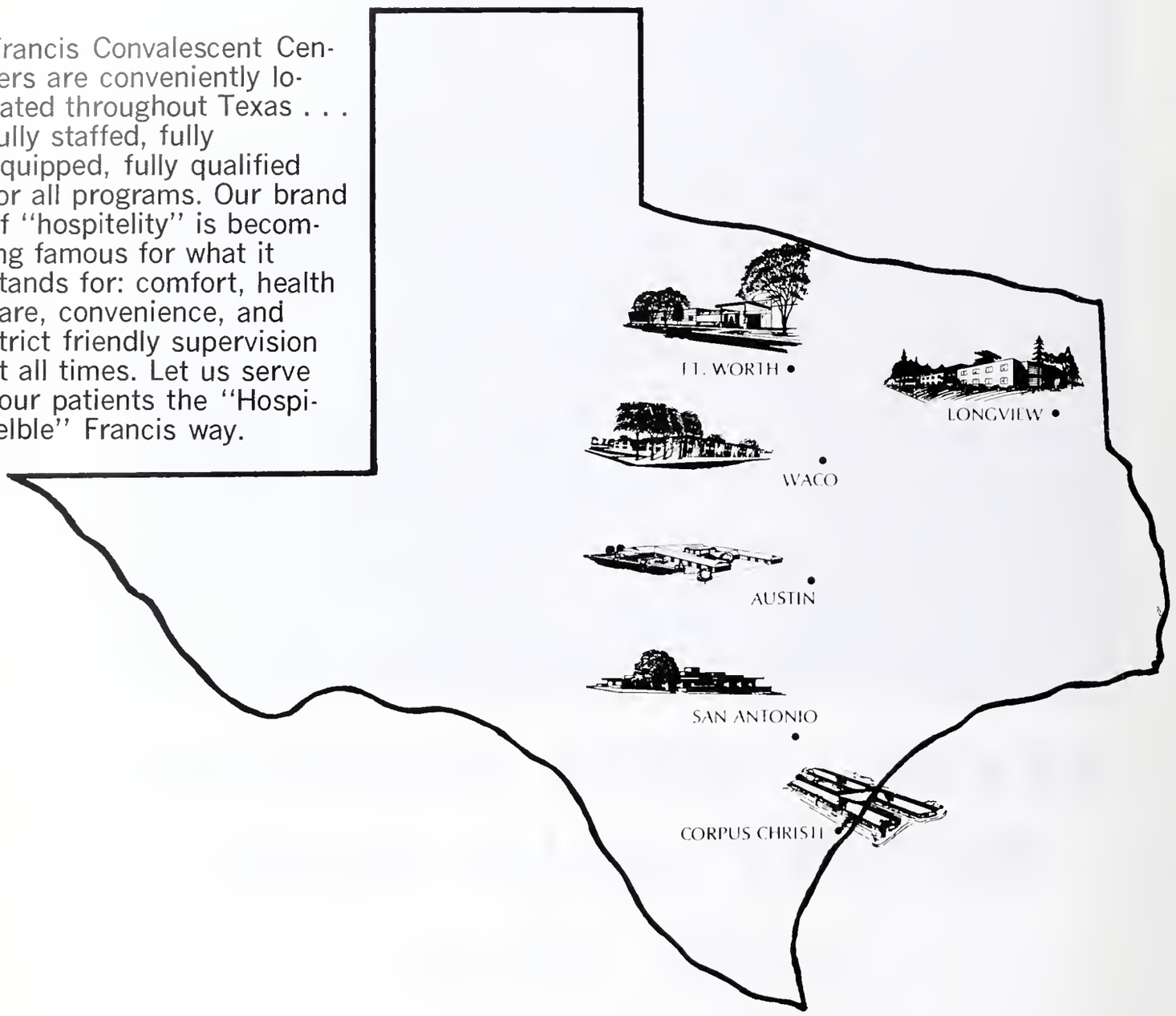
Traudl E. Jordan-Diener, Ph.D.
R. A. Mitchell, M.S.
David K. Fooshee, M.S.

1353 North Westmoreland Avenue
Dallas, Texas 75211
214 331-8331

FRANCIS HOSPITELS INCORPORATED

FRANCIS CONVALESCENT CENTERS
DIVISION OF FRANCIS HOSPITELS, INC.

Francis Convalescent Centers are conveniently located throughout Texas . . . fully staffed, fully equipped, fully qualified for all programs. Our brand of "hospitelity" is becoming famous for what it stands for: comfort, health care, convenience, and strict friendly supervision at all times. Let us serve your patients the "Hospitelble" Francis way.



FRANCIS HOSPITELS, INC., 7129 Highway 290 East, Austin, 512 454-2725

FRANCIS HOSPITELS—WACO: Francis Hospitel, 2501 Maple Avenue, Ph. 752-0311 **FRANCIS CONVALESCENT CENTERS**—AUSTIN: Retirement Inc., 6909 Burnet Road, Ph. 452-5719; FORT WORTH: Francis Convalescent Center, 1000 6th Avenue, Ph. 335-1903; CORPUS CHRISTI: Francis Convalescent Center, 3050 Sunnybrook, Ph. 853-9981; LONGVIEW: Highland Pines, 1100 N. 4th Street, Ph. 753-7661; SAN ANTONIO: San Pedro Manor, 616 West Russell, Ph. 732-5181.

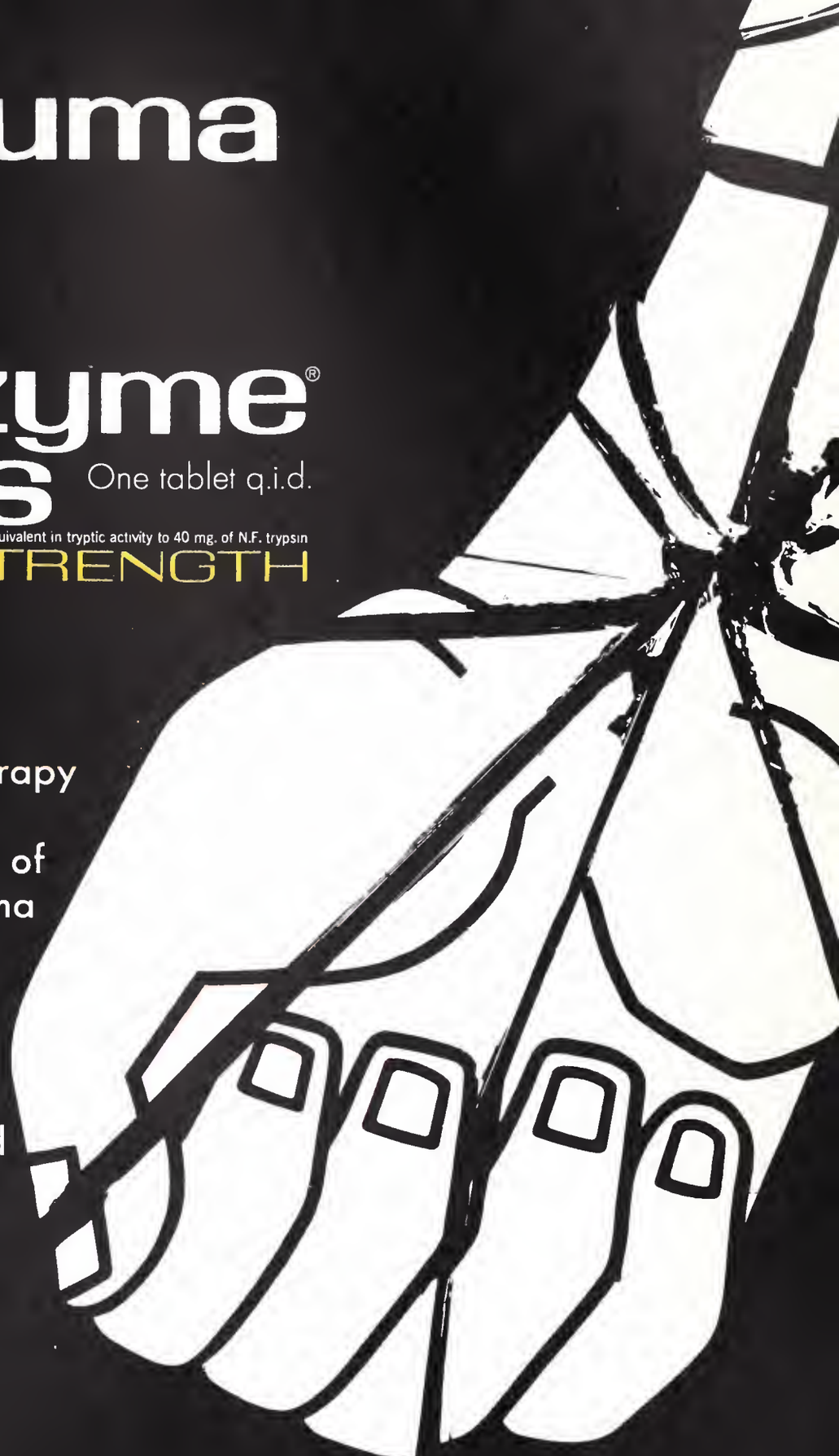
in trauma

new Orenzyme® Bitabs

One tablet q.i.d.

Trypsin: 100,000 N.F. Units, Chymotrypsin: 8,000 N.F. Units.; equivalent in tryptic activity to 40 mg. of N.F. trypsin

DOUBLE STRENGTH



Proteolytic enzyme therapy specifically indicated for the rapid resolution of inflammation and edema as adjunctive therapy in accidental and surgical trauma.

1 tablet q.i.d. provides recommended therapeutic dose at lower cost.

A FULL DAY'S DOSAGE

Description: ORENZYME BITABS offers the therapeutic effects of trypsin in an oral form as adjunctive therapy for the rapid resolution of inflammation and edema. ORENZYME BITABS is convenient to use, promotes patient cooperation and is ideally suited for maintenance therapy following parenteral trypsin.

Indications: When used as adjunctive therapy for the rapid resolution of inflammation and edema, good results have been obtained in:

- ☐ Accidental Trauma
- ☐ Postoperative Tissue Reactions.

Other conventional measures of treatment should be used as indicated. In infection, appropriate anti-infective therapy should be given.

Contraindications: ORENZYME BITABS should not be given to patients with a known sensitivity to trypsin or chymotrypsin.

Precautions: It should be used with caution in patients with abnormality of the blood clotting mechanism such as hemophilia, or with severe hepatic or renal disease. Safe use in pregnancy has not been established.

Adverse Reactions: Adverse reactions with ORENZYME have been reported infrequently. Reports include allergic manifestations (rash, urticaria, itching), gastrointestinal upset and increased speed of dissolution of animal-origin surgical sutures. There have been isolated reports of anaphylactic shock, albuminuria and hematuria. Increased tendency to bleed has also been reported but, in controlled studies, it has been seen with equal incidence in placebo-treated groups. (See Precautions.) It is recommended that if side effects occur medication be discontinued.

Dosage: One tablet q.i.d.

THE NATIONAL DRUG COMPANY
DIVISION OF RICHARDSON-MERRELL INC
PHILADELPHIA, PENNSYLVANIA 19144

TRADEMARK: BITABS U.S. PATENT NO. 3,004,893 4/69 0-821A

Treating vaginitis is as easy as AVC

Trichomonads...Monilia...Bacteria

You can depend on AVC—the comprehensive therapy that acts against all three major vaginal pathogens.

Monilia emerging as a major therapeutic problem—
recent studies report increased incidence, attributed in part to the use of oral contraceptives,[1-4] broad-spectrum antibiotics[5-9] and prolonged use of corticosteroids.[7]
recent evidence establishes high rate of microbiological and clinical cure with AVC.[9-11]

Comprehensive—Effective

The published record and more than two decades of clinical experience clearly establish the therapeutic value of AVC in vaginitis/cervicitis and vaginal surgery.

Easy as AVC

Contraindications: Known sensitivity to sulfonamides.
Precautions/Adverse Reactions: The usual precautions for topical and systemic sulfonamides should be observed because of the possibility of absorption. Burning, increased local discomfort, skin rash, urticaria or other manifestations of sulfonamide toxicity are reasons to discontinue treatment.
Dosage: One applicatorful or one suppository intravaginally once or twice daily.
Supplied: Cream—Four-ounce tube with or without applicator. Suppositories—Box of 12 with applicator.

References: 1. Gardner, H. L.: J. Miss. M.A. 8:529, 1967. 2. Porter, P. S., and Lyle, J. S.: Arch. Dermat. 93:402, 1966. 3. Walsh, H.; Hildebrandt, R. J., and Prystowsky, H.: Am. J. Obst. & Gynec. 93:904, 1965. 4. Vaginitis and the Pill: J.A.M.A. 196:731, 1966. 5. Guerriero, W. F.: South. M.J. 56:390, 1963. 6. Seelig, M. S.: Am. J. Med. 40:887, 1966. 7. To-day's Drugs, New York, Grune & Stratton, Inc., 1965, p. 316. 8. Gray, L. A., and Barnes, M. L.: Am. J. Obst. & Gynec. 92:125, 1965. 9. Salerno, L. J.; Ortiz, G., and Turkel, V.: Vaginitis: A Diagnostic and Therapeutic Approach, Scientific Exhibit, presented at the 115th Annual A.M.A. Convention, Chicago, Illinois, June 1966. 10. Walsh, J. C.; Sheffery, J. B., and Wilson, T. A.: Med. Ann. D.C. 37:358, 1968. 11. Nugent, F. B., and Myers, J. E.: Pennsylvania Med. 69:44, 1966.

THE NATIONAL DRUG COMPANY
DIVISION OF RICHARDSON MERRELL INC.
PHILADELPHIA, PENNSYLVANIA 19144

AVC CREAM (aminacrine hydrochloride 0.2%, sulfanilamide 15.0%, allantoin 2.0%)

AVC SUPPOSITORIES (aminacrine hydrochloride 0.014 Gm., sulfanilamide 1.05 Gm., allantoin 0.014 Gm.)

TRADEMARK: A V C

AV-919A 7/69

Well, Dr. Cunningham! I was just telling Herbert I should talk to you about my allergy. First my nose starts to tickle and..."

You know the rest of the story. Sneezing. Watery eyes. Rosy nose. And for prompt relief of these symptoms, there's Novahistine® LP. These continuous-release tablets have a vasoconstrictor-antihistamine formulation that begins working in minutes, then continues to provide relief for hours. Even when nasal congestion is due to repeated allergic episodes, two Novahistine LP tablets, morning and evening, let most patients breathe freely all day and all night. Use with caution in individuals with severe hypertension, diabetes mellitus, hyperthyroidism or urinary retention. Caution ambulatory patients that drowsiness may result.

Novahistine® LP decongestant

(Each tablet contains 25 mg. of phenylephrine hydrochloride and 4 mg. of chlorpheniramine maleate.)

DOW **THE DOW CHEMICAL COMPANY** Rx Pharmaceuticals Indianapolis

Clinical Extension of a pure Smooth Muscle Relaxant

TROCINATE®

Brand THIPHENAMIL HCl

400 mg./100 mg. S/C tablets

Trocinate relaxes all smooth muscles. Its direct action (musculotropic) does not involve the autonomic nervous system and it is not mydriatic. It is metabolized by the body and eliminated in the urine as harmless degradation products. Trocinate has a remarkable history of freedom from side-effects.

When a pure direct-acting smooth muscle relaxant is indicated, Trocinate is the drug of choice.

DIARRHEA (functional) . . . *the first 400 mg. tablet usually relieves the discomfort of diarrhea so promptly that it ceases to be a bother.*

DIVERTICULITIS—MUCOUS COLITIS . . . *the accompanying discomforts can be relieved by this direct smooth muscle relaxant.*

BLADDER SPASM . . . *relaxation is immediate. One or two tablets condition the bladder for cystoscopy in one hour.*

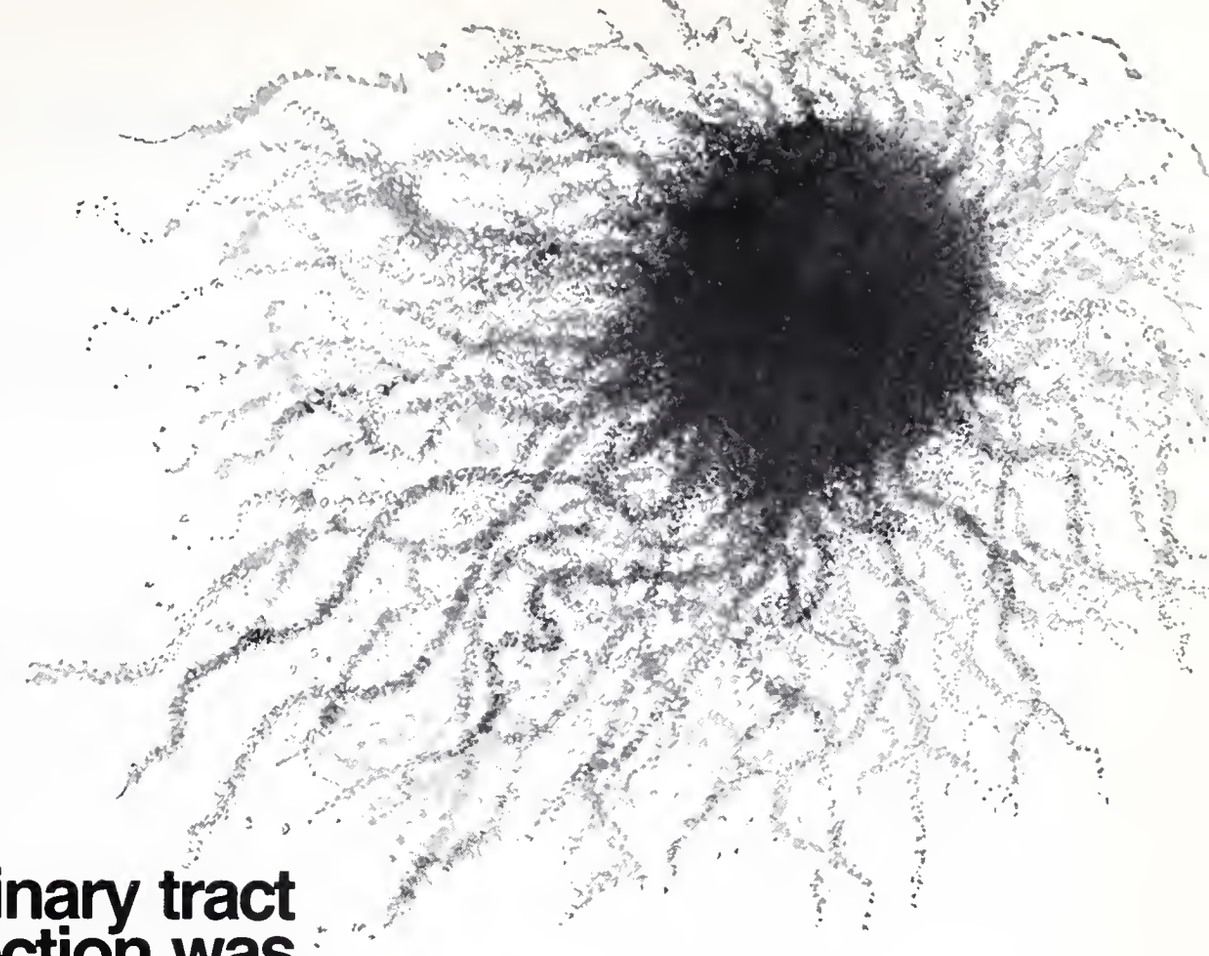
SPASTIC URETER . . . *the specific relaxing effect of Trocinate on the spastic ureter has been proven by animal studies and affirmed clinically. (J. Urol. 73:487-93)*

PRESCRIBING INFORMATION

WARNING: Do not give in advanced kidney or liver disease. PRECAUTIONS: Trocinate relaxes all smooth muscles. Large dosage or prolonged usage may cause feeling of weakness or can theoretically precipitate gall-bladder colic, due to relaxing the vascular and duct systems. Caution should be observed in patients with urinary bladder obstruction. DOSAGE: 400 mg. May be repeated in 4 hours. After relief, lengthen the dose frequency. (see side note)

NOTE: *The high therapeutic index of Trocinate permits its administration in dosage sufficient to relieve smooth muscle spasm promptly. 400 mg. dosage usually creates a therapeutic blood level. In reducing dosage after relief, lengthening the time between dosage rather than lessening the recommended dose is preferable. The prompt direct action allows a consciousness of the first suggestion of return of symptoms . . . a guide to dose spacing and to determining when treatment is complete. A prescription for twelve or sixteen 400 mg. tablets will usually correct spasm and leave a few tablets for a reserve.*

WILLIAM P. POYTHRESS & CO., INC.
RICHMOND, VIRGINIA 23217
Manufacturers of Ethical Pharmaceuticals



A urinary tract infection was eliminated last week

Intestinal monilial overgrowth has appeared this week

For women who are diabetic or debilitated, oral antibiotic therapy often sets the stage for monilial overgrowth in the intestine.

When you anticipate such a problem, take action with DECLOSTATIN 300. It combines the broad-spectrum potency of demethylchlortetracycline with the antifungal effectiveness of nystatin—it helps avoid monilial take-over. Experience has shown DECLOSTATIN to be highly useful for many women patients; individual culture studies will show exactly where this usefulness may best be applied.

It doesn't let monilia begin where bacteria end. Declostatin® 300

Demethylchlortetracycline HCl 300 mg and Nystatin 500,000 units Capsule-Shaped Tablets Lederle

Effectiveness: Because its antibacterial component is DECLOMYCIN® Demethylchlortetracycline, DECLOSTATIN should be equally or more effective therapeutically than other tetracyclines in infections caused by tetracycline-sensitive organisms. The antifungal component, nystatin, protects against superinfection by antibiotic-resistant fungal overgrowth (particularly monilia) in the intestinal tract.

Contraindication: History of hypersensitivity to demethylchlortetracycline or nystatin.

Warning: In renal impairment, usual doses may lead to excessive accumulation and liver toxicity. Under such conditions, lower than usual doses are indicated and, if therapy is prolonged, serum level determinations may be advisable. A photodynamic reaction to natural or artificial sunlight has been observed. Small amounts of drug and short exposure may produce an exaggerated sunburn reaction which may range from erythema to severe skin manifestations. In a smaller proportion, photoallergic reactions have been reported. Patients should avoid direct exposure to sunlight and discontinue drug at the first evidence of skin discomfort. Necessary subsequent courses of treatment with tetracyclines should be carefully observed.

Precautions: Overgrowth of nonsusceptible organisms may occur. Constant observation is essential. If new infections appear, appropriate measures should be taken. In infants, increased intracranial pressure with bulging fontanels has been observed. All signs and symptoms have disappeared rapidly upon cessation of treatment.

Side Effects: Gastrointestinal system—anorexia, nausea, vomiting, diarrhea, stomatitis, glossitis, enterocolitis, pruritus ani. Skin—maculopapular and erythematous rashes; a rare case of exfoliative dermatitis has been reported. Photosensitivity; onycholysis and discoloration of the nails (rare). Kidney—rise in BUN, apparently dose-related. Transient, reversible, nephrogenic diabetes insipidus with excessive thirst and polyuria (rare). Hypersensitivity reactions—urticaria, angioneurotic edema, anaphylaxis. Teeth—dental staining (yellow-brown) in children of mothers given this drug during the latter half of pregnancy, and in children given the drug during the neonatal period, infancy and early childhood. Enamel hypoplasia has been seen in a few children. If adverse reaction or idiosyncrasy occurs, discontinue medication and institute appropriate therapy. Demethylchlortetracycline may form a stable calcium complex in any bone-forming tissue with no serious harmful effects reported thus far in humans.

Average Adult Daily Dosage: One tablet b.i.d. Should be given 1 hour before or 2 hours after meals, since absorption is impaired by the concomitant administration of high calcium content drugs, foods and some dairy products. Treatment of streptococcal infections should continue for 10 days, even though symptoms have subsided.

Lederle LEDERLE LABORATORIES, A Division of American Cyanamid Company, Pearl River, New York 450-9

Starlite Village Clinic

Center Point, Texas

Ph.: ME 4-2426

- - - A specialized clinic dedicated to the physical, mental, and spiritual treatment of men and women suffering from alcoholic and similar disturbances.

F. E. Seale, M.D.
Medical Director

Bland Seale
Administrator

RADIOLOGY ASSOCIATES OF FORT WORTH

John S. Alexander, M.D., M.A.C.R.
Robert J. Atcheson, M.D., M.A.C.R.
Douglas E. Bibby, M.D., F.A.C.R.
James W. Buice, M.D., F.A.C.R.
Richard C. Gasser, M.D., M.A.C.R.
James A. Holland, M.D., M.A.C.R.
Paul W. Mathews, Jr., M.D., M.A.C.R.
Preston W. Nash, M.D., M.A.C.R.
Rolland F. Oakes, M.D., M.A.C.R.
Norman L. Presley, M.D., M.A.C.R.
Sanford Reitman, M.D., M.A.C.R.
Gomer W. Roberts, M.D., M.A.C.R.
Herman C. Sehested, M.D., F.A.C.R.
Glenn A. Stokdyk, M.D., M.A.C.R.
C. H. Tseng, M.D., M.A.C.R.
Claude Williams, M.D., M.A.C.R.
J. Thomas Telle, M.D., D.A.B.R.

DIPLOMATES OF THE AMERICAN BOARD OF RADIOLOGY

Offices:

100 Medical Tower Bldg. — 336-8681
1217 West Cannon — 336-8627
900 W. Randol Mill Rd., Arlington, Texas 76010 — 277-7681

TRAVIS CLINIC ASSOCIATION AND THE NAN TRAVIS MEMORIAL HOSPITAL

JACKSONVILLE, TEXAS

STAFF

General Surgery:
L. L. Travis, M.D.
J. S. O'Hare, M.D.
R. K. Willms, M.D.

Orthopedic Surgery:
E. L. Mahon, Jr., M.D.

Urology:
H. F. Rives, M.D.

Pathology:
Harbert Davenport, Jr., M.D.

Internal Medicine:
J. T. Boyd, M.D.
F. H. Verheyden, M.D.
J. T. Scogin, M.D.
J. H. Pesnell, M.D.
Mary A. Bone, M.D.

Obstetrics and Gynecology:
J. C. Rucker, M.D.
J. D. Crawford, M.D.

Ophthalmology:
Fred Haberle, M.D.

Pediatrics:
M. L. Gray, M.D.

Radiology and Radioactive Isotopes:
L. W. Ralston, M.D.

William J. Fowler
Administrator of Nan Travis Memorial Hospital

J. G. Casey
Business Manager of Travis Clinic

MEDICAL ARTS CLINIC

Box 841
Corsicana, Texas

PEDIATRICS
JOHN W. GRIFFIN, M.D., F.A.A.P.*
JAMES E. SPEIER, M.D.

INTERNAL MEDICINE
ROBERT D. BONE, M.D., F.A.C.P.*
JAMES F. WITTEN, M.D., F.A.C.P.*
CHARLES I. BILTZ., M.D.*

OBSTETRICS & GYNECOLOGY
KELLY PAUL BURKHART, M.D., F.A.C.O.G.*

DERMATOLOGY
JOSEPH M. GLICKSMAN, M.D.

BUSINESS MANAGER
OWEN G. ELLIOTT, M.G.M.A.

SURGERY
LOUIS E. GIBSON, M.D., F.A.C.S.*
E. SCOTT MIDDLETON, M.D.

OPHTHALMOLOGY
ROBERT D. MERTZ, M.D., F.A.A.O.O.*

EAR, NOSE, THROAT
PHILLIP M. AWTREY, M.D.,* F.A.A.O.O.

DENTISTRY
ROBERT A. LANG, D.D.S.

*Diplomate of the American Board

PHYSICIANS' DIRECTORY

DIRECTORY RATES & DATA: Space is available to TMA members at $8.00 per column inch and must run six months. New listings are limited to those specialties recognized by the American Medical Association. A discount of 5% is allowed for six months' advance payment. Mail copy to Advertising Assistant, TEXAS MEDICINE, 1801 North Lamar Blvd., Austin, Texas 78701. Deadline is 20th of the month preceding publication month.

Allergy

DRS. FEIN AND KAMIN
Allergy and Immunology

Bernard T. Fein, M.D., F.A.C.A.
Fellow
American Academy of Allergy
216 Medical Prof. Bldg.
CA 6-7671

Peter B. Kamin, M.D., F.A.A.P.
Diplomate
Sub-Board Pediatric Allergy
San Antonio, Texas
CA 7-6331

HOUSTON ALLERGY CLINIC
CLINICAL ALLERGY AND IMMUNOLOGY
RICHARD L. ETTER, M.D., F.A.C.A., F.A.A.A.
RICHARD H. JACKSON, M.D., F.A.C.A.
WARREN J. RAYMER, M.D., F.A.C.A.
RAMON GARRIDO, M.D.
(Certified American Board of Pediatrics)
Suite 156, Hermann Professional Building
6410 Fannin St., Houston, Texas 77025
JA 6-3281

V. E. FRIEDEWALD, M.D., F.A.C.P.
Diplomate American Boards of Internal Medicine and Allergy
ALLERGY

2203 West Tennessee Midland, Texas 79701
MU 2-5385

McGOVERN ALLERGY CLINIC
Diagnosis and Treatment of Allergic Diseases

John P. McGovern, M.D.
Orville C. Thomas, M.D.
Charles D. Haunschild, M.D.
Theodore J. Haywood, M.D.
Joseph T. Queng, M.D.
James A. Murray, M.D.
*Hermann Gregory, M.D.

Certified American Boards of Pediatrics and Allergy
6655 Travis Street Houston, Texas 77025 JA 8-5591
*Military Leave of Absence

HARRIS HOSEN, M.D., F.A.A.Pd.
Clinical Allergy and Immunology

2649 Procter Street Port Arthur, Texas

ALLERGY CLINIC
Saul Grossman, M.D., F.A.C.A.
Allergy-Dermatology
W. A. Crozier, M.D., F.A.C.A.
Allergy-Immunology
TU 2-3487

2530 Morgan Corpus Christi, Texas

STUART A. MASON, M.D.
Allergic Diseases

921 Eighth Avenue Fort Worth, Texas 76104

Phone: 336-1574 If no answer: 924-4231

Clinics

THE CLINIC-HOSPITAL OF SAN ANGELO
224-234 West Beauregard Avenue
SAN ANGELO, TEXAS

R. M. Finks, M.D., Pediatrics
M. D. Knight, M.D., Surgery
W. H. Brauns, M.D., Internal Medicine
Roy E. Moon, M.D., Obstetrics and Gynecology
Chas. F. Engelking, M.D., Ear, Nose and Throat
R. A. Morse, M.D., Internal Medicine
Ralph R. Chase, M.D., Pediatrics
Tom R. Hunter, M.D., Surgery
Dale W. Hayter, M.D., Ophthalmology
O. Sterling Gillis III, M.D., Obstetrics and Gynecology
Consultant in Pathology—Lloyd R. Hershberger, M.D.
Consultants in Radiology—John E. Ballard, M.D., John G. Bolen, M.D., William T. Gordon, M.D.

Robert P. Gordon, C.P.A., Administrator

THE FORT WORTH CLINIC
1221 West Lancaster Avenue
Fort Worth, Texas

John M. Church, M.D.
T. J. Coleman, M.D.
O. M. Phillips, M.D.
Robert L. Sewell, M.D.
John H. Sewell, M.D.
C. K. Holsapple, M.D.

Wm. L. Asper, Bus. Mgr.

FIFTH AVENUE CLINIC
650 Fifth Avenue
Fort Worth, Texas

MEDICINE
Sidney E. Stout, M.D.
Frank L. Bynum, M.D.
Ed Etier, Jr., M.D.

GENERAL PRACTICE
Donald S. Gibbs, M.D.

RADIOLOGY
Otto H. Grunow, M.D.

THOMAS-SPANN CLINIC AND HOSPITAL
1546 South Brownlee Corpus Christi, Texas 78404
Telephone 884-3861

SURGERY
R. Gayle Spann, M.D., F.A.C.S. (Deceased)
S. T. Coleman, M.D., F.A.C.S. (Consultant)
Donald E. Jackson, M.D., F.A.C.S. (Consultant)

OPHTHALMOLOGY
L. David Wright, M.D., F.A.C.S.

GENERAL PRACTICE
Travis B. Phelps, M.D.
T. D. Harvey, M.D.
H. R. Rose, M.D.
C. L. Vernor, M.D.

ORTHOPEDICS
Carlos M. Yanez, M.D., F.A.C.S.

GYNECOLOGY
J. H. Thomas, M.D.

INTERNAL MEDICINE
William E. Morris, M.D.
Gerald A. Reeves, M.D.
Pruett Moore, Jr., M.D.

RADIOLOGY
Crysup Sory, M.D.

ADMINISTRATOR
B. J. Clark

DIRECTOR OF NURSES
Clinic - Pat Parker
Hospital - Mrs. Joyce Pettit

THE JOHN BUIST CHESTER HOSPITAL & THE CHESTER CLINICS

5330 S. Lancaster Road Dallas, Texas Telephone 376-5411

John B. Chester, M.D., F.A.C.S., Orthopedic Surgery
Gene W. Rogers, M.D., General Surgery
Douglas M. Hardy, M.D., Obstetricts & Gynecology
Ervin R. Miller, M.D., Cardiovascular Diseases
Ralph C. Disch, M.D., D.A.B.S., F.A.C.S., Surgery
Catherine P. Chester, M.D., Pediatrics & Allergy
Doyle L. Sharp, M.D., General Surgery
Arlan P. Larson, M.D., D.A.B.O.S., F.A.C.S., Orthopedic Surgery
Robert B. Curry, M.D., General Practice
Amado E. Dominguez, M.D., Diagnosis & Internal Medicine
Jose Newman, M.D., Internal Medicine
Alfredo Zevallos, M.D., Obstetrics & Gynecology
Souren Chakmakjian, M.D., D.A.B.P., Pediatric Cardiology
Emmett R. Hamby, D.D.S., General Dentistry
H. A. Mueller, M.D., Consultant in Radiology
Gerard Noteboom, M.D., Consultant in Pathology
Charles B. Glover, M.D., Consultant in Nuclear Medicine
Elizabeth Garnett, R.N., Superintendent of Nurses
E. B. Morgan, F.A.A.M.A., Administrator

LANCASTER OFFICE

525 W. Pleasant Run Rd., Lancaster, Texas Telephone 227-2151
David E. Krebs, M.D., Pediatrics & Medicine
Charles W. Waldrop, M.D., General Practice
Miles W. Davis, M.D., General Practice
Garrett W. Maxwell, M.D., Internal Medicine

COUNTRY CLUB CORNERS OFFICE

7140 Baytree Drive, Dallas, Texas Telephone 224-1181
Rudolf M. Flasdick, M.D., Diagnosis & Diseases of the Heart
J. A. Harris, M.D., General Practice

DeSOTO OFFICE

804 N. Hampton Rd., DeSoto, Texas Telephone 223-7701
Herbert M. Hinckley, M.D., General Practice
D. Owen Coons, M.D., Aerospace Medicine & General Practice

BEELER-MANSKE CLINIC

9th Avenue N. at 5th Street N.
Texas City, Texas 77590
AC 713, WI 8-8521

Obstetrics & Gynecology
G. W. Beeler, M.D.

Internal Medicine
W. T. Matlage, M.D.
C. M. Maruri, M.D.

General Surgery
B. W. Hink, M.D., F.A.C.S.

General Practice
J. H. Cochrane, M.D.
J. W. O'Bryant, M.D.
O. O. Smith, M.D.

Clinic Manager
Stan M. Sheppard

Complete X-ray, Physical Therapy and Laboratory Facilities

MALONE and HOGAN CLINIC

901 Main Street Phone 267-6361
Big Spring, Texas 79720

Ophthalmology and Otolaryngology
P. W. Malone, M.D., F.A.C.S.
J. W. Tipton, M.D.

General Surgery
J. E. Hogan, M.D., F.A.C.S.
C. B. Marcum, Jr., M.D., F.A.C.S.

Orthopedic Surgery
P. H. Rhymes, M.D.

Internal Medicine
J. H. Burnett, Jr., M.D.
W. A. Riley, M.D.
R. S. Griffin, M.D.
R. T. Torp, M.D.

Obstetrics and Gynecology
M. A. Porter, M.D.

Pediatrics
J. M. Woodall, M.D.
M. W. Talbot, Jr., M.D., F.A.A.P

Radiology
W. R. Cashion, M.D.

Urology
G. F. Dillon, M.D.

Consultants in Pathology
Jarrett E. Williams, M.D.
B. B. Trotter, M.D.

Business Manager
R. L. Heith

THE LORIMER CLINIC

901 West Leuda Street
Fort Worth, Texas 76104
335-4333

SURGERY
W. S. Lorimer, Jr., M.D., F.A.C.S.
R. J. Turner, III, M.D., F.A.C.S.

INTERNAL MEDICINE
W. W. Moorman, M.D., F.A.C.P.
D. W. Johnston, M.D. F.A.C.P.
Stephen Eppstein, M.D.
A. R. Daniell, M.D.

Mrs. Evelyn Farr, Business Manager

RUGELEY AND BLASINGAME CLINIC

Wharton, Texas

ADMINISTRATION
C. H. "Ham" Rugeley
Malcolm D. Rugeley

2100 North Fulton Street 713 LE 2-1700

INTERNAL MEDICINE
R. D. Little, M.D.
D. W. Samuelson, M.D.

GENERAL PRACTICE
C. E. Woodson, M.D.

PEDIATRICS
F. W. Kolle, M.D.

NEUROPSYCHIATRY
R. R. Gleason, Jr., M.D.

DERMATOLOGY & SKIN CANCER
J. S. Stell, M.D.

GENERAL & THORACIC SURGERY
R. E. Goelzer, M.D.

GENERAL SURGERY
R. B. Caraway, Jr., M.D.

UROLOGY
H. Z. Fretz, M.D.
C. M. Collins, M.D.

OBSTETRICS & GYNECOLOGY
D. M. Voulgaris, M.D.
H. E. Secor, M.D.

OPHTHALMOLOGY
V.A. Black, M.D.

OTOLARYNGOLOGY
J. L. Holcomb, M.D.

DENTISTRY
C. J. Shumbera, D.D.S.
J. R. Kieler, Jr., D.D.S.

PATHOLOGY—CONSULTANT
H. M. Perches, M.D.

ANESTHESIOLOGY—CONSULTANT
C. G. Spears, M.D.

RADIOLOGY—CONSULTANT
L. D. O'Gorman, M.D.

DIAGNOSTIC CLINIC OF HOUSTON

6448 Fannin, Houston, Texas 77025 (713) 526-2051

Internal Medicine and Diagnosis

Cardiovascular Disease
Thomas J. Fatheree, M.D.
Hugh F. Arnold, M.D.
Hugh H. Hanson, M.D
Michael B. Raine, M.D.
Michael A. Modelski, M.D.
Sigmund W. Friedland, M.D.

Endocrinology and Metabolic Diseases
H. Leland Kaplan, M.D.
Thomas G. Vandivier, M.D.
Charles H. Gregory, M.D.
R. Frederick Gregory, M.D.

Endocrinology, Metabolic Diseases and Director of Clinical Research
Raymond L. Gregory, M.D.

Geriatrics
Frederick G. Dorsey, M.D.

Gastroenterology
Dolph L. Curb, M.D.
W. Tom Arnold, M.D.
Belton G. Griffin, M.D.
Frederick R. Lummis, Jr., M.D.
Dean C. Solcher, M.D.

Hematology
Edmund N. Gouldin, M.D.
George W. Conrad, Jr., M.D.

Hypertension and Renal Diseases
K. Ronald Bingman, M.D.
R. Robert Durrett, M.D.

Infectious Diseases
Lewie L. Travis, Jr., M.D.
Jack L. Reddin, M.D.

Internal Medicine
Jeffrey Zatorski, M.D.

Neurology
Donald J. Russell, M.D.

Oncology
Lester L. Hoaglin, Jr., M.D.
Peter Sullivan, M.D.

Pathology
Jack P. Abbott, M.D.
Paul B. Radelat, M.D.

Pulmonary Disease
William M. Donohue, M.D.
Joel E. Reed, M.D.
Gene R. Lindley, M.D.

Radiology and Nuclear Medicine
William L. Hinds, M.D.
Charles P. Eldridge, Jr., M.D.
David D. Lawrence, M.D.
Charles A. Spain, M.D.

Rheumatology
John E. Norris, M.D.

Administration
C. G. Mercy, Administrator
Robert B. Hall, Assistant Administrator

Laboratory:
Clinical Pathology
Cytology

Nuclear Medicine
Isotope uptake, Gammagram and Therapy

Roentgenology

PROCEDURES:

Bronchoscopy:
Pulmonary Functions

Cardiac Catheterization

Electrocardiography-Phonocardiography

Esophagoscopy

Gastroscopy

Proctosigmoidoscopy

CONSULTATION BY APPOINTMENT

CLINIC OF THE SOUTHWEST

6437 High Star at Hillcroft
Houston, Texas 77036 PR 4-7671

INTERNAL MEDICINE
William C. Franklin, M.D.
Arthur B. Conde, M.D.

OBSTETRICS & GYNECOLOGY
Joy L. Deere, M.D.
Loren B. Goss, M.D.

PEDIATRICS
John R. Dunn, Jr., M.D.
Blanca S. Azios, M.D.

PHYSICAL THERAPY
Richard D. Tinsley, R.P.T.

GENERAL SURGERY
Harvey B. Koch, M.D.

UROLOGY
Glen E. Lewis, M.D.

DENTISTRY
Burley G. Ingram, D.D.S.

RADIOLOGY
Neil B. Longley, M.D.
Richard E. Schuette, M.D.

BUSINESS MANAGER
C. C. Walker

Colon and Rectal Surgery

ALVIN BALDWIN, JR., M.D., F.A.C.S.
Practice Limited to
Diseases and Surgery of the Colon and Rectum
714 Doctors Building — Dallas, Texas — 3707 Gaston Avenue
Off. Tel. 824-2573 — Res. Tel. 361-4500

HUGH C. WELSH, M.D.
Proctology and Abdominal Surgery
2715 Fannin Street — Houston, Texas

J. WADE HARRIS, M.D., F.A.C.S.
JOHN E. COGAN, M.D., F.A.C.S.
Surgery of the Rectum and Colon
406 Hermann Professional Bldg.
Houston, Texas

C. D. L. CROMAR, M.D.
Surgery of the Rectum and Colon
617 South Tatar Street
Pasadena, Texas 77502

Dermatology

ROGER W. MANAR, M.D.
DERMATOLOGY
SUPERFICIAL X-RAY THERAPY
1400 Eighth Street — Wichita Falls, Texas

BEDFORD SHELMIRE, M.D.
BEDFORD SHELMIRE, JR., M.D.
DAVID S. SHELMIRE, M.D.
Dermatology
1410 Medical Arts Bldg. — Dallas, Texas

DRS. PIPKIN, RESSMANN & RICHARDSON
J. LEWIS PIPKIN, M.D.
ARTHUR C. RESSMANN, M.D.
A. W. RICHARDSON, M.D.
DERMATOLOGY
X-Ray and Radium in The Treatment of Skin Malignancies
714 Medical Arts Bldg. — San Antonio, Texas

EVERETT R. SEALE, M.D.
Dermatology
Treatment of Skin Malignancies
1217 Hermann Professional Bldg. — Houston, Texas

J. GILMORE BRAU, M.D.
DERMATOLOGY—SYPHILOLOGY
X-RAY and RADIUM THERAPY
Hours 9 to 1 — 3 to 5
3817 Brown Street — Dallas, Texas

J. FRANKLIN CAMPBELL, M.D.
EDMUND N. WALSH, M.D.
Dermatology and Syphilology, and Treatment of Skin Cancer
Radium and X-Ray Therapy
1410 Pruitt Street — Fort Worth, Texas

Leslie M. Smith, M.D. — H. D. Garrett, M.D.
John C. Wilkinson, M.D.
DRS. SMITH, GARRETT & WILKINSON
Dermatology and Syphilology
X-Ray and Radium in the Treatment of Skin Malignancies
Medical Center, 1501 Arizona — El Paso, Texas

WALTER B. MANTOOTH, JR., M.D.
JOE M. LEHMAN, M.D.
ROBERT LEHMAN, M.D.
Dermatology, Syphilology, and Cancer of the Skin
3801 19th St., Suite 500 — Lubbock, Texas

MARVIN E. CHERNOSKY, M.D.
DERMATOLOGY AND SYPHILOLOGY
703 Hermann Professional Building
Phone JA 6-3733 — Houston, Texas

THOMAS L. SHIELDS, M.D.
Dermatology and Syphilology
X-Ray Therapy in the
Treatment of Skin Malignancies
Hours 9 to 1 — 3 to 5
800 Fifth Ave. — Fort Worth, Texas

DAVID R. WEAKLEY, M.D., F.A.C.P.
Dermatology
Treatment of Skin Malignancies
8548 Northwest Plaza Drive — Dallas, Texas
315 North Shiloh Road — Garland, Texas

M. A. (Mac) HAIRSTON, JR., M.D.
DERMATOLOGY
HAIR TRANSPLANTATION & DERMOPLANING
Memorial City Professional Bldg., 902 Frostwood, Suite 184
(Between Memorial & Katy Fwy.)
Phone: 464-6369 — Houston, Texas 77024

JOHN B. McMASTER, JR., M.D.
Dermatology
222-2147
Dermabrasion & Chemosurgery
416 M & S Tower — San Antonio, Texas 78205

Conference on Medical Practice

Austin — September 19, 1970

Eye, Ear, Nose, Throat

Drs. Canon, Watkins, Anderson, Nalle and Ellsasser
Eye, Ear, Nose and Throat, Broncho-Esophagology and Allergy
R. T. Canon, M.D., F.A.C.S. — M. D. Watkins, M.D., F.A.C.S., A.I.C.S.
Wm. F. Anderson, M.D., DAB Oph., F.A.C.S. — Ernest Nalle, Jr., M.D. DAB Oto., F.A.C.S., F.I.C.S.
M. G. Ellsasser, M.D., DAB Oph.
West Texas Clinic 1312 Main Lubbock, Texas

W. HUBERT SEALE, M.D.
Eye, Ear, Nose & Throat
HUBERT JAMES SEALE, M.D.
Disease & Surgery of the Eye
OR 3-3751
1321 Hickory St. Abilene, Texas

Gastroenterology

JAMES J. GORMAN, M.D., F.A.C.P.
Gastroenterology
Diagnosis Gastroscopy
1111 El Paso National Bank Bldg.
El Paso, Texas 79901

MILFORD O. ROUSE, M.D.
announces limitation of practice to consultation in hospitals. His office is now at Dallas Chamber of Commerce in Community Health Focus program. Records of his patients are with Cecil O. Patterson, M.D., and Daniel Polter, M.D., 1414 Medical Arts Building, Dallas, 742-6144.

CECIL O. PATTERSON, M.D.
GASTROENTEROLOGY, GASTROSCOPY
ESOPHAGOSCOPY
1414 Medical Arts Building
Dallas, Texas
742-6141

DRS. BAILEY, DOUGLAS AND FISHER ASSOCIATION
3434 Swiss Avenue, Suite 303, Dallas, Texas
Diseases of the Digestive System
Herbert A. Bailey, M.D. F. Clark Douglas, M.D.
John W. Fisher, M.D.

W. CROCKETT CHEARS, JR., M.D.
GASTROENTEROLOGY
GASTROSCOPY & ESOPHAGOSCOPY
1027 Medical Arts Building
Telephone 748-4975 Dallas, Texas

General Surgery

J. PEYTON BARNES, M.D., F.A.C.S.
Surgery
1000 St. Joseph Professional Bldg.
Houston, Texas 77002

L. GONZALEZ CIGARROA, M.D., F.A.C.S.
Diplomate American Board of Surgery
Practice limited to
SURGERY
1502 Logan Ave. Laredo, Texas

BURT B. SMITH, M.D.
SURGERY
Emphasizing Breast, Thyroid and Gastro-Intestinal Surgery
728 Hermann Professional Building
Phone 523-8323 Houston, Texas 77025

ADOLPH F. KAUFFMANN, M.D., F.A.C.S.
Diplomate American Board of Surgery
GENERAL SURGERY
707 Fifth Ave. Fort Worth, Texas
Phone 332-7597

BRYAN V. WILLIAMS, M.D., F.A.C.S.
Diplomate American Board of Surgery
GENERAL SURGERY
1506 St. Joseph Professional Bldg.
Houston, Texas 77002
227-5505

PAUL CARRILLO-RIVERA, M.D., F.A.C.S.
General, Pulmonary, Cardiovascular Surgery
105 University Towers
915-533-2508
1900 N. Oregon St. El Paso, Texas 79902

Internal Medicine

JOHN A. WIGGINS, JR., M.D.
Diseases of the Chest
Bronchoscopy
1105 Pennsylvania Ave. Fort Worth, Texas

HENRY N. GEMOETS, M.D., F.A.C.P., F.C.C.P.
Internal Medicine and Diseases of the Chest and Heart
THOMAS H. GEMOETS, M.D.
Internal Medicine and Diagnosis
1003 Memorial Professional Building
1010 Louisiana Houston, Texas 77002 222-7224

Neurology/Psychiatry

STEPHEN WEISZ, M.D.
Practice Limited to
NEUROLOGY and PSYCHIATRY
1637 Medical Arts Bldg. Dallas, Texas
747-5183

ALEX K. MUNSON, M.D.
Child Psychiatry
KERBEY LANE EVALUATION AND TREATMENT CENTER
3400 Kerbey Lane Austin, Texas 78703
Office Hours by Appointment
AC 512-454-8718

HAUSER CLINIC

Psychiatry, Neurology, and Electroencephalography

Section of Psychiatry
*Abe Hauser, M.D.
*Robert I. Hauser, M.D.
Barry M. Brown, M.D.
*Harris M. Hauser, M.D.

Section of Neurology
*Harris M. Hauser, M.D.
*Gerald Ratinov, M.D.
Robert M. Gordon, M.D.
*Abe Hauser, M.D.

Section of Social Work
Ethel Feinsilver, M.S.

Section of Psychology
Robert Langston, Ph.D.
Consultant
Joanne Borba, M.A.

Administrator
Gordon D. Keller

808 Memorial Professional Building
Houston, Texas 77002
224-5041

*Diplomate, American Board of Psychiatry and Neurology

Perry C. Talkington, M.D.
Charles L. Bloss, M.D.
Howard M. Burkett, M.D.
Jerry M. Lewis, M.D.
James K. Peden, M.D.
Claude L. Jackson, M.D.
Dode M. Hanke, M.D.
Doyle I. Carson, M.D.
Thomas H. Allison, M.D.
Stanley L. Seaton, M.D.
Maurice S. Green, M.D.
Joe W. King, M.D.
Keith H. Johansen, M.D.
Charles G. Markward, M.D.
Aretta J. Rathmell, M.D.
Donald N. Offutt, M.D.

practice limited to
PSYCHIATRY

4645 Samuell Blvd., Dallas, Texas
Timberlawn Psychiatric Hospital
4600 Samuell Blvd., Dallas, Texas
381-7181

CHAPMAN ISHAM, M.D.
Diplomate American Board of Psychiatry
Child Psychiatry and Marriage Counseling
Hypnotherapy for Smoking and Obesity
3701 21st Street Lubbock, Texas 79410
795-4023

MEDICAL NEUROLOGY AND
ELECTROENCEPHALOGRAPHY
205 Swiss Avenue Medical Building
3434 Swiss

Dallas, Texas 75204 827-3610

Sheff D. Olinger, M.D. Joseph S. Jenike, M.D.
Charles W. Barrier, M.D.

Hours by Appointment Only

THE FORT WORTH
NEUROPSYCHIATRIC CENTER
*Bernard J. Dolenz, M.D. *Herbert G. Rush, M.D.
1066 W. Magnolia Avenue 336-5469
Fort Worth, Texas 76104
*Diplomates American Board of Psychiatry and Neurology

HOUSTON ASSOCIATES
IN
PSYCHIATRY AND NEUROLOGY
Houston, Texas

C. A. Iannucci, M.D.
Joe C. A. Eckhardt, Jr., M.D.
Alfred H. Vogt, M.D.
George M. Stevens, M.D.
Jules Bohnn, M.D.
Leroy Androes, M.D.
A. R. Martinez, Ph.D.
Ruth Searls, M.S.W.
Diana Sheer, M.S.W.
Dan DeShazo, M.S.W.
Beth Bowman, M.A.

Comprehensive Neuropsychiatric
Evaluation and Treatment
Electroencephalography

1021 Hermann Prof. Bldg. 529-5721
6812 Staffordshire 748-3780

Pasadena Neuropsychiatric Clinic Association
Robert E. Hazlewood, M.D. Richard M. Orr, M.D.
Practice Limited
to
Neurology and Psychiatry
Office Hours by Appointment
First Pasadena State Bank Building
1001 E. Southmore, Suite 1103
Pasadena, Texas 77502 Telephone 473-7646

Neurological Surgery

JAMES GREENWOOD, JR., M.D.
Neurosurgery
718 Hermann Professional Bldg., Houston, Texas 77025
Office: 528-5373 Residence: 528-4038

Morris Sanders, M.D. Jack I. Woolf, M.D.
DRS. WOOLF AND SANDERS
Diplomate American Board of Neurological Surgery
Locke Medical Building, 6011 Harry Hines Blvd.
Dallas, Texas 631-1500

JACK STERN, M.D.
GARY C. HUTCHISON, M.D.
CLARK WATTS, M.D.
Neurological Surgery
8226 Douglas, Suite 609
Dallas, Texas 75225
363-8524

Casey E. Patterson, M.D. Tom M. Nash, M.D.
Charles W. Simpson, M.D. James E. Bland, M.D.
DRS. NASH, PATTERSON & SIMPSON, ASSN.
Neurological Surgery
637-0420
Suite 557 - Locke Medical Building, 6011 Harry Hines Blvd.
Dallas, Texas 75235

ALBERT D'ERRICO, M.D.
Neurological Surgery
3707 Gaston Avenue Dallas, Texas 75246
Telephone 824-2543

RONALD SMITH, M.D.
Neurological Surgery
901 South Lake Fort Worth, Texas
Telephone 336-0551

GLENN R. CHERRY, M.D., F.A.C.S.
R. GORDON LONG, M.D.
Diplomate American Board of Neurological Surgery
712 North Washington
826-7060 Dallas, Texas

ROBT. C. L. ROBERTSON, M.D., F.A.C.S.
JOSEPH W. ROBERTSON, M.D.
Neurological Surgery
2210 Maroneal Houston, Texas 77025
523-3684

WILLIAM J. NELSON, M.D.
Certified by the American Board of Neurological Surgery
Suite 300
University Towers
915-542-0643
1900 N. Oregon St. El Paso, Texas 79902

CHARLES A. BORNE, JR., M.D.
Neurological Surgery
Suite 834, Sealy-Smith Professional Building
Galveston, Texas 77550
200 University Boulevard 713-763-1688

PRESENT A PAPER,
SCIENTIFIC EXHIBIT
OR ART EXHIBIT
at the
TMA ANNUAL SESSION
MAY 6-9, 1971 HOUSTON

For information, contact
Mrs. Dale Willimack, Coordinator of Annual Session
Texas Medical Association, 1801 North Lamar Blvd.
Austin, Texas 78701 512 477-6704

Nuclear Medicine

HERBERT C. ALLEN, JR., M.D.
Practice Limited to
NUCLEAR MEDICINE
526-1501
100 Hermann Professional Bldg.
Houston, Texas 77025

Ophthalmology

HOUSTON EYE ASSOCIATES
1121 Hermann Professional Building
Houston, Texas 77026
Phone 626-7261
(AC 713)
Richard S. Ruiz, M.D., F.A.C.S.
Charles E. Russo, M.D. Robert H. Stewart, M.D.
Malcolm L. Mazow, M.D. Robert B. Wilkins, M.D.

DRS. MURPHY, ALPAR, TAYLOR & HOWELL
OPHTHALMOLOGY
Weldon O. Murphy, M.D.
John J. Alpar, M.D.
Coleman Taylor, M.D.
J. Franklin Howell, Jr., M.D.
Diplomates of the American Board of Ophthalmology
2300 West 7th Avenue Amarillo, Texas

ALBERT VAISER, M.D.
WILLIAM B. SNYDER, M.D.
Diseases and Surgery of the Retina
318 Medical Arts Building
Dallas, Texas 748-0958

LIEVEN J. VAN RIET, M.D.
OPHTHALMOLOGY
Medical Surgical
224-0654
Saint Joseph Professional Building
Houston, Texas 77002

W. REX HAWKINS, M.D.
Detachment of the Retina
Diabetic Retinopathy
250 Hermann Professional Building
Houston, Texas 529-6727

OPHTHALMOLOGY ASSOCIATES
Harold E. Caplan, M.D. Jed Lee Howard, M.D.
R. Larry Brenner, M.D.
Special interest in corneal, ophthalmic plastic & retinal surgery
3320 Plainview
Pasadena, Texas 77504
713-944-5700
2622 NASA Road 1
Seabrook, Texas 77586
713-877-2571

DAVID R. STAGER, M.D.
PEDIATRIC OPHTHALMOLOGY
8226 Douglas Ave.
Dallas, Texas 75225

ARTHUR M. CLEMENTS, M.D.
Surgery and Diseases of the Eye
(214) 341-3407
Northlake Professional Building
8535 Ferndale Road Dallas, Texas 75238

Orthopedic Surgery

H. H. Beckering, M.D. George Truett James, M.D.
L. Ray Lawson, M.D. Robert D. Vandermeer, M.D.

W. B. CARRELL MEMORIAL CLINIC
2828 Lemmon Ave. Dallas, Texas

FORT WORTH BONE & JOINT CLINIC
918 8th Avenue — Fort Worth, Texas

Louis J. Levy, M.D. Cuvier P. Lipscomb, M.D.
Henry C. McDonald, Jr., M.D. Fred W. Sanders, M.D.

Ralph E. Donnell, M.D. F. Carlton Hodges, M.D.
ORTHOPEDIC ASSOCIATES
Diplomates American Board of Orthopedic Surgery

1133 N. 19th St. Abilene, Texas 79601

HOUSTON ORTHOPEDIC CLINIC
Joseph Barnhart, M.D. Donald T. Lazarz, M.D.
1817 Dryden Road Phone: 529-4389
Houston, Texas

LUBBOCK ORTHOPEDIC SURGERY CLINIC
Surgery of the Hand
ROYCE C. LEWIS, JR., M.D.
KENNETH C. SCHOLZ, D.D.S., M.D.
RAY E. SANTOS, M.D.
ROBERT O. BATEMAN, M.D.
3702 21st St., Suite 9 806-795-8261
Lubbock, Texas 79410

THE EL PASO
ORTHOPEDIC SURGERY GROUP
Diplomates American Board of Orthopaedic Surgery

Louis W. Breck, M.D. Oren H. Ellis, M.D.
W. Compere Basom, M.D. Wellington J. Pindar, M.D.
Morton H. Leonard, M.D.* Donald A. Shearer, Admstr.

**Special attention to surgery of the hand*

1220 N. Stanton St. El Paso, Texas 79902
Tel. 533-7465

B. C. HALLEY, JR., M.D.
DAVID R. WEBB, JR., M.D.
Orthopaedic Surgery
3909 Worth at Washington 821-1417
Dallas, Texas 75246

RUSS B. GRAHAM, M.D., F.A.C.S.
ORTHOPEDIC SURGERY
306 Presbyterian Professional Building
8210 Walnut Hill Lane, Dallas, Texas 75231
Telephone
824-7883

THE ORTHOPEDIC GROUP OF RICHARDSON
Charles E. Graham, M.D.
M. Gayle Glidewell, M.D.
812 S. Central Expressway
Richardson, Texas 75080
ORTHOPEDIC SURGERY
231-6396

L. LEE LANKFORD, M.D.
Diplomate American Board of Orthopedic Surgery
HAND SURGERY AND
UPPER EXTREMITY RECONSTRUCTIVE
SURGERY
3707 Gaston Ave. Area Code 214
Dallas, Texas 75246 823-5351

THE ARLINGTON ORTHOPEDIC GROUP
H. W. Bendel, Jr., M.D. E. E. Rising, Jr., M.D.
C. Poindexter, M.D.
Diplomates American Board of Orthopaedic Surgery
801 West Randol Mill Road 817-261-8284
Arlington, Texas 76010

THE BOSWELL-EVANS ORTHOPAEDIC CLINIC
George M. Boswell, Jr., M.D., F.A.C.S. James P. Evans, M.D.
Lewis R. Thompson, M.D.
Gerald W. Schofield, M.D.
4849 W. Lawther Dr. 348-8300 Dallas, Texas 75218

Otolaryngology

TOM BARR, M.D.
Ear, Nose, and Throat,
Diseases of Larynx, and
Laryngeal Surgery
Medical Arts Building Dallas, Texas

HERBERT H. HARRIS, M.D., F.A.C.S., F.I.C.S.
Oto-Laryngology Broncho-Esophagology
and Laryngeal Surgery
907 Hermann Professional Bldg. Houston, Texas

MARVIN G. SHEPARD, M.D., F.A.C.S.
Practice limited to Otology and Otological Surgery
Medical Tower Building
712 N. Washington
Suite 514
Dallas, Texas Hours By Appt.

W. P. ANTHONY, M.D.
Otology
662 So. Henderson Fort Worth, Texas 76104

DONALD N. MATHESON, M.D., F.A.C.S.
Diplomate American Board of Otolaryngology
800 Fifth Avenue, Phone 336-7133
Fort Worth, Texas

JACK BLUM, M.D.
LLOYD F. RITCHEY, M.D.
Otolaryngology
8215 Westchester
Suite 135
Dallas, Texas

Pathology

MARVIN D. BELL, A.B., M.D.
Clinical Pathology

1109 Medical Arts Bldg. Dallas, Texas

A. B. CAIRNS, M.D.
GERARD NOTEBOOM, M.D.
MARC GARZA, M.D.
RONALD E. BUCHANAN, M.D.
WADE M. BRANNAN, M.D.
Diplomates American Board of Pathology
1105 N. Bishop Methodist Hospital
Dallas, Texas Dallas, Texas

FORT WORTH MEDICAL LABORATORIES
John J. Andujar, M.D.
Dorothy Patras, M.D.
1404 Pennsylvania Ave. (817) 336-7137
P. O. Box 1118 Fort Worth, Texas 76101

BROWN & ASSOCIATES MEDICAL LABORATORY
Tissue Pathology, Exfoliative Cytology, Hematology, Serology, Clinical Chemistry, Bacteriology, Parasitology, Serum Protein Electrophoresis and Hemoglobin Electrophoresis
Wilson G. Brown, M.D. George V. Miller, M.D.
Walter G. Olin, M.D. John R. Thomas, M.D.
S. J. Skinner, M.D. Joe B. Haden, M.D.
Diplomates American Board of Pathology
165 Hermann Professional Bldg., 526-4031
Houston, Texas
"Mailing Containers on Request"
"Office Pickup Service in Houston"

DR. PREUSS PATHOLOGY LABORATORY
Exfoliative Cytology
and Surgical Pathology
FRED S. PREUSS, M.D., F.C.A.P.
3607 Gaston Avenue, Room 305
Dallas, Texas 75226
Telephone: 823-6912
Specimen containers on request

NUCLEAR MEDICINE LABORATORIES
OF TEXAS
6411 South Main Street
Texas Medical Center
Houston, Texas 77025
Completely equipped radioisotope laboratory for diagnostic radioactive tests in:
Hematology, Thyroidology, Endocrinology, Gastroenterology, Cardiology, Neurology, Neuro-Surgery, Urology, Ophthalmology and Obstetrics-Gynecology
Herbert C. Allen, Jr., M.D., Director
526-1501

John H. Childers, M.D. E. H. Valentine, M.D.
R. R. Rember, M.D. W. L. Crofford, M.D.
E. P. Jenevein, M.D.
MEDICAL LABORATORY SERVICE OF DALLAS
Clinical Pathology Surgical Pathology
Diagnostic Radioisotopes Exfoliative Cytology
6011 Harry Hines Boulevard Dallas, Texas 75235
637-0210
(Mailing containers available upon request)

PRUITT MEDICAL LABORATORIES
Jack Pruitt, M.D.
Diplomate, American Board of Pathology
Tissue Patbology, Exfoliative Cytology, Clinical Pathology, Medicolegal Consultation.
P. O. Box 160 Lufkin, Texas 75901
Phone 634-4453

WACO CLINICAL PATHOLOGY LABORATORY
K. P. Wittstruck, M.D., F.C.A.P.
Walter Krohn, M.D., F.C.A.P.
Clinical Pathology Exfoliative Cytology
Surgical Pathology Medicolegal Consultation
Mailing containers on request
2112 Washington Avenue 756-7226
P.O. Box 3160 Waco, Texas 76707

GEORGE J. RACE, M.D. AND ASSOCIATES
PATHOLOGISTS
421 Medical Tower Building
712 North Washington, Dallas, Texas 75246
Telephone AC 214, 824-1258

DELTA PATHOLOGY LABORATORIES
James W. G. Carman, M.D.
Clinical Pathology And Anatomic Pathology
Cytology
6209 Stuebner Airline (713) 697-7875
Houston, Texas 77018

Physical Medicine and Rehabilitation

TEXAS REHABILITATION HOSPITAL
OF GONZALES
WARM SPRINGS FOUNDATION, INC.
P.O. BOX 58, GONZALES, TEXAS 78629
Facilities for physical restoration.
Physical Therapy, Occupational Therapy, Speech Therapy, Recreational Therapy, School from first grade through twelfth grade.
ROBERT M. IZARD, JR., M.D. LYNN SMITH, SR.
Medical Director Administrator

Plastic Surgery

THOMAS D. CRONIN, M.D., F.A.C.S.
RAYMOND O. BRAUER, M.D.
THOMAS M. BIGGS, M.D.
JAMES H. PENOFF, M.D.
Diplomates American Board of Plastic Surgery
PLASTIC SURGERY
5419 Caroline Street 523-8131 Houston, Texas 77004

WILLARD C. SELLMAN, JR., M.D.
Plastic, Maxillo-Facial and Hand Surgery
530 Locke Medical Building
6011 Harry Hines Blvd.
Dallas, Texas 75235 637-4770

BROMLEY SMITH FREEMAN, M.D., F.A.C.S.
Diplomate American Boards of Surgery and Plastic Surgery
PLASTIC AND RECONSTRUCTIVE SURGERY
Tumors of the Head and Neck
1810 The Medical Towers Tel. 529-3579
Houston, Texas 77025 Res. 782-1628

JOHN B. PATTERSON, M.D., F.A.C.S.
Diplomate American Board
PLASTIC SURGERY
612 Doctors Building Fort Worth, Texas
336-0356

SIMON FREDRICKS, M.D., F.A.C.S.
Diplomate American Board of Plastic Surgery

Houston Office
1103 Medical Towers
Houston, Texas 77025
523-5575

Pasadena Office
904½ E. Southmore
Pasadena, Texas 77502
473-5488

DAVID A. GRANT, M.D., F.A.C.S.
Diplomate American Boards of Surgery and Plastic Surgery
PLASTIC & RECONSTRUCTIVE SURGERY
COSMETIC SURGERY
800 Fifth Avenue
Fort Worth, Texas 76104
335-4751

CARL R. COERS, III, M.D.
Diplomate American Board of Plastic Surgery
PLASTIC, RECONSTRUCTIVE & HAND SURGERY
800 Fifth Avenue
Fort Worth, Texas 76104
335-4751

MARCUS L. FINLEY, M.D., F.A.C.S.
Diplomate American Board of Plastic Surgery
PLASTIC, RECONSTRUCTIVE AND HAND SURGERY
1115A Pennsylvania Avenue
Fort Worth, Texas 76104
Telephone 335-6439

VALENTIN GRACIA, M.D.
F.A.C.S., F.I.C.S., D.A.B.
AESTHETIC SURGERY—BURNS
1001 W. Rosedale Phone
Fort Worth, Texas 76104 336-0446

FRANCIS A. MORRIS, JR., M.D.
WILLIAM E. BARNES, M.D.
Diplomates American Board of Plastic Surgery
Plastic, Reconstructive and Hand Surgery
3100 Red River 476-9149 Austin, Texas

Plastic Surgery
JOHN R. HILL, M.D., F.A.C.S.
Diplomate, American Board of Plastic Surgery
Practice limited to Plastic, Reconstructive and Hand Surgery
Medical Center Office: 272 Hermann Prof. Bldg.
Houston, Texas 77025 528-2481
Spring Branch Office: 9320 Westview
Houston, Texas 77055 528-2481

E. FRANK DUNTON, M.D., F.A.C.S.
Plastic & Reconstructive Surgery and Surgery of the Hand
Telephone 824-7290
Suite 104
3434 Swiss Avenue
Dallas, Texas

W. W. SCHUESSLER, M.D., F.A.C.S.
Diplomate of American Board of Plastic Surgery
Plastic, Reconstructive & Maxillo-Facial Surgery
Telephone 533-6362
Suite 4-C Medical Center
1501 Arizona Avenue
El Paso, Texas 79902

Radiology

AMARILLO RADIOLOGICAL GROUP
Practice Limited to Radiology
ROYAL WERTZ, M.D., F.A.C.R.
WILBUR Q. BUDD, M.D., D.A.B.R.
800 Rusk Street
Amarillo, Texas 79106 373-8324

J. R. MAXFIELD, JR., M.D., M.A.C.R.
JACK G. S. MAXFIELD, M.D., M.A.C.R.
Radiological Center
Including Radioisotopes
2711 Oak Lawn, Dallas 526-6661

MAURICE C. ARCHER, M.D., M.A.C.R.
MARY L. KILLINGSWORTH, M.D., M.A.C.R.
Diplomates of the American Board of Radiology
800 Fifth Avenue Doctors Building
Fort Worth, Texas 332-3401

DRS. CARLSON AND BAREKMAN
Glenn D. Carlson, M.D., F.A.C.R.
William H. Barekman, M.D., D.A.B.R.
Agnes M. Guthrie, M.D., D.A.B.R.
X-RAY DIAGNOSIS
X-RAY AND RADIUM THERAPY
RADIOISOTOPES
1221 Medical Arts Bldg.....741-3621
6011 Harry Hines Blvd.....631-7070
3607 Gaston Ave.....823-9961
DALLAS, TEXAS

Harvey M. Lowry, M.D., F.A.C.R.
James R. Gish, M.D., D.A.B.R.
Edward A. Sheldon, M.D., D.A.B.R.
James P. Wills, M.D.
RADIOLOGY
109 Doctors Bldg. 838-4543
502 Goodhue Bldg. 838-2224
Baptist Hospital 833-6421
Beaumont, Texas

JAMES L. CLIFFORD, M.D., D.A.B.R.
Cobalt 60 Rotational Therapy
X-Ray and Radium Therapy
X-Ray Diagnosis
Radioisotopes
845 Clarksville St. 784-4624 Paris, Texas

Mark these TMA meeting dates on your calendar today —

CONFERENCE ON MEDICAL PRACTICE
Saturday, Sept. 19, 1970 Austin

CONFERENCE ON LEGISLATION
Saturday, Jan. 16, 1971 Austin

104th ANNUAL SESSION
May 6-9, 1971 Houston

Plan now to attend!

Thoracic Surgery

Donald L. Paulson, M.D. Harold C. Urschel, Jr., M.D.
DRS. PAULSON AND URSCHEL
Thoracic and Cardiovascular Surgery
3810 Swiss Ave. 824-2503
Dallas, Texas

THORACIC AND CARDIOVASCULAR SURGERY
James O. McBride, M.D., F.A.C.S.
662 South Henderson, Suite A
P. O. Box 1407
Fort Worth, Texas 76102
332-7454 738-4594

Charles T. Meadows, M.D.
Diplomate, American Board of Thoracic Surgery
Thoracic and Cardiovascular Surgery
Broncho-esophagology
The Professional Building
673-8184
1101 North 19th Abilene, Texas

LeROY J. KLEINSASSER, M.D., F.A.C.S.
Diplomate American Board of Surgery &
The Board of Thoracic Surgery
CARDIOVASCULAR and
PERIPHERAL VASCULAR SURGERY
The Doctors Bldg., 3707 Gaston Ave.
Dallas 10, Texas

Robert R. Shaw, M.D. John L. Kee, Jr., M.D.
DRS. SHAW AND KEE
THORACIC SURGERY
The Doctors Building 3707 Gaston Avenue
Dallas, Texas 75246
826-5184

WILLIAM W. TAYLOR, M.D.
Diplomate Board of Thoracic Surgery
Thoracic, Cardiac, and Vascular Surgery
804 Locke Med. Bldg. 6011 Harry Hines Blvd.
Dallas, Texas 75235 637-4833

ALLAN L. GRAHAM, M.D.
Diplomate American Board of Surgery and
Board of Thoracic Surgery
Cardiovascular and Peripheral Vascular Surgery
502 Doctors Building 800 Fifth Avenue
Fort Worth, Texas 332-7879

Alton C. Lawton, M.D., F.A.C.S.
Diplomate, American Board of Thoracic Surgery
Thoracic and Cardiovascular Surgery
Endoscopy
626 Doctors Building 800 Fifth Avenue
Fort Worth, Texas 332-5791

FOR INFORMATION ON SUBMITTING MANUSCRIPTS FOR PUBLICATION IN *TEXAS MEDICINE*, contact:
Managing Editor
1801 North Lamar Blvd.
Austin, Texas 78701

Urology

CECIL M. CRIGLER, M.D., F.A.C.S.
Practice limited to
UROLOGY
1519 Hermann Professional Bldg., Houston, Texas

JO C. ALEXANDER, M.D.,
KARL B. KING, M.D., FOSTER FUQUA, M.D.,
ELGIN W. WARE, JR., M.D.,
GEORGE E. HURT, JR., M.D.,
EUGENE R. TODD, M.D.,
DONALD E. JOHNSON, M.D. & ASSOCIATES
Urology
3707 Gaston Avenue Dallas, Texas 75246

THE UROLOGY CLINIC
1415 Pennsylvania Ave., Fort Worth, Texas 76104
Dolphus E. Compere, M.D., M.S., F.A.C.S.
Diplomate of American Board of Urology
Grant F. Begley, A.B., M.D.
Diplomate of American Board of Urology
Hugh Lamensdorf, M.D.

H. M. GIBSON, JR., M.D., F.A.C.S.
(Certified by American Board of Urology)
Practice limited to
UROLOGY
512 University Towers Bldg. 1900 North Oregon St.
El Paso, Texas Ph. 532-8130 & 533-4765

MARVIN GREER RAPE, M.D.
Diplomate of American Board of Urology
NEWTON F. McDONALD, M.D.
Diplomate of American Board of Urology
Practice Limited to
UROLOGY
1703 St. Joseph Professional Bldg., 2000 Crawford
Houston, Texas 77002

JOHN B. TRIBLE, M.D.
Practice Limited to
UROLOGY
1209-10 Medical Arts Bldg.
222-7521 Houston, Texas 77002

ERWIN C. WINKEL, M.D.
practice limited to
UROLOGY
Northwest Professional Center 681-0343
2925 West T.C. Jester Blvd. Houston, Texas

THE UROLOGY CLINIC
1010 Louisiana, Houston, Texas 77002
227-1414
JAMES S. BOREN, M.D.
ROBERT I. COX, M.D.
Diplomates American Board of Urology

JOHN F. COLLINS, JR., M.D.
UROLOGY
Doctor's Park 1400 Crescent
Denton, Texas 76201 (817) 387-3828

CLASSIFIED ADS

Physicians Wanted

INTERNIST—Sixth member needed by 13-member multi-specialty group in North Texas university city of over 100,000 population. Board certified or eligible. Fully equipped lab and x-ray. Starting salary $25,000 plus percentage with liberal fringe benefits. Please reply to Ad-273, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

ORTHOPEDIC SURGEON AND TWO GP's needed by 19 doctor group. 100-bed fully accredited hospital. Salary open. Full partnership in one year. For additional details, write John B. Chester, M.D., 3330 South Lancaster Road, Dallas, Texas 75216.

GENERAL PRACTITIONER NEEDED to assume well-established practice in Milford, Texas. The community's only doctor recently suffered a heart attack and has moved. An eight room small clinic owned by the City is available rent free. Income limited only by interest and ability. Good school and churches. Twelve and 17 miles from two first-class hospitals, 48 miles south of Dallas, 48 miles north of Waco. Contact C. O. Miller, P.O. Box 546, Milford, Texas 76670, area code 214, 493-2511.

DERMATOLOGIST, EENT AND GENERAL PRACTITIONER WANTED to associate with clinic with five physicians, two dentists, one orthodontist. Also complete laboratory and x-ray facilities. Write John G. Compton, Jr., M.D., Medical Center Clinic, Waxahachie, Texas 75165.

INTERNIST, board certified or eligible to join four internists in 15-doctor, multi-specialty clinic in West Texas city of 35,000. Life and malpractice insurance, disability and retirement programs provided. Modern clinic building adjacent to accredited hospital. Starting salary $25,000. Contact Jack H. Burnett, Jr., M.D., Malone and Hogan Clinic, 901 Main Street, Big Spring, Texas 79720.

EXCELLENT OPPORTUNITY FOR PHYSICIANS in Carrizo Springs, Texas. Office space available in new professional building adjacent to hospital and nursing home. Excellent schools and housing in city. One general practitioner needed. For information write or call C. W. Vandervoort, 500 North 1st Street, Carrizo Springs, Texas 78834. Phone 876-2550.

UROLOGIST, board certified or eligible, to associate with a progressive and expanding multispecialty group in West Texas. Many fringe benefits including retirement program. No investment required. Adjoining accredited hospital. City population 35,000. Contact Ad-236, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

RADIOLOGIST, board certified or eligible, to associate with a progressive and expanding multispecialty group in West Texas. Many fringe benefits including retirement program. No investment required. Adjoining accredited hospital. City population 35,000. Contact Ad-236, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

PEDIATRICIAN, board certified or eligible, to associate with a progressive and expanding multispecialty group in West Texas. Many fringe benefits including retirement program. No investment required. Adjoining accredited hospital. City population 35,000. Contact Ad-236, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

ORTHOPEDIC SURGEON, PEDIATRICIAN, OBSTETRICIAN AND TWO GENERAL PRACTITIONERS needed by 19 doctor-group. Salary open. Full partnership in one year. 100-bed fully accredited hospital. Many fringe benefits including tax-sheltered retirement plan. For additional details write Chester Clinic and Hospital Association, 3330 South Lancaster Road, Dallas, Texas 75216, Attn: John B. Chester, M.D.

WANTED: GENERAL PRACTITIONER, PEDIATRICIAN, INTERNIST on staff of Denton State School. Base annual salary $20,000, extra $1,000 to $3,500 if board certified. 40-hour work week with ample vacation time, other fringe benefits. Excellent community to live. Near Dallas, Fort Worth. Contact Medical Director, Denton State School, Box 368, Denton, Texas.

GENERAL PRACTITIONER OR GP-SURGEON WANTED in East Texas community of Crockett (Houston County). Office space available for solo practice or association with other physicians in area—106-bed new hospital. Center for industry, farming, livestock, and forestry operations. Excellent schools, churches, and recreational facilities available. For additional information contact Houston County Development Foundation, P.O. Box 807, Crockett, Texas 75835, area code 713, 544-2359.

PATHOLOGY RESIDENCIES AND INTERNSHIPS available in 600-bed general hospital. Fully approved four year program in anatomical and clinical pathology. Average annual specimens and tests—348,587. Interns—$6300; residents—$8100 up. Board and laundry. Charles B. Mitchell, M.D., Director of Laboratories, Harris Hospital, 1300 West Cannon, Fort Worth, Texas 76104.

GENERAL PRACTITIONER WANTED to join five man clinic in growing town of Clifton, 30 miles northwest of Waco near Lake Whitney. 41-bed fully accredited hospital with plans to expand by 30 beds. Salary to start, commensurate with present requirements; partnership later. Good schools, churches and hunting and fishing facilities. Contact V. D. Goodall, M.D., Goodall & Witcher Clinic, Clifton, Texas 76634.

RETIRED PHYSICIAN interested in Ob-Gyn and family planning clinics on part-time basis. $300 and up plus travel. Central Texas. Excellent fishing and hunting nearby. Easy access to metropolitan areas. Contact John B. Bryson, M.D., Bell County Health Department, Box 3745, Temple, Texas 76501.

PHYSICIAN NEEDED: Clinic located in the downtown and industrial areas of Dallas needs a physician. The first year salary is guaranteed with the possibility of a future percentage partnership. For additional information contact Harry Carter, Business Manager, Suite 350, 6011 Harry Hines Blvd., Dallas, Texas or call 638-2730.

RADIOLOGIST TO ASSOCIATE in diagnosis and therapy with established board man in hospital, office practice. Progressive South Texas city of 58,000. Minimal school and community strife. Leisurely pace. Growth potential. Intensifiers, automatic processing. Pre-partner first-year salary $30,000 if board certified. $25,000 if eligible. Write Ad-282, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

NEWLY CONSTRUCTED AND EXPANDED multi-specialty clinic and 120-bed general hospital has openings for physicians in fields of general practice, radiology, urology, pathology, anesthesiology, and orthopedic surgery. Construction to be completed in March, 1971. Located in growing West Texas city of 180,000. Renumeration open depending on board certification and experience. Partnership in two years. Interested applicants send medical curriculum vitae to Ad-287, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

M.D.'S TO DO GENERAL PRACTICE WITH SURGERY, Houston area, new offices in an expanding general hospital. Liberal guarantee first six months. Average monthly income of present doctors $8,000 plus. Pasadena Memorial Hospital, 4040 Red Bluff Road, Pasadena, Texas 77503. Area code, 713, 473-3311.

WANTED BOARD CERTIFIED OR ELIGIBLE ANESTHESIOLOGIST in San Angelo, Texas. This is a private practice with fee for service. Direct all correspondence to O. G. Zacharias, M.D., 224 East Harris Avenue, San Angelo, Texas 76901.

BOARD ELIGIBLE INTERNIST WANTED for 7-man medical department with well established multispecialty group in Dallas, Texas. $25,000 beginning annual salary, early partnership; liberal vacation and meeting time; life insurance, group hospitalization, retirement benefits and teaching opportunities. New facilities. Interviewing expenses paid. Please reply to Arthur L. Cook, Business Manager, Dallas Medical & Surgical Clinic, P. O. Box 28, Dallas, Texas 75221.

GENERAL SURGEON WANTED FOR ASSOCIATE. Established large practice in Central Texas located between Dallas-Fort Worth metropolitan area. Excellent opportunity for general surgeon interested in suburban practice. Must be board certified or eligible. Send complete resume or contact Jack Utt Hudson, M.D., 909 Dalworth Avenue, Grand Prairie, Texas. AC 214-262-5466.

OPPORTUNITIES IN YOAKUM COUNTY, TEXAS. DENVER CITY, TEXAS. Actual need for four general practitioners. Three overworked general practitioners for the past six years until January 15, 1970. One man left at that time to enter industrial medicine, leaving two. His modern well equipped clinic available, rent free for six months, low rent for following six months, with option to buy, records available. This clinic on same block with hospital. Hospital is 50 beds, well equipped, has radiology, clinical and tissue pathology consultation on regular basis. Present two physicians will welcome one or two other physicians, will help introduce. Amicable working arrangement for time off, patient coverage and consultation. PLAINS, TEXAS. County seat of Yoakum County, 15 miles north of Denver City, excellent highway. Completely equipped modern clinic available for one dollar ($1.00) a month. Utilities furnished by city. Large enough for two physicians. Physicians in Denver will make same arrangements for coverage, etc. as outlined above. Yoakum County has excellent schools, good churches, Yoakum County Park between the two towns with very good grass, green nine hole golf course. Lubbock with Texas Tech University, one hour, twenty minutes away. Midland-Odessa area one hour, thirty minutes away. Contact administrator Yoakum County Hospital, Denver City, Texas, area code 806. 592-2121 or County Judge Gene Bennett, Plains, Texas, area code 806, 456-8606.

PRIVATE INDIVIDUAL AND GROUP PRACTICE. $30,000 guaranteed first year with little or no practice expense. Maximum leisure time with family. Both small town and city locations. Not an employment agency. Sanford Smith, P. O. Box 9836, Houston, Texas 77015. 713-453-5454.

ESTABLISHED GENERAL PRACTICE, office, all equipment rent free for two years while I take leave of absence with Peace Corps. Associates for alternating calls. Available in four to eight months. If you want to stay, full partnership of all facilities would be offered at my return. Good area in North Texas with full hospital facilities. Furnished home included for cost of payments. Write P. O. Box 4109, Wichita Falls, Texas 76308.

EENT NEEDED in city of 60,000 in Dallas-Fort Worth area where there are no such specialists. Advantages of continued education at Southwestern Medical. Space available in attractive dental building January, 1971. Please reply to Ad-284, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

WANTED: MD TO DO GENERAL PRACTICE in a fully equipped modern two man clinic. Guarantee and association after interval. No investment needed. Rotate weekends and off days with busy general practitioner who is clinic owner. 36-bed hospital available, located in Central Texas area, with recreational facilities and large cities accessible. Contact 647-1182, or send resume to L. R. Gohlke, M.D., Box 37, Ranger, Texas 76470.

WANTED: GENERAL PRACTITIONER, INTERNIST, OR PEDIATRICIAN to join medical staff of Abilene State School. Base annual salary $20,000 with supplement of $1,000-$3,000 if board certified and working full-time in that capacity. Forty-hour week, excellent vacation/sick plan and about 12 holidays a year. Good life and hospitalization plan, Social Security and excellent state retirement coverage. Lovely community of 90,000 friendly people in West Central Texas. Texas license required. Contact Superintendent L. W. Cain, P. O. Box 451, Abilene, Texas 79604.

WANTED: PHYSICIANS WITH INTEREST IN SURGERY AND/OR OBSTETRICS to locate in progressive East Texas area with complete support of local medical staff. Contact Paul R. Bennett, 300 West Upshur, Gladewater, Texas, or phone AC 214, 845-2281.

CLASSIFIED AD RATES & DATA: Classified Advertising sells for $6.00 per issue for 50 words or less, payable in advance. Ad numbers can be substituted for formal addresses upon request at no extra cost. Name and address of ad number listings can not be given out unless specific permission to do so has been given. The advertising office will not contact ad number holders except by mail. Copy deadline is the 20th of the month preceding publication. Send copy to Advertising Assistant, TEXAS MEDICINE, 1801 North Lamar Blvd., Austin, Texas 78701.

ATTENTION: GENERAL PRACTITIONERS-SURGEONS. If you would like the advantages of small city living together with a wide open field for practicing your profession, contact the Board of Directors, Taft Hospital District, 1220 Gregory Street, Taft, Texas 78390. A modern hospital and convalescent home is at your disposal. Added attraction: only 15 minutes by car from the Sparkling City by the Sea, Corpus Christi, Texas. Ideal climate, plus swimming, fishing, sailing, golfing, hunting, and social activities available. Write us for more details, or better still, come and see for yourself. You will be pleasantly surprised.

Situations Wanted

SEEKING LOCATION. Mature member of the Texas Branch of the American Psychiatric Association desires salaried position. Good background in general medicine. References exchanged. Available August 31 or September 15, 1970. Contact Ad-288, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

RADIOLOGIST, board certified, wants to relocate to Central Texas. Willing to do general radiology with hospital or private group. Please reply to Ad-289, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

For Sale or For Rent

FOR SALE OR LEASE. Fort Worth, Texas, 4104 East Lancaster. Modern brick, 2,300 square feet. Large private parking area. This clinical installation has large waiting room, private offices, business office, seven treatment rooms, x-ray room, and two nurse stations. Available after July 15, 1970. Call Fort Worth 536-8086 for appointment or write to 1804 Provine Street, Fort Worth, Texas 76103.

BLANCO RIVER RANCH. 530 acres, about one mile river frontage. Lots of wild game. Home and eight other buildings. Total price $156,000; $36,000 down. Owner financed, balance 6% interest. Call Bill Flint, area code 512, 997-2522 or write Ken Offer Real Estate, 212 East Main Street, Fredericksburg, Texas.

Miscellaneous

M.A. PSYCHOLOGIST, eligible Texas certification. Desires association with hospital, clinic, group practice, psychiatrist in metropolitan setting. Eight years experience in diagnostics, group, individual, marital, play, therapies, vocational guidance. One year supervisory experience in forming and directing children's crisis short-term treatment unit. Prefer Central, South Central Texas area. Vita, references available. Please reply to Ad-286, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

HOMESTEAD

CHILD PLACEMENT AGENCY

and

HOMESTEAD MATERNITY HOME

1250 W. Rosedale

335-5942 **336-7905**

Fort Worth, Texas

Licensed Adoption Service and Private, Confidential maternity care provided unwed expectant mothers. Obstetrical services by a Diplomate of THE AMERICAN BOARD. Also pediatric care furnished by a licentiate of THE AMERICAN BOARD.

Make your plans now to attend the

Texas Medical Association

Conference on Medical Practice

September 19, 1970

Austin

FIVE FEATURED SPEAKERS

PANEL SESSION ON PHYSICIAN-HOSPITAL RELATIONS

ORIENTATION PROGRAM

UT vs CALIFORNIA FOOTBALL

RIVERBOAT CRUISE & DINNER

See pages 4, 83 and 84 for complete details!

ONCOLOGY

Oscar L. Morphis, M.D., F.A.C.R.
Radiation Therapy
Radium Therapy

R. P. O'Bannon, M.D., F.A.C.R.
Radiation Therapy

Norris Gilfillan, M.D., F.A.C.S.
Chemotherapy

Tom B. Bond, M.D., F.A.C.R.
Consultant

Jack M. Morgan, M.S., F.A.C.R.
Consultant-Physicist

1550 West Rosedale, Suite 620 Fort Worth 336-2028

ADVERTISING INDEX

American College of Cardiology
Vectorcardiology—A Workshop 67

Arch Laboratories
Dicarbosil 67

Barnes-Hind Laboratories
Tinver Lotion 22

Becton, Dickinson and Company
Plastipak 85-86

Beverly Hills Hospital and Clinic 93

Blue Cross-Blue Shield of Texas 7

The Brown Pharmaceutical Company
Android 20
Cerebro-Nicin 20

Bristol Laboratories
Salutensin 40-41

Burroughs Wellcome & Company, Inc.
Neosporin 66

Campbell Soup Company 63

The Carlton Corporation
Calphosan 40

Casualty Indemnity Exchange
Malpractice Insurance 88

Dallas Medical & Surgical Clinic and Hospital 2nd Cover

The Dow Chemical Company
Novahistine LP 97

Eaton Laboratories
Furacin Otic 18

Fahin Tours
Discover India 67

First Texas Pharmaceuticals, Inc.
Amylofene 21

Flint Laboratories
Synthroid 34

Francis Hospitels Incorporated
Convalescent Care 94

Highland Hospital 8

Homestead Child Placement 112

Humco Laboratory
Vasomist 114

Hynson, Westcott and Dunning, Inc.
Lactinex 23

Ives Laboratories, Inc.
Cyclospasmol 42-43

Mead Johnson Laboratories
Vasodilan 24-25

Kelsey-Seybold Clinic 77

King's Daughters Clinic Back Cover

Lederle Laboratories
Achrostatin V 8
Declostatin 99

Eli Lilly and Company
Cordran Tape 28

The Martin X-Ray and Radium Clinic 80

Medical Arts Clinic, Corsicana 100

The Medical Protective Company
Professional Liability Insurance 80

The National Drug Company
AVC 96
Orenzyme Bitabs 95
Quinamm 38
Tepanil Ten-tab 37

Oncology—Fort Worth 112

William P. Poythress & Company, Inc.
Trocinate 98

T. Rowe Price Growth Stock Fund, Inc. 43

The Prudential Insurance Company of America
TMA Group Insurance Plan 78

Radiology Associates of Fort Worth 100

Roche Laboratories
Valium 27

Sandoz Pharmaceuticals
Serentil 9-12

Schering Corporation
Garamycin 35-36

Scott and White Clinic Back Cover

G. D. Searle & Company
Flagyl 64-65

Smith Kline & French Laboratories
Thorazine 3rd Cover

Starlite Village Clinic 100

Surgical Mechanical Research, Inc.
Medical and Dental Equipment 114

Terrell's Laboratories and Medical Group 1

Texas Medical Association
Conference on Medical Practice 112
Texas Medicine 26

Timberlawn Psychiatric Hospital 77

Torbett, Hutchings, Smith Memorial Hospital 2nd Cover

Travis Clinic and Nan Travis Memorial Hospital 100

Turner's Clinical & X-Ray Laboratories 80

Wichita Falls Clinic-Hospital 43

Physicians' Directory 101-110

Classified Advertisements 111-112

ADVERTISING RATES & DATA: Available on request from the Advertising Director, Texas Medicine. Advertising plates should be sent directly to the printer. Space reservations, copy and proofs should be sent to the Advertising Director. Represented nationally by the State Medical Journal Advertising Bureau, Inc., 1010 Lake Street, Oak Park, Ill. 60301.

ADVERTISING & BUSINESS OFFICES: Texas Medical Association, 1801 North Lamar Blvd., Austin 78701; Telephone: 512-477-6704.

PRINTING OFFICES: Texas Medicine, c/o Stafford-Lowdon Company, 1114 West Daggett, Fort Worth 76104.

Vasomist

(ANTIHISTAMINIC)

VASOCONSTRICTOR, NASAL DECONGESTANT AND LOCAL ANTIHISTAMINIC

Active Ingredients:
Phenylephrine Hcl 0.25%
Phenylpropanolamine Hcl ...0.50%
Chlorobutanol 0.15%
Tripelennamine Hel 0.50%
In Isotonic Solution

Vasomist

(PLAIN)

VASOCONSTRICTOR AND NASAL DECONGESTANT

Active Ingredients:
Phenylephrine Hcl 0.25%
Phenylpropanolamine Hcl ...0.50%
Chlorobutanol 0.15%
In Isotonic Solution

USE: Temporary relief of nasal congestion due to colds and hay fever.

DIRECTIONS: Adults and Children: Instill two or three drops into each nostril, using no more than needed to provide relief. Repeat every three to four hours as needed but not oftener.

AVAILABILITY

In plastic squeeze bottles containing ¾ fluid oz. and in dropper bottles containing 1 fluid oz.

HUMCO LABORATORY
TEXARKANA, ARK.-TEX.

HUMCO LABORATORY
TEXARKANA, ARK.-TEX.
Our Integrity is Your Guarantee

Serving Texas Physicians for Over Forty Years

Precision-engineered, functionally-built equipment

SMR keeps you and your patients' comfort and satisfaction in mind . . . a room that reflects professional good taste.

SMR has manufactured medical and Dental equipment for over forty years on a direct to user basis.

NEW CATALOG NOW AVAILABLE

SURGICAL MECHANICAL RESEARCH, INC.

Post Office Box 1185 • (714) 646-4405

960 W. 16th St., Newport Beach, Calif. 92663

Established Over 40 Years

STAINLESS STEEL POLISH

SMR Stainless Steel Polish cleans, and preserves with superior results —ends fingerprints, watermarks and surface stains. 22 oz. economy $2.75 F.O.B. Plant

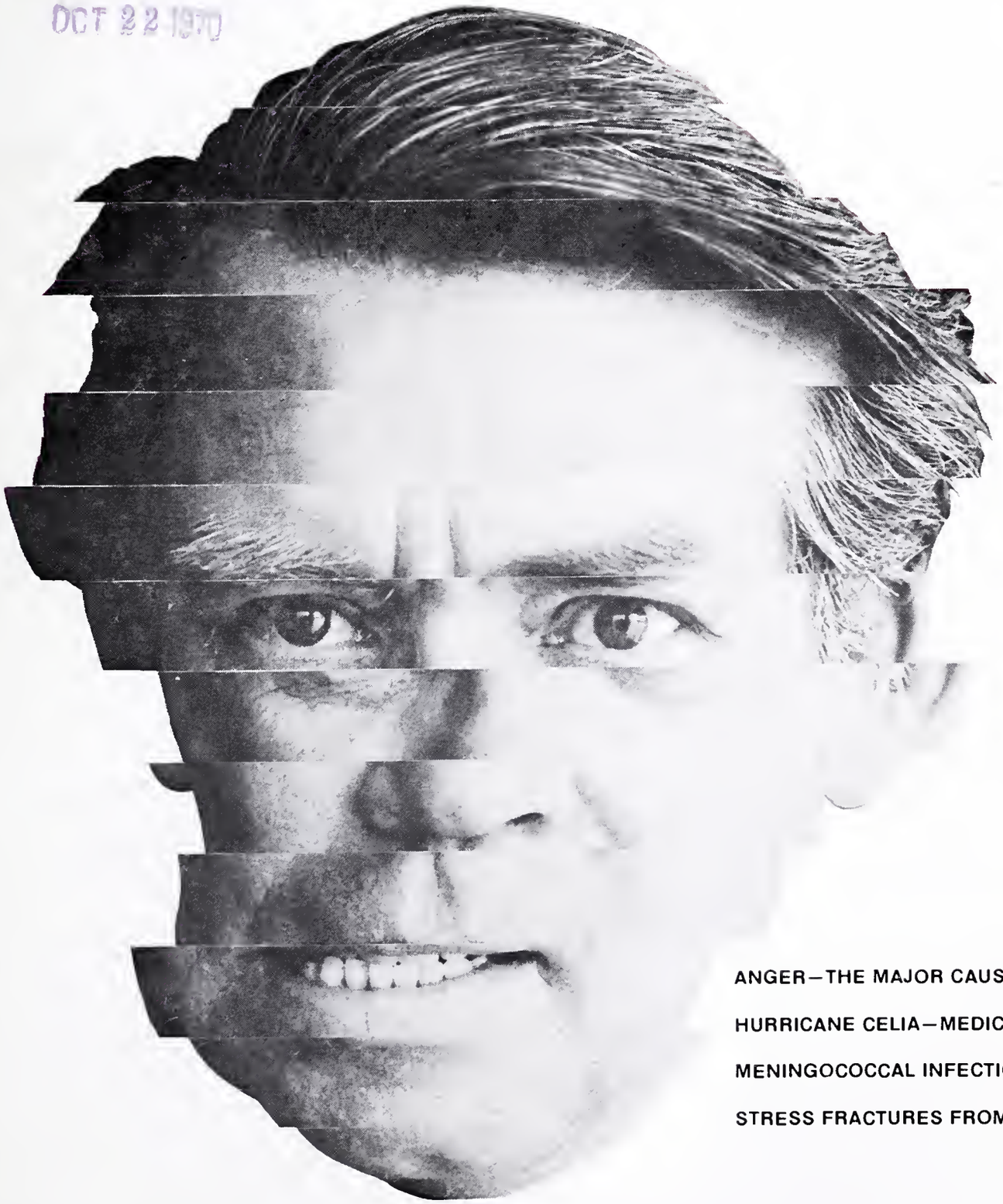
Factory Direct Sales

Please visit our booths, numbers 1, 2, 3, AAOO, Oct. 5-9, 1970, Las Vegas, Nevada.

SEPTEMBER 1970

TEXAS MEDICINE

U. C. SAN FRANCISCO
MEDICAL CENTER LIBRARY
OCT 22 1970



ANGER—THE MAJOR CAUSE OF DEATH?

HURRICANE CELIA—MEDICAL STORY

MENINGOCOCCAL INFECTIONS IN TEXAS

STRESS FRACTURES FROM JOGGING

Torbett, Hutchings, Smith Memorial Hospital
And The Torbett Clinic

306 Coleman Street
Post Office Box 60

Marlin, Texas

Telephone: WE 6-3561

GENERAL SURGERY
Howard O. Smith, M.D., F.A.C.S.
D. R. Swetland, M.D., F.A.C.S.
Howard L. Smith, M.D., F.A.C.S.

INTERNAL MEDICINE
W. F. McKinley, Jr., M.D.
James S. Bussell, M.D.
C. G. Brown, M.D.

EYE, EAR, NOSE AND THROAT
S. W. Hughes, M.D.

ALLERGY
Walter S. Smith, M.D.*

OBSTETRICS AND PEDIATRICS
M. A. Davison, M.D., F.A.C.O.G.
W. L. Reese, M.D., F.A.C.O.G.

RADIOLOGY
J. M. Brown, M.D., F.A.C.R.

PATHOLOGY
W. W. Klatt, M.D.
Ronald E. Henderson, Jr., M.D.
Kent Smith, M.D.

UROLOGY
Howard O. Smith, M.D., F.A.C.S.

DENTISTRY
B. E. Latimer, D.D.S.

NEUROPSYCHIATRY
S. B. Morrison, M.D.

DERMATOLOGY
Maurice C. Barnes, M.D., D.A.B.D.

Administrator:
J. D. Norris, Jr.

Superintendent of Nurses:
Ruby Lowrance, R.N.

Howard O. Smith, M.D., FACS, Chairman of the Board of Trustees, of Torbett, Hutchings, Smith Memorial Hospital and the Torbett Clinic which opened January, 1963. The original hospital was founded by Dr. J. W. Torbett, Sr., in 1898.

The Torbett Clinic and Memorial Hospital continues to utilize the Marlin Hot Mineral Water and other forms of physical therapy as an adjunct in the treatment of arthritis and allied rheumatic conditions.

*Expired 4-24-69.

THE DALLAS MEDICAL & SURGICAL CLINIC AND HOSPITAL

1105 Live Oak Street

DALLAS, TEXAS

Telephone TA 3-4151

*Geo. M. Underwood, M.D., F.A.C.P., Diagnosis & Gastroenterology, D.A.B. Internal Medicine & Gastroenterology
P. E. Luecke, Sr., M.D., F.A.A.P., Pediatrics
Diplomate American Board Pediatrics
*G. A. Davidson, B.S., M.D., Dermatology
*Wm. H. Potts, B.A., F.A.C.P., Internal Medicine
*Ozro T Woods, M.D., Surgery, Emphasizing Tumors
Richard M. Smith, M.D., F.A.C.P., Diagnosis & Internal Medicine
J. Wilbur Bourland, Jr., M.D., Obstetrics & Gynecology
Harry M. Spence, M.D., D.A.B.U., F.A.C.S., Urology
Wells M. Wade, D.D.S., Dental Surgery
Halcuit Moore, M.D., F.A.A.P., Pediatrics
Diplomate American Board Pediatrics
John B. Bourland, M.D., Gynecology & Obstetrics
Diplomate American Board OB-GYN
Raymond W. Burford, M.D., D.A.B.R., Radiology
Henry G. Montgomery, M.D., F.A.C.S., D.A.B.S., Surgery
Edwin M. Cleveland, M.D., Internal Medicine
John B. Allen, M.D., Internal Medicine
Diplomate American Board Internal Medicine
R. M. Burnside, M.D., D.A.B.O., Ophthalmology
Adam D. Green, M.D., Surgery
Morris E. Mag[illegible], M.D., Internal Medicine
Diplomate American Board Internal Medicine

B. Celia Slaughter, M.D., F.A.A.P., Pediatrics
Diplomate American Board Pediatrics
D. W. Shuster, M.D., D.A.B.O., Otolaryngology and Otologic Surgery
P. E. Luecke, Jr., M.D., Pediatrics, F.A.A.P.,
Diplomate American Board Pediatrics
Channing Woods, M.D., Internal Medicine
William W. Hoffman, M.D., D.A.B.U., F.A.C.S., Urology
James M. Copps, M.D., D.A.B.O., Ophthalmology
Joe B. Caldwell, M.D., D.A.B.R., Radiology
Terry D. Allen, M.D., D.A.B.U., Urology
J. Boyd Hollabaugh, D.D.S., General Dentistry
George P. Fosmire, M.D., F.A.C.S., D.A.B.S., General Surgery
Richard C. Stone, M.D., Internal Medicine and Gastroenterology
Daniel L. Maddox, D.D.S., General Dentistry
William N. New, M.D., Dermatology
Masashi Kawasaki, M.D., D.A.B.O., Otolaryngology, Tumor and Reconstructive Surgery of the Head and Neck
Landon W. Stewart, M.D., Internal Medicine
William S. Wolff, M.D., Surgery
George S. Phalen, M.D., Orthopedic Surgery
Miss Billye J. Norris, R.N., Director of Nurses
C. H. Rosamond, Administrator
Arthur L. Cook, Associate Administrator

*Inactive status

TERRELL'S LABORATORIES

T. C. TERRELL, M.D., F.C.A.P., F.A.C.P., DIRECTOR
JOHN S. TERRELL, M.D., F.A.A.P., ASSISTANT DIRECTOR

FORT WORTH, TEXAS

211 Medical Arts Building

DEPARTMENT OF PATHOLOGY
T. C. Terrell, M.D., F.C.A.P., F.A.C.P.
May Owen, M.D., F.C.A.P., F.A.C.P.
Robert Hausman, M.D., F.C.A.P.
Joan Windmiller, M.D., F.A.A.P.

DEPARTMENT OF RADIOLOGY
H. W. Banker, M.D., D.A.B.R., M.A.C.R.
Ernest E. Holt, M.D., D.A.B.R., M.A.C.R.
James C. Moore, M.D., D.A.B.R., M.A.C.R.

DEPARTMENT OF CHEMISTRY
LaMonte A. Tucker, Ph.D.

DEPARTMENT OF BACTERIOLOGY & MYCOLOGY

CONSULTING & ANALYTICAL SERVICES

PATHOLOGY, FORENSIC PATHOLOGY & VETERINARY PATHOLOGY: Histology, Cytology.
CLINICAL PATHOLOGY: Serology, Bacteriology & Mycology, Parasitology, Hematology.
INDUSTRIAL & CLINICAL CHEMISTRY: Radioassay, SMA-12 survey and other Automated Procedures. Hormone Chemistry, Chromatography, Electrophoresis, Immunochemistry.
TOXICOLOGY: Drugs, Water, Foods & Biological materials.
MANUFACTURING DEPARTMENT: Allergenic Extracts and Treatment Sets, Mounting Media, Specifically Prepared Reagents and Stains for Laboratory Use.

TERRELL MEDICAL GROUP

FORT WORTH, TEXAS

210 Medical Arts Building

INTERNAL MEDICINE Diagnosis, Allergy, Cardiology	T. C. Terrell, M.D., F.C.A.P., F.A.C.P. Elizabeth A. Taylor, M.D.
NEUROPSYCHIATRY Electroencephalography	Henry G. Gardiner, Jr., M.D.
PEDIATRICS Pediatric Hematology Adolescent Medicine & Pediatric Consultation	Joan Windmiller, M.D., F.A.A.P. John S. Terrell, M.D., F.A.A.P.
CLINICAL PSYCHOLOGY	Michael W. Wheeler, Ph.D.

TEXAS MEDICINE

VOLUME 66 NUMBER 9 SEPTEMBER 1970

SCIENTIFIC ARTICLES

44 Epidemiologic Overview of Meningococcal Infections in Texas, 1964-1968

S. J. Lerro is medical consultant, Communicable Disease Section, Texas State Department of Health, Austin. He is a graduate of Western Reserve University School of Medicine, Cleveland, and holds a master's degree in public health administration from the University of California, Berkeley. Dr. Lerro is a member of the Texas and American Public Health Associations, Texas and American Associations of Public Health Physicians, and other professional societies.

52 Tetanus

James W. Smith is chief of the Infectious Disease Section of the Veterans Administration Hospital, Dallas, and assistant professor of internal medicine at The University of Texas (Southwestern) Medical School. Dr. Smith is a diplomate of the American Board of Internal Medicine and a member of the American Federation for Clinical Research and the Infectious Disease Society.

56 The Major Cause of Death

William G. Reese is professor and head of the Department of Psychiatry, University of Arkansas School of Medicine in Little Rock. He serves as consultant to the VA Consolidated Hospital, the Inter-University Forum for Educators in Community Psychiatry, and the Arkansas Association for Mental Health. A diplomate of the American Board of Psychiatry and Neurology (Psychiatry), Dr. Reese is a member of several professional societies and is a founding member of the Pavlovian Society of North America, the Association of Southern Professors of Psychiatry, and the Arkansas Psychiatric Society.

68 Stress Fractures in Joggers

Charles E. Graham of Richardson is a diplomate of the American Board of Orthopaedic Surgery and is in private practice. He also is on the staff of Parkland Memorial Hospital. Dr. Graham is a graduate

LERRO

SMITH

REESE

GRAHAM

HORBELT

KIT

of The University of Texas (Southwestern) Medical School, interned at John Peter Smith Hospital in Fort Worth, and took residencies at the VA Hospital in Dallas and at Crippled Children's Hospital in Birmingham, Ala.

76 Ultrastructural Changes in Fallopian Tube Epithelium at Term Gestation and During the Postpartum Period

Douglas V. Horbelt is a junior medical student at The University of Texas Medical Branch, Galveston. He is a member of SAMA, the Texas Society of Electron Microscopy, and Phi Chi medical fraternity.

86 Clinicopathologic Conference

Participants in this CPC from Baylor College of Medicine in Houston are William H. Obenour, fourth-year resident in internal medicine; Henry D. McIntosh, professor of internal medicine; Robert S. MacIntyre, clinical assistant professor of radiology; and M. Sidney Anderson, assistant professor of pathology. Guest editors are Montague Lane, professor of both pharmacology and internal medicine; and Harlan J. Spjut, professor of pathology.

SPECIAL ARTICLE

98 Basic Research and the Health Needs of the Nation

Saul Kit of Houston is professor of biochemistry and head of the division of biochemical virology at Baylor College of Medicine. He is president-elect of the American Society for Cell Biology, a member of the American Society of Biological Chemists, American Chemical Society, American Association for Cancer Research, American Society for Microbiology, and a member of the editorial board of the *International Journal of Cancer*.

EDITORIALS

29 Speak Up, (But) Join Now

R. A. Stevenson, Jr

30 Medical Students —Radical?

Dennis W. Whitfield

32 Anemia Is Not a Disease

Robert L. Palmer

39 The AMA and Its Dues

Walter Walthall

DEPARTMENTS

4 Association and Late News

13 Highlights of Coming Meetings

19 Continuing Education Courses

111 News

111 Destructive Celia: Our Latest Instructive Disaster

119 Personals

119 Pamphlets

121 Medicine in Literature

122 Recent Deaths

ON THE COVER

Question: How is an angry man like the earth in cataclysm?

Answer: In both, the fault lines break under the stress of internal turmoil.

Anger can damage and destroy in countless subtle ways, and thus it may well rank first as the primary cause of premature death. Read the article beginning on page 56, and consider the implications.

NEXT MONTH

Medical education and health care in Texas will share editorial space with highway safety in the October issue. Scientific articles will include management of breast cancer, benign tumors of the external auditory canal, tracheal transplantation, esophageal substitutes, transcutaneous cutting needle biopsy of pulmonary coin lesions, and advantages and complications of intravenous hyperosmolar alimentation.

PUBLICATION INFORMATION

Texas Medicine is published monthly by the Texas Medical Association.

Editorial and Business Offices: 1801 N Lamar Blvd, Austin, Texas 78701; Telephone: Area Code 512 477-6704.

Second Class Postage paid at Austin, Texas, with additional entry at Fort Worth, Texas, under Act of March 3, 1879.

Subscription communications should be sent to the Business Offices, $3 per year for members; $6 for nonmembers; $8 for foreign; $3 for medical students; single copy, $1.

Contributions, previously unpublished, are welcomed for review; suggestions for preparation are available from the Editorial Offices. News and other items should be sent to the Editorial Offices by the 10th of the month preceding the month of publication. All contributions are sent at the owner's risk.

Printing Offices: c/o Stafford-Lowdon Company, 1114 West Daggett, Fort Worth, Texas 76104.

ASSOCIATION & LATE NEWS

TMA striving to develop greater liaison with state medical specialty societies by improving communications with officers, providing administrative services

C. Lincoln Williston
Executive Secretary
Texas Medical Association

One of the most productive and satisfying new programs to be undertaken by the Texas Medical Association in recent years is the development of greater liaison and joint endeavor with specialty societies in the state.

As is well known, there has been a trend toward specialization in medical practice during the past 35 years. With this trend has come the formation of specialty societies, each with its own officers, bylaws, meetings, and activities. The emergence of these societies has brought with it a lessening of interest, participation, and dependence on the part of some physicians in their county and state societies. Some physicians understandably have become more interested in the problems of their own specialty rather than those of the profession as a whole. Some specialists do not feel that issues in their field of practice receive the attention which they deserve from their county and state societies.

Large metropolitan county societies and state associations must broaden their horizons to a greater extent. At this time, medical society officers and executives have a great opportunity to help reunite the entire profession. If county and state societies are to survive, they obviously must represent all physicians with various interests, and they must provide them with useful services.

Officers of the Texas Medical Association have devoted considerable thought to the issue of fragmentation. They have developed several approaches which appear most promising.

First, and undoubtedly most important, is the dedication to improving communications with officers of specialty societies. This is being accomplished by the staging of periodic conferences between state society officers and the presidents and secretaries of specialty organizations. The purpose of these meetings is simple—to establish more effective channels of communication between societies and to explore relationships which will enable all organizations to work together to greater advantage.

We also are making a great effort to invite representatives of specialty societies to meet with appropriate committees of the state Association. Like all medical organizations, societies have a great interest in legislation which affects their members. This has prompted our Council on Medical Jurisprudence to invite all specialty societies to attend a conference every second year, immediately preceding the sessions of the Texas Legislature. Such a conference has been scheduled already for Jan. 15, 1971. As a result, cooperation and understanding is much greater than ever before. We now find ourselves working hand in hand in support of or in opposition to specific bills pending before the Legislature.

This same principle is employed in other areas of mutual interest. For example, the Texas Department of Mental Health and Mental Retardation is confronted at this time with many problems in the operation of the state hospitals. Accordingly, arrangements were made recently for officers of the Texas District Branch, American Psychiatric Association, and our Committee on Mental Health to meet jointly with State Board of Mental Health and Mental Retardation. It is this type of joint endeavor which has been responsible for developing productive relationships with the specialty societies.

The Annual Session of the Texas Medical Association provides a strong bridge of unity with 27 specialty and related medical organizations. These societies are meeting concurrently as

part of the Association's annual convention. The TMA Board of Trustees provides funds for an out-of-state guest speaker for each of these societies. Similarly, each society also underwrites the expenses of a guest speaker. These speakers are made available to all organizations which convene during the four-day meeting. This has added appreciably to the quality of the scientific program of each society, and it has been a factor in attracting an attendance of 4,500 to the Association's Annual Session.

More recently, the Association has implemented another approach which is certain to develop greater liaison with specialty societies. For the past two years, the Texas Medical Association has been providing administrative services to those organizations.

Most specialty societies at the state and county levels do not have large memberships. Most of them do not have adequate financial resources to permit them to employ administrative staffs. The great majority would not find it economical to employ full-time staff. All, however, have a definite need for administrative services.

The administrative responsibility is particularly difficult for many physicians who serve as secretaries of these societies. Organizational records and possessions generally are passed from one physician to another at each election of officers. Most physicians do not have the time, the secretarial personnel, or office equipment to fulfill the responsibilities of their offices as they ideally would like.

It was these considerations which prompted the Texas Medical Association to establish a service-oriented administrative office for interested societies. An administrative secretary, Mrs. Iris Wenzel, has been employed by the Association to serve them.

As could have been predicted, the response from the specialty societies has been enthusiastic. Services presently are being rendered to seven specialty and related medical societies in the state. For the most part, seven basic services are being offered to those organizations.

1. Membership recordkeeping and the maintenance of files.

2. Handling society correspondence and referral of business to officers and appropriate committees.

3. Providing addressing and mailing services.

4. Printing of newsletters and mass communications.

5. Providing secretarial services to officers and to the boards of directors.

6. Billing of dues to members and other related business functions. This includes the payment of bills and the preparation of financial reports.

7. Providing convention services for their annual meetings.

These services are being rendered at this time on the basis of actual costs. Each society is billed at an hourly rate for time devoted to its affairs by the administrative secretary. The hourly rate also includes a stipend for office rental and utilities, the cost of equipment and its depreciation, general supplies, and janitorial services. In addition, each participating organization is billed directly for printing and for other services which require out-of-pocket expenditures.

Next year, as the service continues to develop, each participating society will be expected to become a partner or a shareholder in the operation of the administrative office. These societies will be asked to contract for a percentage of the time of the administrative secretary. The Texas Society of Internal Medicine, for example, may ask for a commitment of 10 percent. Thus, participating societies will pay a percentage of the basic cost of maintenance and operation of the office, and they will be billed for printing, stamps, stationery, and other direct costs. The basic cost of operating the office presently is running approximately $11,000 a year.

This endeavor already is achieving many of the objectives which the Association's Board of Trustees had envisioned for it. Specialty society officers report that they have been able to enhance their organizational effectiveness and their administrative efficiency. Participating societies have profited by having a permanent address and office. Very importantly, the service is resulting in greater liaison and cooperation between those societies and the Texas Medical Association. Officers and staff of the Texas Medical Association are far more knowledgeable about their activities, and those societies, in turn, are much more responsive to our activities. Mutual legislative interests have been enhanced. Most of these societies are participating to an even greater extent in the Association's Annual Session. In some instances, activities have been consolidated, such as those of the Physicians Placement Service of the state Association and the Texas Society of Pathologists.

This approach is proving to be one of the most productive and satisfying which the Texas Medical Association has initiated in recent years. It is an effective approach in developing greater liaison and more wholesome relationships with specialty organizations.

Mrs. Iris Wenzel, TMA administrative secretary, and Dr. Thomas M. Runge, secretary-treasurer of the Texas Society of Internal Medicine, Inc., review a recent copy of the TSIM newsletter.

AMA to incorporate TMA, Committee on Government Health Programs views into testimony on H.R. 17550 to be presented to Senate Finance Committee

Views of the Texas Medical Association and its Committee on Government Health Programs on H.R. 17550, the Social Security Amendments of 1970, will be incorporated into the AMA's testimony to be presented before the Senate Finance Committee later this month. Bernard P. Harrison, secretary of the AMA's Council on Legislation, reported this development to C. Lincoln Williston, TMA executive secretary.

TMA and its Committee on Government Health Programs had voiced concern to the AMA Council over several proposed sections of the bill, including limitation on physicians' fees, the freezing of fees, and the subsequent power of the Secretary of the Department of Health, Education, and Welfare to authorize fee reimbursement rates.

Under the current wording, H.R. 17550 would limit physicians' fees under Medicare, Medicaid, and the maternal and child health program to a maximum of the 75th percentile of actual charges prevailing in a community during the 1969 calendar year. This does not mean that all physicians will be reimbursed 75% of their fee for a specific service; rather, it means that fees that fall within the 75th percentile of the range of fees in an area or community will be paid in full; fees which are above that percentile will be reduced. At present, the Social Security Administration has been authorizing fiscal intermediaries to pay charges within the 83rd percentile. The letter from TMA to the AMA Council points out that "The Federal government should be expected to pay reasonable rates for professional services."

Also at issue are frozen fees. Fees under Medicare and Medicaid have been frozen in Texas since Dec. 16, 1968. Under the current provisions of H.R. 17550, the fees would remain frozen until July 1, 1971. The TMA letter notes that no consideration has been given to the statistics which indicate that with the present inflationary conditions the cost of maintaining a practice in Texas has increased approximately 8% per year.

Another provision of the bill is that after June 30, 1971, the Secretary of HEW will have the power to authorize increases in reimbursement to cover 75% of customary charges. The increases are to be made "on the basis of appropriate economic index data" and as "adjustments are justified by economic changes." The TMA Committee on Government Health Programs feels this provision gives far too much authority to the Secretary of HEW. The Committee has suggested that the unfair limitations, which they point out have not been directed toward any other individuals or businesses in the United States, should be deleted from the bill, and if these limitations cannot be deleted, adjustment in fee reimbursement should be based on "an economic index based on services, rather than be left to the discretion of the Secretary of HEW."

The Committee also urged the AMA Council on Legislation to direct efforts toward allowing physicians the choice of billing the patient directly or accepting an assignment for presentation to the patient's insurance carrier. Although this option is available in most Federal health care programs, the choice is not open to physicians who provide services to cash assistance recipients under the Medicaid program.

The AMA Council on Legislation expects to present its testimony to the Senate Finance Committee sometime in late September. Meanwhile, the TMA Council on Medical Jurisprudence will consider the bill's provisions at its meeting in Austin on Sept. 19, 1970.

UNIT VALUES FOR TMA MEMBERS RETIREMENT PLAN AND TRUST

(As a service to participants in the TMA Members Retirement Plan and to physicians interested in enrolling in the program, comparative values for investment media are published regularly in *Texas Medicine*. Figures shown are the latest available at press deadline and are for comparison purposes only. Most daily newspapers list up-to-the-minute values on mutual funds.)

Investment Media	Original Price 9-30-68	Net Asset Value Per Share 8-31-70	Net Asset Value Per Share 8-31-70*
Mercantile National Bank Stock Fund	$10.25	$ 8.40	$ 8.40
Loomis-Sayles Capital Development Fund	14.20	8.56	12.52
T. Rowe Price Growth Stock Fund	25.93	19.05	21.03
Loomis-Sayles Mutual Fund	16.82	11.90	13.00
Stein Roe & Farnham Balanced Fund	23.34	15.74	16.95
Mercantile Bank Fixed Income Fund	10.00	9.41	9.41

*Adjusted to include dividends and distributions since 9-30-68.

Make it an election party

November 3 will probably arrive as unexpectedly as every First Tuesday on your office calendar—involving the usual harried decisions on whether you should attend one or three meetings or yield to your wife's plans to have that little postponed dinner party.

But the First Tuesday in November deserves your attention today. It's Election Day, 1970.

Think your vote won't make a difference? In 1966, the last congressional election, only 46% of the eligible voters exercised their right to vote. Assuming this same percentage holds for the 1970 elections, a winning candidate would need the support of only 24% of the eligible voters. Is that incentive enough to cast your vote, and encourage your friends to do the same?

Actually, you really have more than one vote. You can vote your choice for the U. S. Senate (Lloyd Bentsen or George Bush), Governor (Preston Smith or Paul Eggers), and Lt. Governor (Ben Barnes or Byron Fullerton), for your Congressman, State Senator and Representative, and for local officials and Constitutional amendments.

It's quite a challenge to be informed on all these races and issues. And, although it may sound a bit trite, it's quite an opportunity to vote on them, too.

Another note—if you plan to be out of town, absentee voting dates are Oct. 14-30—two weeks before the First Tuesday in November.

An apple for teacher

Teachers have rendered one great extra-curricular service to Americans, and it's time somebody said so. Back in 1929, a group of teachers helped set up what later became BLUE CROSS®, to help take care of hospital bills; and later BLUE SHIELD®′ came along to help pay doctor bills.

This solved the teachers' problem then; and it still solves their problems — in many areas of the country, up to 90 percent of teachers are protected by Blue Cross and Blue Shield.

But—think what the whole prepayment idea has done for the providers of health care!

"Everybody's swingin' to the Blues!"

BLUE CROSS® and BLUE SHIELD®′

Hospital and Health Care Coverage
(GROUP HOSPITAL SERVICE, INC.)

Medical and Surgical Benefits
(GROUP LIFE & HEALTH INSURANCE COMPANY)

OF TEXAS MAIN AT NORTH CENTRAL EXPRESSWAY ■ DALLAS, TEXAS 75222

® American Hospital Association
®′ National Association of Blue Shield Plans

Have fun in the water with the famous

KLEPPER FOLD-A-WAY BOATS

"The sailboat that folds away"

BACK PACKERS HEADQUARTERS

FLOAT 'N' FOLD BOATS

KAYAKS 11023 TIBBS STREET DALLAS, TEXAS 75230 214 361-0696 TENTS

WRITE OR CALL FOR FREE BROCHURE

T. ROWE PRICE GROWTH STOCK FUND, INC.

Est. 1950

A NO-LOAD FUND

Investing in stocks carefully selected for long term growth possibilities

Individuals & institutions are invited to request free prospectus

NO SALES CHARGE

T. Rowe Price Growth Stock Fund, Inc.
One Charles Center, Dept. F-1
Baltimore, Md. 21201 Phone (301) 539-1992

Name _____

Address _____

_____ Zip _____

Ec-on-omy!

Dicarbosil®

ANTACID

Your ulcer patients and others will appreciate it. Specify DICARBOSIL 144's—144 tablets in 12 rolls.

ARCH LABORATORIES
319 South Fourth Street, St. Louis, Missouri 63102

Remember how great milk of magnesia tasted?

Almost as good as castor oil.
But now you can spare the taste buds and spoil the patient with a modern Dulcolax tablet or suppository.

And Dulcolax works so predictably that the time of bowel movement can often be predicted. Tablets taken at night usually produce a bowel movement the following morning. Suppositories generally work in 15 minutes to an hour.

For preoperative preparation, a combination of tablets at night and a suppository the next morning usually cleans the bowel thoroughly.

Dulcolax suppositories may be particularly helpful when straining should be avoided, as in postoperative care. Keep in mind, however, that the drug is contraindicated in the acute surgical abdomen.

Dulcolax®...it's predictable
bisacodyl

license from Boehringer Ingelheim G.m.b.H. Geigy Pharmaceuticals, Division of Geigy Chemical Corporation, Ardsley, New York 10502 DU-7015

"What she really needs, Doctor, is a shot of penicillin

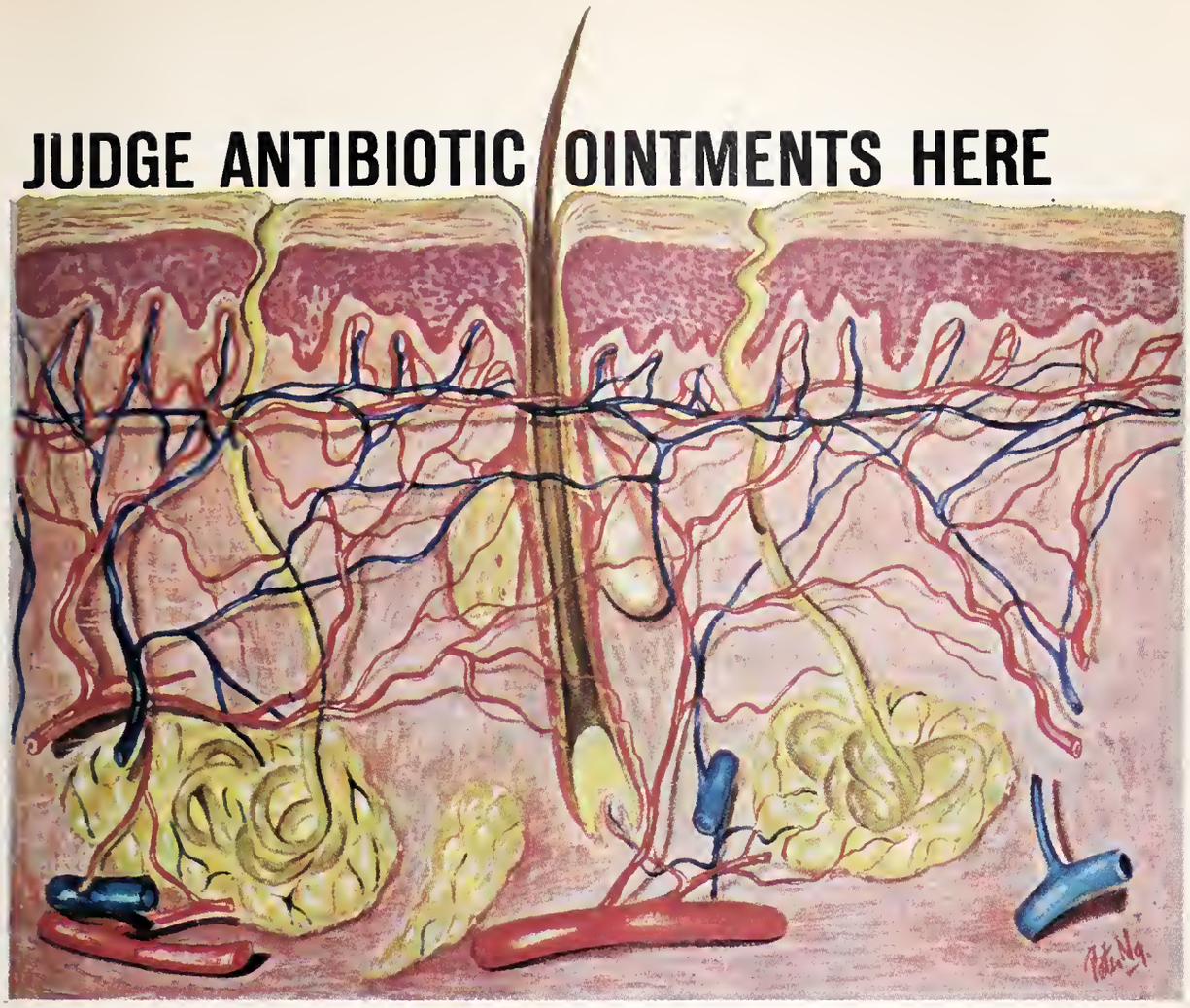
Maybe. Maybe not. In any case she needs something to control her sneezing, watery eyes and runny nose. And for most children over six, Novahistine® LP can be depended on to provide fast relief from summer colds and allergy. These continuous-release tablets have a vasoconstrictor-antihistamine formulation that begins working in minutes, then continues to provide relief for hours. A single Novahistine LP tablet, morning and evening, can keep most young patients free of symptoms all day and all night. Use with caution in individuals with severe hypertension, diabetes mellitus, hyperthyroidism or urinary retention. Caution ambulatory patients that drowsiness may result.

Novahistine LP decongestant

(Each tablet contains 25 mg. of phenylephrine hydrochloride and 4 mg. of chlorpheniramine maleate.)

DOW THE DOW CHEMICAL COMPANY Rx Pharmaceuticals Indianapolis

JUDGE ANTIBIOTIC OINTMENTS HERE



Results on skin are final proof of any topical antibiotic's effectiveness

No in vitro test can duplicate a clinical situation on living skin. 'Neosporin' (polymyxin B—bacitracin—neomycin) Ointment has consistently proven its effectiveness in thousands of cases of bacterial skin infection. The spectra of the three antibiotics overlap in such a way as to provide bactericidal action against most pathogenic bacteria likely to be found topically. Diffusion of the antibiotics from the special petrolatum base is rapid since they are insoluble in the petrolatum, but readily soluble in tissue fluids. The Ointment is bland and nonirritating.

Caution: As with other antibiotic preparations, prolonged use may result in overgrowth of nonsusceptible organisms and/or fungi. Appropriate measures should be taken if this occurs. Articles in the current medical literature indicate an increase in the prevalence of persons allergic to neomycin. The possibility of such a reaction should be borne in mind.

Contraindications: This product is contraindicated in those individuals who have shown hypersensitivity to any of its components.

Supplied: Tubes of 1 oz., ½ oz. with applicator tip, and ⅛ oz. with ophthalmic tip.

Complete literature available on request from Professional Services Dept. PML.

'NEOSPORIN'®
brand

POLYMYXIN B-BACITRACIN-NEOMYCIN OINTMENT

BURROUGHS WELLCOME & CO. (U.S.A.) INC., Tuckahoe, N.Y.

Clinical Extension of a pure Smooth Muscle Relaxant

TROCINATE®

Brand THIPHENAMIL HCl

400 mg./100 mg. S/C tablets

Trocinate relaxes all smooth muscles. Its direct action (musculotropic) does not involve the autonomic nervous system and it is not mydriatic. It is metabolized by the body and eliminated in the urine as harmless degradation products. Trocinate has a remarkable history of freedom from side-effects.

When a pure direct-acting smooth muscle relaxant is indicated, Trocinate is the drug of choice.

DIARRHEA (functional) . . . *the first 400 mg. tablet usually relieves the discomfort of diarrhea so promptly that it ceases to be a bother.*

DIVERTICULITIS—MUCOUS COLITIS . . . *the accompanying discomforts can be relieved by this direct smooth muscle relaxant.*

BLADDER SPASM . . . *relaxation is immediate. One or two tablets condition the bladder for cystoscopy in one hour.*

SPASTIC URETER . . . *the specific relaxing effect of Trocinate on the spastic ureter has been proven by animal studies and affirmed clinically. (J. Urol. 73:487-93)*

PRESCRIBING INFORMATION

WARNING: Do not give in advanced kidney or liver disease. PRECAUTIONS: Trocinate relaxes all smooth muscles. Large dosage or prolonged usage may cause feeling of weakness or can theoretically precipitate gall-bladder colic, due to relaxing the vascular and duet systems. Caution should be observed in patients with urinary bladder obstruction. DOSAGE: 400 mg. May be repeated in 4 hours. After relief, lengthen the dose frequency. (see side note)

NOTE: *The high therapeutic index of Trocinate permits its administration in dosage sufficient to relieve smooth muscle spasm promptly. 400 mg. dosage usually creates a therapeutic blood level. In reducing dosage after relief, lengthening the time between dosage rather than lessening the recommended dose is preferable. The prompt direct action allows a consciousness of the first suggestion of return of symptom . . . a guide to dose spacing and so determining when treatment is complete. A prescription for twelve or sixteen 400 mg. tablets will usually correct spasm and leave a few tablets for a relapse.*

WILLIAM P. POYTHRESS & CO., INC.
RICHMOND, VIRGINIA 23217
Manufacturers of Ethical Pharmaceuticals

TEXAS PEDIATRIC SOCIETY

"Learning Disorders in Children" will be the theme of the Texas Pediatric Society's meeting Sept 24-26 at the Sheraton-Fort Worth Hotel in Fort Worth. Participants in the program include Drs. Gerald Solomons, professor of pediatrics, University of Iowa College of Medicine, Iowa City, Iowa; Dora Chao, department of pediatrics, Baylor College of Medicine, Houston; Bill Caldwell (PhD), department of pediatrics, The University of Texas Medical Branch, Galveston; William Hardy Hendren, III, director of pediatric surgical service, Massachusetts General Hospital, Boston; Carl M. Pfeifer, Community Guidance Center, San Antonio; Thomas W. Wilson, former director, Child Study Center, Fort Worth; and Mrs. Shulamith Kastein, associate director, Mount St. Ursula Speech Center, New York City. "Learning Disabilities," "Language—The Tool of Learning," "Reconstructive Surgery of the Urinary Tract in the Small Infant," and "Can Learning Disability and Secondary Emotional Problems be Prevented by the Pediatrician?" are some of the presentation topics.

Contact: Dr. Stephen G. Maddox, 5211 W. Freeway, Fort Worth 76107, program chairman.

PANHANDLE DISTRICT MEDICAL SOCIETY

Panhandle District Medical Society's annual meeting in Amarillo on Oct. 17 will feature Drs. Charles A. Nugent, professor of medicine and chief of the endocrinology section, University of Arizona College of Medicine; Malcolm O. Perry, assistant professor of surgery, The University of Texas (Southwestern) Medical School at Dallas; Kermit E. Krantz, professor and chairman, department of obstetrics-gynecology, University of Kansas Medical Center; and James G. Hughes, chief, division of pediatrics, University of Tennessee College of Medicine. The emotional impact of chronic disease, surgical treatment of cerebrovascular disease, managing the thyroid nodule, changing concepts of abortion—the physician's responsibility, management of seizures, thrombophlebitis, and the treatment of hyperuricemia and gout are topics to be covered at the meeting.

Contact: Carlie Umphres, Box 3276, Amarillo 79106, executive secretary.

METHODIST HOSPITAL AND LUBBOCK SURGICAL SOCIETY

The 11th annual Methodist Hospital Lectureship in Medicine and the 8th annual Lubbock Surgical Society Lectures will take place Sept. 26 at KoKo Palace in Lubbock. General topic for the lectureship in medicine is "The Edema State and Aldosteronism," and speakers will be Dr. Grant W. Liddle, chairman, department of medicine, Vanderbilt University School of Medicine, Nashville, Tenn.; and Dr. Louis G. Welt, chairman, department of medicine, University of North Carolina School of Medicine, Chapel Hill, NC. Speakers at the surgical section will be Dr. W. Sterling Edwards, III, professor and chairman, department of cardiovascular and thoracic surgery, University of New Mexico School of Medicine, Albuquerque, NM; and Dr. Jack Wickstrom, professor and chairman, department of orthopedic surgery, Tulane University School of Medicine, New Orleans, La.

Contact: Dr. Millard Carnrick, 701 University, Lubbock 79408 (medical lectureship); or Dr. W. T. Snodgrass, 3601 21st St., Lubbock 79419 (surgery lectureship).

HIGHLIGHTS OF COMING MEETINGS

CURRENT MEETINGS IN TEXAS

AMERICAN PUBLIC HEALTH ASSOCIATION will focus on new national programs and priorities for the more equitable delivery of health care, the environment and its implications for health, and community health problems and programs at its 98th annual meeting in Houston, Oct. 23-30. Topics to be discussed in scientific sessions include effective community programs on drug abuse, a new look at basic radiation standards, aged and chronically ill and mental health programs, noise control, birth control for adolescents, abortion, consumer development of health, public medical care for children, and accident and poison control. Contact: Mrs. Marion Paul, APHA, 1740 Broadway, New York 10019.

CURRENT REGIONAL MEETINGS

COLORADO HEART ASSOCIATION will sponsor the 17th Western Cardiac Conference, "What's New in Cardiology," Oct. 21-23, in Denver. Speakers and their topics will be Drs. Charles Rackley, associate professor of medicine, University of Alabama, "Perspectives in CCU, Pre- and Post-hospital Phase"; Peter Pool, associate professor of medicine, University of California at San Diego, "Muscle Mechanics and their Modification" and "Digitalis—Modernization of an Ancient Drug"; Solomon Papper, professor and co-chairman, department of medicine, University of Miami School of Medicine, "Diuretics—What's New"; Donald Ross, lecturer in cardiology and consulting thoracic surgeon, Guy's Hospital, London, "Non-Prosthetic Valve Replacement"; Denton Cooley, professor of surgery, Baylor College of Medicine, Houston, "Prosthetic Valve Replacement"; W. Dudley Johnson, assistant professor of surgery, Marquette University School of Medicine, Milwaukee, "Surgery in Coronary Artery Disease—the Saphenous Vein By-pass Procedure"; and Willem Kolff, professor of surgery, University of Utah College of Medicine, "The Mechanical Heart—Present and Future." Contact: Colorado Heart Association, 1375 Delaware St., Denver 80204.

OKLAHOMA CITY CLINICAL SOCIETY will feature presentations on "Physical Fitness Program" and "The Upper Extremity" during its 40th annual fall conference, Oct. 26-28, at the Hotel Oklahoma in Oklahoma City. Guest lecturers will include Drs. Kenneth H. Cooper, San An-

tonio; Don W. Chapman, Houston; Robert J. Freeark, Chicago; Robert W. Goltz, Denver; Kermit E. Krantz, Kansas City, Kans.; Hunter L. Little, Palo Alto, Calif.; Donn G. Mosser, Minneapolis; John P. Naughton, Washington, DC; Vincent J. O'Conor, Jr., Chicago; and Kinsey M. Simonton, Rochester. Contact: Alma O'Donnell, 601 Northwest Expressway, Oklahoma City 73118, executive secretary.

SOUTHERN PSYCHIATRIC ASSOCIATION will meet at the Palm Beach Towers in West Palm Beach, Fla., Oct. 4-6. Presentations will include "New Thinking Concerning Psychiatry," "Clinical Research Center—NIMH," "Juvenile Offenders," and "Encounter Therapies." Suicide prevention will be studied during a panel session. Contact: Mrs. Annette S. Boutwell, PO Box 10387, Raleigh, NC 27605, executive secretary.

CURRENT NATIONAL MEETINGS

AMERICAN ACADEMY OF CLINICAL TOXICOLOGY's third annual meeting will be held at the Jack Tar Hotel in San Francisco, Oct. 24-26. Preceding the meeting, the Academy will conduct a two-day intensive training program for the practicing physician. The program, planned to provide 16 hours of instruction and conferences on the diagnosis and treatment of acute intoxication, will also take place at the Jack Tar Hotel, Oct. 22-23. The Academy's annual meeting will consist of two symposia "Ethical and Legal Aspects of Clinical Toxicology" and "Clinical Toxicology of Drug Abuse." A general session on areas of clinical toxicology will also be held. A special feature, open to members only, will be an informal presentation of some of the problems of clinical management of acute intoxications as experienced by the speakers. Contact: Dr. Eric G. Comstock, PO Box 2565, Houston 77001, executive director.

AMERICAN ACADEMY OF GENERAL PRACTICE will present a program of postgraduate courses covering the spectrum of the family doctor's professional educational needs at its 22nd annual scientific assembly to be held in San Francisco, Sept. 28-Oct. 1. The medicine of the future—the family practice of medicine—with emphasis on health care for the 70's, and subjects ranging from post-coronary care to the family physician's role in sex education and medicine in the ghetto outline the physician-oriented program. Topics to be covered at the clinical seminars include common skin disorders, cardiac arrhythmias, management of diabetes mellitus, headache—diagnosis and management, diagnosis and treatment of arthritis, alcoholism, the repeatedly ill child, and the allergic patient. Contact: Mac F. Cahal, Volker Blvd. at Brookside, Kansas City, Mo. 64112, executive director.

AMERICAN ACADEMY OF OPHTHALMOLOGY AND OTOLARYNGOLOGY will conduct ten scientific assemblies and 485 instructional courses at its 75th annual meeting in Las Vegas, Oct. 5-9. Ophthalmology and otolaryngology research reports will be presented and instructional courses will be offered daily. Dr. Roger O. Egeberg, assistant secretary for health and scientific affairs, US Department of Health, Education, and Welfare. will be featured speaker at the meeting. Contact: Dr. Clair M. Kos, 15 Second St., SW, Rochester, Minn. 55901, executive secretary-treasurer.

AMERICAN ACADEMY OF PEDIATRICS, meeting in San Francisco Oct. 17-22, will feature the presentation of a special report on the delivery of health care to children in the United States developed by the Academy during the past year to delineate guidelines and recommendations concerning such areas as patterns of child health care, special groups of children requiring health care, and factors that determine the availability and quality of child health care. Contact: Dr. Robert G. Frazier, 1801 Hinman Ave., Evanston, Ill. 60204, executive director.

AMERICAN ASSOCIATION OF BLOOD BANKS will meet Oct. 27-30 at the San Francisco Hilton in San Francisco. Advances in tissue matching and other phases of human organ transplantation will be the subject of a seminar and several paper presentations at the 23rd annual meeting. Contact: Lois J. James, 30 N. Michigan Ave., Chicago 60602, central office manager.

AMERICAN COLLEGE OF CHEST PHYSICIANS will meet Oct. 25-29 at the Century-Plaza Hotel in Los Angeles. "Multidisciplinary Approach to Pulmonary and Cardiovascular Disease" is the theme of the meeting. General topics to be covered include surgical implications of cardiovascular disease, current approaches to therapeutics in pulmonary and esophageal disease, concepts in coronary artery disease, and clinical problems in cardiology. Contact: Dr. Alfred Soffer, 112 East Chestnut St., Chicago 60611, executive director.

AMERICAN COLLEGE OF EMERGENCY PHYSICIANS will present its second annual scientific assembly at the Hotel Sahara in Las Vegas, Oct. 20-22. An assembly that will review the latest methods and techniques in the delivery of acute medicine has been designed specifically for physicians who work in hospital emergency departments. Also included in the program is a daily panel session entitled "Organization and Operation of an Emergency Department." Contact: Executive Secretary, 120 W. Saginaw, East Lansing, Mich. 48823.

AMERICAN COLLEGE OF SURGEONS' 56th annual clinical congress is slated for Oct. 12-16 at the Conrad Hilton in Chicago. The program will include a "Forum on Fundamental Surgical Problems" which will consist of more than 260 research-in-progress reports; panel discussions in general surgery and the surgical specialties; special sessions in graduate education, cancer, and trauma; scientific and industrial exhibits; and a new feature, "The Surgical Environment," with distinguished surgeons, Drs. Harold Laufman of New York, Carl W. Walter of Boston, and James V. Maloney of Los Angeles participating. Postgraduate courses will also be offered. Contact: Dr. C. Rollins Hanlon, 55 E. Erie St., Chicago 60611, director.

AMERICAN DIETETIC ASSOCIATION's 53rd annual meeting will take place Oct. 5-9 in Cleveland. "Challenge and Commitment in the 70s" is the theme of the meeting to be staged at the Sheraton-Cleveland Hotel and Cleveland Convention Center. Contact: Ruth M. Yakel, 620 N. Michigan Ave., Chicago 60611, executive director.

AMERICAN FRACTURE ASSOCIATION has scheduled its annual meeting for Sept. 26-Oct. 1 at the Hotel Americana in New York City. Program participants will include Drs. Robert E. Carroll, Columbia University; David Bosworth, New York Medical College; Frank E. Stinchfield, Columbia University; Walter Thompson, New York University School of Medicine; Robert S. Siffert, Mount Sinai School of Medicine; Arthur J. Helfet, Einstein School of Medicine; and Robert L. Patterson, Jr., Cornell University Hospital for Special Surgery. Contact: Dr. Arthur A. Michele, 121 E. 60th St., New York 10022, convention and program chairman.

AMERICAN MEDICAL ASSOCIATION's 30th Congress on Occupational Health will take place Sept. 30-Oct. 1 at the Century Plaza Hotel in Los Angeles. Acceptable for 12½ elective hours by the AAGP, the program will consist of symposia on standard setting, criteria, and guides; government programs in occupational health; mental health in industry; and avocational hazards. Topics to be discussed include translating criteria and guides into regulatory standards, compliance with regulations of occupational safety and health legislation, federal employee health services, behavioral aspects of accidents, liaison between psychiatric and industrial physicians, injury control in skiing and snowmobiling, and

hazardous exposures in the laboratory. Contact: AMA, Department of Occupational Health, 535 N. Dearborn St., Chicago 60610.

AMERICAN MEDICAL WRITERS ASSOCIATION's 30th annual convention will provide a unique opportunity for editors, writers, and researchers in the medical field to exchange ideas with their colleagues and to keep abreast of what's new in science communications when it convenes Sept. 24-27 at the Waldorf-Astoria Hotel in New York City. The program will feature roundtables, workshops, symposia, and panel discussions. Contact: W. Wayne Curtis, 420 Lexington Ave., New York 10017, executive officer.

ASSOCIATION OF AMERICAN MEDICAL COLLEGES will meet Oct. 29-Nov. 2 at the Biltmore Hotel in Los Angeles. Discussing the academic health center and health care delivery—the changing scene, preparing personnel to meet the demand, and organizational patterns for new responsibilities, will be Drs. Carleton B. Chapman, dean, Dartmouth Medical School; Joseph T. English, former administrator, Health Services and Mental Health Administration; George E. Burket, Jr., former president, American Academy of General Practice; Robert J. Haggerty, chairman, department of pediatrics, University of Rochester School of Medicine and Dentistry; George James, dean, Mount Sinai School of Medicine; and others. Contact: Dr. T. Stewart Hamilton, One Dupont Circle, NW, Washington, DC 20036, secretary.

ASSOCIATION OF AMERICAN PHYSICIANS AND SURGEONS will present the "Private Doctors Institute" during its annual meeting, Sept. 30-Oct. 3, at the John Marshall Hotel in Richmond, Va. Specifically created for doctors in private practice, the Institute will focus on the financial, legal, and economic factors that affect private practitioners. Contact: Frank K. Woolley, 230 N. Michigan Ave., Chicago 60601, executive director.

SOCIETY FOR CRYOSURGERY will sponsor a Seminar on Cryosurgery in EENT on Oct. 4 at the Dunes Hotel in Las Vegas. Speakers are Drs. Jerrie Cherry, Vanderbilt University School of Medicine, Nashville; Daniel Miller, Massachusetts Eye & Ear Infirmary, Boston; Robert Wolfson, Woman's Medical College of Pennsylvania, Philadelphia; Roger Cutt, director of otolaryngology research laboratory, Presbyterian-University of Pennsylvania Medical Center, Philadelphia; Charles Schepens, Retina Foundation, Boston; Louis Girard, department of ophthalmology, Baylor College of Medicine, Houston; and Ramon Castroviejo, New York University, New York City. Contact: Dr. John G. Bellows, 30 N. Michigan Ave., Chicago 60602, secretary.

MORE HIGHLIGHTS OF COMING MEETINGS

■ Denotes Texas meetings.

ALSO IN SEPTEMBER

AMERICAN HUMANE ASSOCIATION, St. Louis, Sept. 27-30, 1970. Rutherford T. Phillips, P. O. Box 1266, Denver 80201, Exec. Dir.

AMERICAN ROENTGEN RAY SOCIETY, Miami Beach, Sept. 29-Oct. 2, 1970. Dr. William B. Seaman, 20 N. Wacker Dr., Chicago 60606, Exec. Officer.

ASSOCIATION OF LIFE INSURANCE MEDICAL DIRECTORS OF AMERICA, Boston, Sept. 28-30, 1970. Dr. Arthur E. Brown, c/o ALIMDA, P.O. Box 594, Newark, NJ.

■ **TEXAS SOCIETY OF CHILD PSYCHIATRY, Fort Worth, Sept. 25-26, 1970. Dr. Ann H. Hughes, 3643 W. Lake Dr., Austin, Sec.**

ALSO IN OCTOBER

AMERICAN ASSOCIATION OF MEDICAL ASSISTANTS, Des Moines, Iowa, October, 1970. Pauline M. Hunter, 5652 N. 10th St., Phoenix, Ariz., Sec.

AMERICAN ASSOCIATION OF OPHTHALMOLOGY, annual, Las Vegas, Oct. 4-5, 1970. Lawrence A. Zupan, Rm. 304, 1100 17th St., NW, Washington, DC 20036, Exec. Officer.

■ AMERICAN CANCER SOCIETY, TEXAS DIVISION, INC., annual, Fort Worth, Oct. 21-22, 1970. Curt W. Reimann, 5014 Bull Creek Rd., Austin 78731, Exec. Officer.

AMERICAN COUNCIL OF OTOLARYNGOLOGY, Las Vegas, Oct. 4, 1970. Dr. John E. Bordley, Suite 406, 1100 17th St., NW, Washington, DC 20036, Exec. Dir.

AMERICAN SOCIETY OF ANESTHESIOLOGISTS, New York, Oct. 17-21, 1970. John W. Andes, 515 Busse Hwy., Park Ridge, Ill., Exec. Sec.

AMERICAN SOCIETY OF PLASTIC AND RECONSTRUCTIVE SURGEONS, INC., annual, Los Angeles, Oct. 4-8, 1970. Mr. Dallas F. Whaley, 29 E. Madison St., Suite 812, Chicago 60602, Exec. Dir.

■ **EASTER SEAL SOCIETY FOR CRIPPLED CHILDREN & ADULTS OF TEXAS, INC., San Antonio, Oct.**

8-10, 1970. William E. Russell, 4429 N. Central Expwy., Dallas, Exec. Dir.

■ SCOTT AND WHITE CLINIC, seminar on practical neurology, Temple, Oct. 1-3, 1970. Dr. W. L. Griggs, Department of Neurology, Scott and White Clinic, Temple 76501.

■ TEXAS ACADEMY OF GENERAL PRACTICE, annual, Dallas, Oct. 17-20, 1971. Donald C. Jackson, 1905 N. Lamar Blvd., Austin 78705, Exec. Sec.

■ TEXAS STATE BOARD OF EXAMINERS IN THE BASIC SCIENCES, Austin, Oct. 12-13, 1970. Dr. Paul C. Witt (PhD), 1012 State Office Bldg., Austin 78701, Pres. of the Board.

NOVEMBER

AMERICAN ASSOCIATION FOR THE ACCREDITATION OF LABORATORY ANIMAL CARE, Chicago, Nov. 2-6, 1970. Joseph J. Garvey, 4 E. Clinton St., Suite 605, P. O. Box 13, Joliet, Ill. 60434, Exec. Sec.

AMERICAN ASSOCIATION FOR INHALATION THERAPY, New Orleans, Nov. 14-18, 1970. Mark T. Bowers, 3554 Ninth St., Riverside, Calif. 92501, Exec. Sec.

AMERICAN CANCER SOCIETY, annual, New York, Nov. 4-6, 1970. Norman R. Hollis, 219 E. 42nd St., New York 10017, Asst. Sec.

■ AMERICAN COLLEGE OF CHEST PHYSICIANS, Southern Chapter, annual, Dallas, Nov. 16, 1970. Dr. Charles Frank Tate, Jr., 1700 NW 10th Ave., Miami, Fla. 33136, Sec.-Treas.

AMERICAN DENTAL ASSOCIATION, Las Vegas, Nov. 8-12, 1970. Dr. C. Gordon Watson (DDS), 211 E. Chicago Ave., Chicago 60611, Exec. Dir.

AMERICAN HEART ASSOCIATION, Atlantic City, Nov. 12-17, 1970. Dr. James M. Hundley, 44 E. 23rd St., New York 10010, Exec. Officer.

AMERICAN MEDICAL ASSOCIATION, 24th clinical convention, Boston, Nov. 29-Dec. 2, 1970. AMA, 535 N. Dearborn St., Chicago 60610.

AMERICAN MEDICAL RECORD ASSOCIATION, Colorado Springs, Nov. 1-6, 1970. Mrs. Mary-j Waterstraat, 211 E. Chicago Ave., Chicago 60611, Exec. Officer.

AMERICAN MEDICAL WOMEN'S ASSOCIATION, INC., Puerto Rico, Nov. 7-10, 1970. Gertrude F. Conroy, 1790 Broadway, New York 10019, Exec. Dir.

AMERICAN SOCIETY OF CLINICAL HYPNOSIS, Miami Beach, Nov. 4-8, 1970. F. D. Nowlin, 800 Washington Ave., SE, Minneapolis 55414, Exec. Sec.

AMERICAN SOCIETY OF CYTOLOGY, Los Angeles, Nov. 4-7, 1970. Dr. Warren R. Lang, 7112 Lincoln Dr., Philadelphia 19119, Sec.-Treas.

ASSOCIATION OF MILITARY SURGEONS OF THE US, Washington, DC, Nov. 29-Dec. 2, 1970. RADM Walter Welham, MC, USN, Ret., 8502 Connecticut Ave., Chevy Chase, Md. 20015, Exec. Dir.

■ BAYLOR COLLEGE OF MEDICINE, symposium on management of renal disease, Houston, Nov. 12-14, 1970. Dr. C. E. Carlton, Jr., Baylor College of Medicine, 1200 Moursund Ave., Houston 77025.

■ BLACKFORD MEMORIAL LECTURES, annual, Denison, Nov. 7, 1970. Dr. John D. Gleckler, 211 N. Fannin, Denison 75020, Chrmn.

CONGRESS OF COUNTY MEDICAL SOCIETIES, annual, Cincinnati, Nov. 6-8, 1970. Dr. Joseph F. Boyle, P. O. Box 54571, Terminal Annex, Los Angeles 90054, Chrmn., Bd. of Trustees.

INTERNATIONAL COLLEGE OF SURGEONS, Las Vegas, Nov. 20-24, 1970. Dr. Aldo Parentela, 1516 Lake Shore, Chicago 60610, Exec. Officer.

INTERSTATE POSTGRADUATE MEDICAL ASSOCIATION OF NORTH AMERICA, annual, Chicago, Nov. 2-5, 1970. Roy T. Ragatz, 307 N. Charter St., Madison, Wis. 53715, Exec. Dir.

MEDICAL SOCIETY OF THE US AND MEXICO, annual, Guadalajara, Jal. Mexico, Nov. 4-7, 1970. Virginia E. Bryant, 333 W. Thomas Rd., #207, Phoenix 85013, Exec. Sec.

NATIONAL SOCIETY FOR THE PREVENTION OF BLINDNESS, INC., New York, Nov. 19, 1970. Margaret S. Banks, 79 Madison Ave., New York 10016, Admin. Asst.

RADIOLOGICAL SOCIETY OF NORTH AMERICA, Chicago, Nov. 29-Dec. 4, 1970. Mrs. Marguerite H. Henry, 713 E. Genessee St., Syracuse, NY 13210, Exec. Dir.

■ SOUTHERN MEDICAL ASSOCIATION, Dallas, Nov. 16-19, 1970. Robert F. Butts, 2601 Highland Ave., Birmingham, Ala. 35205, Exec. Dir.

■ SOUTHWESTERN MEDICAL ASSOCIATION, El Paso, Nov. 4-6, 1971. Bob Reid, 723 Mills Bldg., El Paso 79901, Exec. Sec.

■ TEXAS ASSOCIATION FOR CHILDREN WITH LEARNING DISABILITIES, INC., Austin, Nov. 20-21, 1970. Mrs. William F. Howard, 4601 Small Drive, Austin 78731, Chrmn.

■ THE UNIVERSITY OF TEXAS M. D. ANDERSON HOSPITAL AND TUMOR INSTITUTE AT HOUSTON, 15th annual clinical conference, Houston, Nov. 19-20, 1970. UT M. D. Anderson Hospital and Tumor Institute, Texas Medical Center, Houston 77025.

UNIVERSITY OF FLORIDA COLLEGE OF MEDICINE, seminar in obstetrics and gynecology, Gainesville, Fla., Nov. 19-20, 1970. Division of Postgraduate Education, University of Florida College of Medicine, J. Hillis Miller Health Center, Gainesville 32601.

DECEMBER

AMERICAN ACADEMY OF DERMATOLOGY, Chicago, Dec. 5-10, 1970. Mrs. Dorothy P. Compton, 2250 NW Flanders St., Portland, Ore., Exec. Sec.

AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE, Chicago, Dec. 26-31, 1970. Dr. Dael Wolfe, 1515 Massachusetts Ave., NW, Washington, DC 20005, Exec. Officer.

■ AMERICAN COLLEGE OF PHYSICIANS, Galveston, Dec. 4, 1970. Dr. Ralph R. Tompsett, 3500 Gaston Ave., Dallas 75246.

ASSOCIATION OF STATE AND TERRITORIAL HEALTH OFFICERS, Washington, DC, Dec. 6-10, 1970. Noble J. Swearingen, 234 E. Capitol St., Washington, DC 20002, Dir.

SOUTHERN SURGICAL ASSOCIATION, Boca Raton, Fla., Dec. 7-9, 1970. Dr. David C. Sabiston, Jr., Duke University Medical Center, Durham, NC, Sec.

■ TEXAS ACADEMY OF INTERNAL MEDICINE, Galveston, Dec. 5, 1970. Dr. O. Roger Hollan, 703 Nix Bldg., San Antonio 78205, Sec.

■ TEXAS SOCIETY OF INTERNAL MEDICINE, INC., Galveston, Dec. 4, 1970. Dr. Thomas Runge, 1801 N. Lamar Blvd., Austin 78701, Sec.-Treas.

■ TEXAS SOCIETY OF OPHTHALMOLOGY AND OTOLARYNGOLOGY, Corpus Christi, Dec. 4-5, 1970. Dr. Bland H. Schwarting, 304 Med. Prof. Bldg., San Antonio, Sec.

■ TEXAS STATE BOARD OF MEDICAL EXAMINERS, Fort Worth, Dec. 7-9, 1970. Dr. M. H. Crabb, 1612 Summit Ave., Suite 303, Fort Worth 76102, Sec.

JANUARY

ARIZONA HEART ASSOCIATION, Fourteenth Annual Cardiac Symposium, Phoenix, Jan. 22-24, 1971. Arizona Heart Association, 1720 E. McDowell Rd., Phoenix 85006.

■ FIFTH DISTRICT MEDICAL SOCIETY, annual, San Antonio, Jan. 29, 1971. S. E. Cockrell, Jr., 202 W. French Place, San Antonio 78212, Exec. Officer.

■ INTERNATIONAL MEDICAL ASSEMBLY OF SOUTHWEST TEXAS, annual, San Antonio, Jan. 28-29, 1971; extension trip to Mexico follows. S. E. Cockrell, Jr., 202 W. French Place, San Antonio 78212, Exec. Officer.

NATIONAL CONFERENCE ON CANCER OF THE COLON AND RECTUM, San Diego, Jan. 7-9, 1971. Dr. Ronald N. Grant, c/o American Cancer Society, Inc., 219 E. 42nd St., New York 10017.

■ TEXAS MEDICAL ASSOCIATION, Austin, Jan. 15-17, 1971. C. Lincoln Williston, 1801 N. Lamar Blvd., Austin 78701, Exec. Sec.

■ TEXAS RADIOLOGICAL SOCIETY, annual, Dallas, Jan. 29-30, 1971. Dr. Herman C. Sehested, 1550 W. Rosedale, Fort Worth 76104, Sec.

FEBRUARY

AMERICAN ACADEMY OF ALLERGY, annual, Chicago, Feb. 20-24, 1971. James O. Kelley, 756 N. Milwaukee St., Milwaukee, Wis. 53202, Exec. Officer.

AMERICAN COLLEGE OF CARDIOLOGY, annual, Washington, DC, Feb. 3-7, 1971. William D. Nelligan, 9650 Rockville Pike, Bethesda, Md. 20014, Exec. Dir.

AMERICAN SOCIETY OF ABDOMINAL SURGEONS, New Orleans, Feb. 14-17, 1971. Dr. Blaise F. Alfano, 675 Main St., Melrose, Mass., Exec. Sec.

■ FIRST DISTRICT MEDICAL SOCIETY, annual, Pecos, February, 1971. Dr. John Emmett, 1900 N. Oregon, El Paso, Sec.

INTERNATIONAL ACADEMY OF PROCTOLOGY, 23rd annual congress and teaching seminar, Mexico City, Feb. 26-March 5, 1971. Dr. Alfred J. Cantor, 147-41 Sanford Ave., Flushing, NY 11355, Exec. Sec.

PAN-PACIFIC SURGICAL ASSOCIATION, annual, Honolulu, Feb. 26-March 3, 1972. Harriet N. DeVault, 236 Alexander Young Bldg., Honolulu 96813, Exec. Sec.

■ TEXAS PUBLIC HEALTH ASSOCIATION, annual, Fort Worth, Feb. 28-March 3, 1971. Joseph N. Murphy, Jr., PO Box 5192, Austin 78703, Exec. Sec.

MARCH

AMERICAN ACADEMY OF ORTHOPAEDIC SURGEONS, annual, San Francisco, March 6-11, 1971. John K. Hart, 430 N. Michigan Ave., Chicago 60611, Exec. Sec.

AMERICAN ASSOCIATION OF PATHOLOGISTS AND BACTERIOLOGISTS, annual, Montreal, Quebec, March 6-9, 1971. Dr. K. M. Brinkhous, Dept. of Pathology, University of North Carolina, Chapel Hill, NC 27514, Sec.

AMERICAN COLLEGE OF ALLERGISTS, annual, San Francisco, March 28-April 1, 1971. Dr. John D. Gillaspie, 2141 14th St., Boulder, Colo. 80302, Exec. Sec.

AMERICAN COLLEGE OF PHYSICIANS, annual, Denver, March 28-April 2, 1971. Dr. Edward C. Rosenow, Jr., 4300 Pine St., Philadelphia 19104, Exec. Dir.

AMERICAN COLLEGE OF RADIOLOGY, annual, St. Louis, March 29-April 3, 1971. William C. Stronach, 20 N. Wacker Dr., Rm. 2920, Chicago 60606, Exec. Dir.

AMERICAN COLLEGE OF SURGEONS, Phoenix, March 1-3; New Orleans, March 15-17, 1971. Dr. C. Rollins Hanlon, 55 E. Erie St., Chicago 60611, Dir.

AMERICAN SOCIETY OF INTERNAL MEDICINE, annual, Denver, March 26-28, 1971. W. R. Ramsey, 525 The Hearst Bldg., San Francisco 94103, Exec. Officer.

■ DALLAS SOUTHERN CLINICAL SOCIETY, annual, Dallas, March 15-18, 1971. Millard J. Heath, 433 Medical Arts Bldg., Dallas 75201, Exec. Officer.

NEW ORLEANS GRADUATE MEDICAL ASSEMBLY, annual, New Orleans, March 8-11, 1971. Irma B. Sherwood, 1430 Tulane Ave., New Orleans 70112, Exec. Sec.

SOCIETY FOR CRYOSURGERY, annual, Hollywood, Fla., March 1-5, 1971. Dr. John G. Bellows, 30 N. Michigan Ave., Chicago 60602, Sec.

■ SOCIETY OF NUCLEAR MEDICINE, Southwestern Chapter, annual, Houston, March 19-21, 1971. Dr. Herbert C. Allen, Jr., 100 Hermann Prof. Bldg., Houston 77025, Sec.-Treas.

■ TEXAS ASSOCIATION OF OBSTETRICIANS AND GYNECOLOGISTS, annual, Corpus Christi, March 5-6, 1971. Dr. J. L. Jinkins, Jr., 200 University Blvd., Galveston 77550, Sec.-Treas.

■ TEXAS UROLOGICAL SOCIETY, annual, Wichita Falls, March 11-13, 1971. Dr. Charles Dryden, 1605 Tenth St., Wichita Falls 76301, Sec.-Treas.

US-MEXICO BORDER PUBLIC HEALTH ASSOCIATION, annual, Tucson, March 29-April 2, 1971. Dr. Jorge Jimenez-Gandica, 501 US Court House, El Paso 79901, Sec.

APRIL

■ AEROSPACE MEDICAL ASSOCIATION, annual, Houston, April 26-29, 1971. Dr. Merrill H. Goodwin, Washington Nat'l Airport, Washington, DC 20001, Exec. Sec.

AMERICAN ACADEMY OF NEUROLOGY, annual, New York City, April 26-May 1, 1971. Stanley A. Nelson, 4005 W. 65th St., Minneapolis 55435, Exec. Sec.

AMERICAN ASSOCIATION OF ANATOMISTS, annual, Philadelphia, April 18-23, 1971. Dr. Russell T. Woodburne, Dept. of Anatomy, The University of Michigan, 4643 Medical Science Bldg., Ann Arbor, Mich. 48104, Sec.-Treas.

AMERICAN ASSOCIATION FOR THORACIC SURGERY, Atlanta, April 26-28, 1971. Ada Hanvey, 7710 Carondelet Ave., St. Louis 63105, Admin. Asst.

AMERICAN COLLEGE HEALTH ASSOCIATION, annual, San Francisco, April 27-30, 1971. James W. Dilley, 2807 Central St., Evanston, Ill. 60201, Exec. Dir.

AMERICAN COLLEGE OF SURGEONS, Montreal, Quebec, Canada, April 5-7, 1971. Dr. C. Rollins Hanlon, 55 E. Erie St., Chicago 60611, Dir.

ST. JUDE'S HOSPITAL

3200 South 1st Street

Austin, Texas

A 40-bed psychiatric hospital

Owned by the Roman Catholic Diocese of Austin

ANNOUNCES THE OPENING OF AN

ADOLESCENT UNIT

Multiple disciplinary approach in the treatment of emotional disturbances in adolescents

J. H. Albright, M.D.
Chief of Staff

Alex K. Munson, M.D.
Director of Adolescent Psychiatry

E. B. Baker,
Administrator

Mrs. Mardy Gray, R.N.,
Adolescent Program Coordinator

For further information call: Area Code 512 442-7818, or write to the Director of Adolescent Psychiatry, St. Jude's Hospital, P. O. Box 3545, Austin, Texas 78704

ANNOUNCING
40th ANNUAL FALL CONFERENCE
OKLAHOMA CITY CLINICAL SOCIETY

October 26, 27, 28, 1970 — HOTEL OKLAHOMA — Oklahoma City, Oklahoma

Monday Morning, Oct. 26
"PHYSICAL FITNESS PROGRAM"
Col. Kenneth H. Cooper, M.D.
John Naughton, M.D.

Monday Afternoon, Oct. 26
"WHAT'S NEW AND WHAT'S USABLE OF WHAT'S NEW"
Presented by Faculty of the University of Oklahoma Medical Center
Boyd K. Lester, M.D.
Oscar A. Parsons, Ph.D.
James M. Hartsuck, M.D.
G. Rainey Williams, M.D.

Tuesday Afternoon, Oct. 27
SURGICAL GRAND ROUNDS
"THE UPPER EXTREMITY"
Don H. O'Donoghue, M.D.
Bob J. Rutledge, M.D.
Allen E. Greer, M.D.
Edward A. Shadid, M.D.
Moderator:
G. Rainey Williams, M.D.
Guest Panelist:
Robert J. Freeark, M.D.

GUEST LECTURERS

Physical Fitness
Col. Kenneth H. Cooper, M.D.
San Antonio, Texas

Cardiology
Don W. Chapman, M.D.
Houston, Texas

Surgery
Robert J. Freeark, M.D.
Chicago, Illinois

Dermatology
Robert W. Goltz, M.D.
Denver, Colorado

Gynecology & Obstetrics
Kermit E. Krantz, M.D.
Kansas City, Kansas

Ophthalmology
Hunter L. Little, M.D.
Palo Alto, California

Radiology
Donn G. Mosser, M.D.
Minneapolis, Minnesota

Medicine
John P. Naughton, M.D.
Washington, D.C.

Urology
Vincent J. O'Conor, Jr., M.D.
Chicago, Illinois

Otorhinolaryngology
Kinsey M. Simonton, M.D.
Rochester, Minnesota

Registration Fee of $25.00 includes 3 luncheons.
Approved for 30 Prescribed Hours Credit by the AMERICAN ACADEMY OF GENERAL PRACTICE

For Further Information, write: Executive Secretary,
Oklahoma City Clinical Society, 601 Northwest Expressway, Oklahoma City, Okla. 73118

CONTINUING EDUCATION COURSES

Neurology: The department of neurology, Scott and White Clinic, Temple, will present a seminar on practical neurology Oct. 1-3. The symposium will be devoted to selected practical topics in neurology, neurosurgery, and psychiatry with presentations by members of the staff of Scott and White and by a distinguished visiting faculty which will include Drs. David D. Daly, professor and chairman, department of neurology, UT Southwestern Medical School at Dallas; Robert E. McMasters, associate professor of physiology and medicine (neurology), UT Medical School at San Antonio; B. Joe Wilder, associate professor of physiology and medicine (neurology), University of Florida School of Medicine, Gainesville, Fla.; and Charles Reul, neurologist, Sheppard Air Force Base, Wichita Falls. Informal panel discussions of specific patient problems will be given by the visiting faculty and by participating Scott and White physicians. Questions and comments from the floor are encouraged.

Registration fee is $50; no charge to residents, interns or members of the Armed Forces. For further information write to the Education Office, Scott and White Memorial Hospital, Temple, Tex. 76501.

Psychiatry: Dr. Jack E. Ponder, assistant professor of psychiatry at The University of Texas (Southwestern) Medical School at Dallas, will be the instructor for a course on Emotional Dimensions of Medical Problems to begin in October and run through December. Enrollment is limited to 10, and the course will be taught in weekly two-hour sessions. The course is sponsored by Southwestern's department of psychiatry and division of postgraduate education; for details write Dr. Ponder in care of the school, 5323 Harry Hines Blvd., Dallas, Tex. 75235.

Public Health Laboratory Workshops: Information and applications for the following workshops may be obtained from Dr. J. V. Irons (ScD), Director of Laboratories, Texas State Department of Health, 1100 W. 49th St., Austin 78756:

Public Health and Medical Bacteriology, Oct. 5-9; Public Health and Medical Parasitology, Oct. 19-21; Introductory Immuno Fluorescence, Nov. 3-5, Dec. 8-10; Public Health and Medical Mycology, Nov. 17-20; Tuberculosis-Mycobacteriology, Dec. 1-3.

The workshops are designed for the benefit of public health, hospital, clinical, and other medical laboratories. No registration fee; only a limited number of qualified workers can be accommodated.

Birth Defects: The Second Annual Birth Defects Symposium, "Disorders of Glucose Metabolism in Children," will be Oct. 30-31 at the University of Florida College of Medicine, Gainesville, Fla. Sponsors are the University's Institutional Division of Endocrinology and Metabolism and the National Foundation-March of Dimes Birth Defects Center. Mrs. Betty L. Howard, Division of Postgraduate Education, J. Hillis Miller Health Center, Gainesville, Fla. 32601, can send complete information; registration fees will be waived for interns and residents.

Cancer: Postgraduate fellowships in cancer will be offered by The University of Texas Medical School at San Antonio for practicing physicians who wish to spend a period of one or two weeks, fulltime, in the medical school and adjacent teaching hospital working with the faculty and staff in the care and management of cancer patients. Programs will be available in most of the clinical fields such as surgery, radiotherapy, medicine, pediatrics, obstetrics-gynecology, and pathology and will be tailored to meet the desires of the individual physician. An optional per diem allowance of as much as $17 per day will be available.

Inquiries may be addressed to Dr. J. B. Aust, Chairman, Cancer Committee, 7703 Floyd Curl Drive, San Antonio 78229.

Emergency Nursing: The American Academy of Orthopaedic Surgeons Committee on Injuries will sponsor a postgraduate course for emergency department nurses Nov. 8-11 at the Holiday Inn Downtown in Dallas. Held in conjunction with The University of Texas Southwestern Medical School at Dallas, Dallas County Medical Society, and Texas Nurses Association, the course will include lectures, demonstrations, discussions, and class participation. Topics will concern cardiopulmonary resuscitation, shock, control of hemorrhage, burns, poisonings, narcotics and LSD intoxication, cardiac emergencies, fractures, legal aspects of emergency department care, religious aspects of emergency department care, intravenous catheterization technique, psychiatric emergencies, and other related subjects.

Registration will be limited to 200, and tuition will be $50. For registration applications or additional information contact Dr. George N. Aldredge, Jr., 1224 Medical Arts Bldg., Dallas, Tex. 75201.

Ophthalmology: A course on "The Aging Eye" will be presented Nov. 9 in Houston. Sponsors are the division of continuing education of The University of Texas Graduate School of Biomedical Sciences at Houston, the department of ophthalmology at Hermann Hospital, and St. Anthony Center. The program will review the basic principles of diagnosis of diseases of the anterior and posterior segment of the aging eye; the concept of glaucoma and its detection by general physicians; the effect of aging changes on the refractive status of the eye; and neurological, vascular, and adnexal changes in the aging eye that are of general diagnostic importance.

For further information write The University of Texas Graduate School of Biomedical Sciences at Houston, Division of Continuing Education, PO Box 20367, Houston 77025.

Internal Medicine, Obstetrics and Gynecology: Chicago Medical Society will sponsor a course on internal medicine Nov. 9-13 and a course on obstetrics and gynecology Nov. 16-20 at the Knickerbocker Hotel in Chicago. Each course has been approved by the AAGP for 32½ hours of credit.

Registration for each course is $150. Complete details may be obtained from Chicago Medical Society, 310 South Michigan Ave., Chicago 60604.

Dietitians: The division of postgraduate education of The University of Texas (Southwestern) Medical School at Dallas announces a seminar for dietitians, Dec. 4-5, at the school. "Dietary Prevention of the Epidemic of Atherosclerosis in the Diabetic Patient," "Diabetes Mellitus and Adipose Tissue," and various topics in nutrition research will be presented. Guest faculty will be Dr. Daniel B. Stone, chief, diabetes division and professor of internal medicine, The University of Iowa, Iowa City.

The session is limited to 200 registrants and the fee is $15. Inquiries and registrations should be addressed to Dr. John S. Chapman, Assistant Dean for Postgraduate Education, The University of Texas (Southwestern) Medical School at Dallas, 5323 Harry Hines Blvd., Dallas 75235.

What is worth doing..

In 1936 A. E. Smith, professional at Woolcombe, England, recorded the lowest golf score for an 18 hole course. He shot a 55 and was 15 under par. The course at Woolcombe, which measured 4,248 yards, was covered in 4, 2, 3, 4, 2, 4, 3, 4, 3 out and 2, 3, 3, 3, 3, 2, 5, 4, 1 in.

is worth doing well.

Take ACHROMYCIN V, for example. Lederle routinely runs over 1,000 quality control checks on every batch produced. Many, many more than officially required. This extra attention means your patients get what the doctor ordered when you prescribe ACHROMYCIN V: uniform *in vitro* dissolution rate, predictable *in vivo* serum and urinary levels. In short, known biologic availability of tetracycline. And every step in the production of ACHROMYCIN V is in-house controlled right in Pearl River.

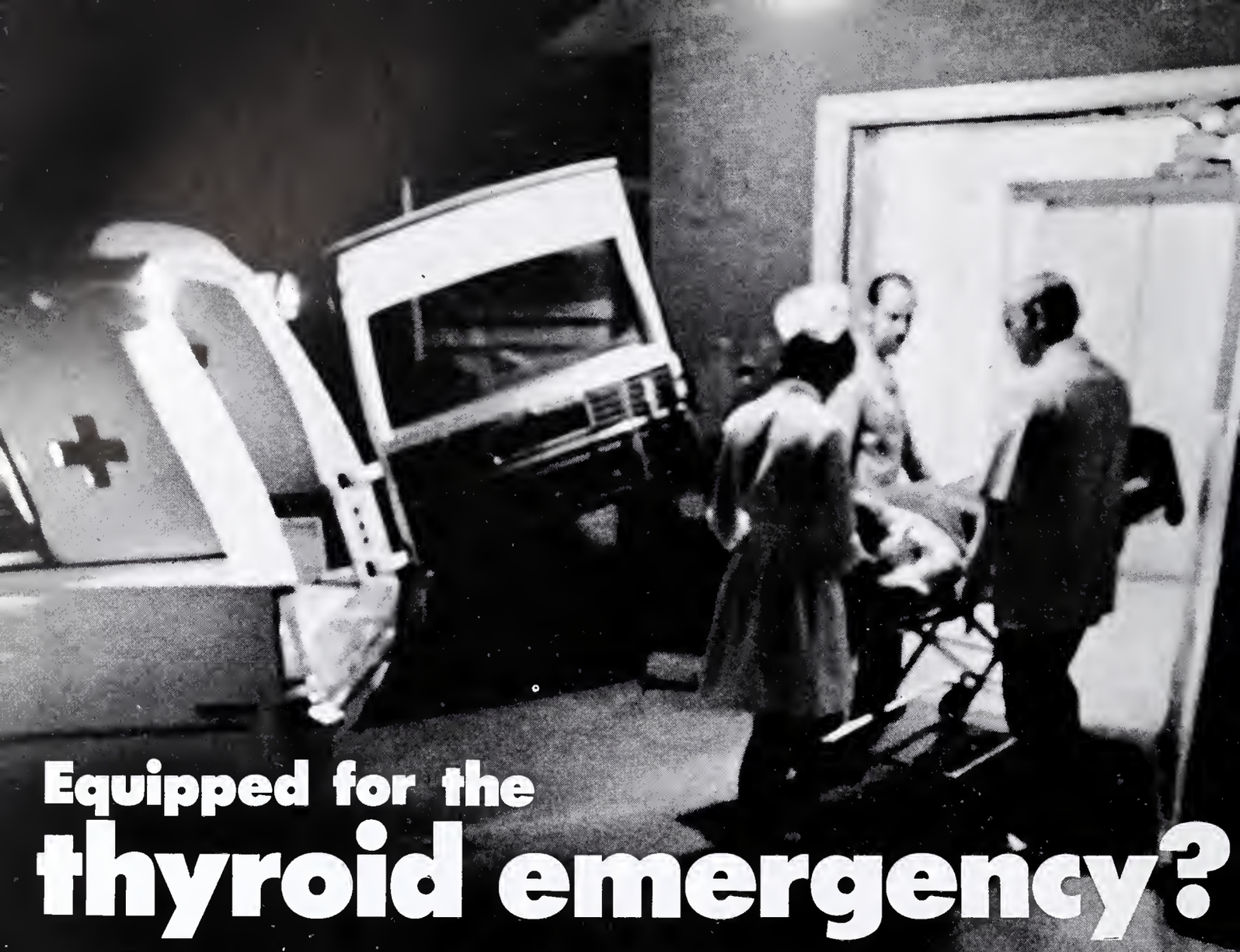
ACHROMYCIN®-V
Tetracycline HCl

Performance proved in practice

Effectiveness: ACHROMYCIN Tetracycline is a crystalline broad-spectrum antibiotic which provides effective therapeutic activity against susceptible microorganisms.
Contraindication: History of hypersensitivity to tetracycline.
Warning: In renal impairment, usual doses may lead to excessive accumulation and liver toxicity. Under such conditions, lower than usual doses are indicated and, if therapy is prolonged, serum level determinations may be advisable. Some patients may develop a photodynamic reaction to natural or artificial sunlight. Those with a history of photosensitivity reactions should avoid direct exposure to sunlight while under treatment. Discontinue drug at first evidence of skin discomfort.
Precautions: Use may result in overgrowth of nonsusceptible organisms. Constant observation is essential. If new infections appear, take appropriate measures. Use of tetracycline during teeth development may cause discoloration of teeth.
Side Effects: Gastrointestinal system—anorexia, nausea, vomiting, diarrhea, stomatitis, glossitis, enterocolitis, pruritus ani. Skin—maculopapular and erythematous rashes (a case of exfoliative dermatitis has been reported); photosensitivity reaction, onycholysis and discoloration of nails (rare). Kidney—rise in BUN, apparently dose-related. Hypersensitivity reactions—urticaria, angioneurotic edema, anaphylaxis. In young infants, bulging fontanels have been reported following full therapeutic dosage. This symptom has disappeared rapidly when drug is discontinued. Teeth—dental staining (yellow-brown) in children of mothers given tetracycline during the latter half of pregnancy, and in children given the drug during the neonatal period, infancy and early childhood. Enamel hypoplasia has been seen in a few children. Blood—anemia, thrombocytopenic purpura, neutropenia, eosinophilia. Liver—cholestasis (rare), usually at high dosage. Tetracycline may form a stable calcium complex in bone-forming tissue. If adverse reaction or idiosyncrasy occurs, discontinue medication and institute appropriate therapy.
Average Adult Daily Dosage: One Gm. per day, in 4 divided doses of 250 mg. each. Should be given 1 hour before or 2 hours after meals, since absorption is impaired by the concomitant administration of high calcium content drugs, foods and some dairy products. Treatment of streptococcal infections should continue for 10 days, even though symptoms have subsided.

Lederle LEDERLE LABORATORIES, A Division of American Cyanamid Company, Pearl River, New York 10965

281-0



Equipped for the thyroid emergency?

When an ambulance arrives with the unexpected patient presenting the classical picture of myxedema coma, is your hospital suitably equipped? It is if SYNTHROID® (sodium levothyroxine) injectable is at hand. You are also ready to conveniently handle post-operative thyroid medication situations until oral therapy can be reinstated.

In tablet form this single entity synthetic thyroid provides smooth, predictable response for thyroid replacement. An excellent drug for long-term therapy.

But in an emergency, when rapid replacement is needed to sustain life, prompt clinical response is essential. SYNTHROID injection makes this therapy instantly available. Is it available in your hospital?

Levothyroxine has a high binding capacity for serum proteins in contrast to other thyraid medicoments that may contain a thyroactive agent with low binding capacity. *The bound levathyroxine is totally measurable using the serum PBI test. It is not unusual to find PBI levels af 8-10 mcg. per 100 ml. af serum.*

INDICATIONS: SYNTHROID (sodium levothyroxine) INJECTION is specific replacement therapy for diminished or absent thyroid function resulting from primary or secondary atrophy of the gland, cangenital defect, surgery, excessive radiation, or antithyroid drugs. It is indicated in myxedematous coma and other thyroid dysfunctions where rapid replacement of the hormone is required. When o potient does not respond to aral therapy, SYNTHROID (sadium levothyroxine) INJECTION may be administered intravenously.

PRECAUTIONS: As with other thyroid preparations, overdose may cause diarrhea or cramps, nervousness, tremors, tachycardia, insomnia and continued weight loss. These effects may became apporent in fram 4 days to three weeks. Therefore, patients should be kept under close observation. Medication, in such cases, should be stopped for 2 to 6 days, then resumed at a lower level. In patients with diabetes mellitus, look for possible changes in metabalic activity which may offect insulin or other antidiabetic drug dosage requirements.

CONTRAINDICATIONS: Thyrotoxicosis, acute myocardial infarction.

SIDE EFFECTS: Side effects are secandary ta increased rates of body metabolism: sweating, heart palpitations with or without pain, leg cramps, weight loss, diarrhea, vamiting ond nervousness. Myxedematous patients with heart disease have died from abrupt increases in dosage of thyroid drugs. In most coses, a reduction in dosage followed by a more gradual odjustment upward will indicate the patient's dosage requirements without the appeorance of side effects.

DOSAGE AND ADMINISTRATION: In myxedematous stupor or coma, with no evidence of severe heart disease, 200 to 400 mcg. of SYNTHROID (sadium levothyroxine) INJECTION may be administered intravenously utilizing a solution cantaining 100 mcg. per ml. Detectable effects are usually observed by the sixth hour after injection and are fully appreciated during the following day. A repeat injection of 100 ta 200 mcg. may be given on the second day if significant improvement has not occurred. The intravenaus use of sodium levathyraxine in myxedematous cama is advantageous because it produces a predictable increase in the concentration of protein-bound iodine, eliminates the need for multiple doses until aral therapy is reinstated, circumvents the uncertainty of aral absarption, and avoids the risk of pulmonary aspiratian.

SUPPLIED: SYNTHROID (sodium levathyroxine) INJECTION is supplied in 10 ml. vials contoining 500 mcg. of lyophilized active ingredient and 10 mg. of Mannitol, N.F.; a 5 ml. vial containing Sadium Chloride Injectian, U.S.P. is provided as diluent.

Also supplied as SYNTHROID (sodium levothyroxine) TABLET in color caded compressed tablets, and in seven strengths: 0.025 mg. (orange), 0.05 mg. (white), 0.1 mg. (yellow), 0.15 mg. (violet), 0.2 mg. (pink), 0.3 mg. (green), and 0.5 mg. (blue). Each strength is supplied in bottles of 100 and 500 tablets.

Synthroid®
(sodium levothyroxine, FLINT)
Injection

FLINT LABORATORIES
DIVISION OF TRAVENOL LABORATORIES, INC.
Morton Grove, Illinois 60053

vacation in a vial: the spasm reactors in your practice deserve

"the Donnatal® Effect"

	each tablet, capsule or 5 cc. of elixir (23% alcohol)	each Donnatal No. 2	each Extentab®
hyoscyamine sulfate	0.1037 mg.	0.1037 mg.	0.3111 mg.
atropine sulfate	0.0194 mg.	0.0194 mg.	0.0582 mg.
hyoscine hydrobromide	0.0065 mg.	0.0065 mg.	0.0195 mg.
phenobarbital	(¼ gr.) 16.2 mg.	(½ gr.) 32.4 mg.	(¾ gr.) 48.6 mg.
(Warning: may be habit forming)			

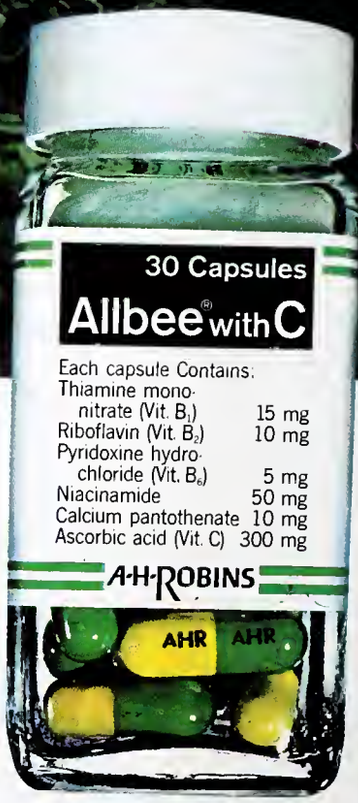
Brief Summary. Blurring of vision, dry mouth, difficult urination, and flushing or dryness of the skin may occur on higher dosage levels, rarely on usual dosage. Administer with caution to patients with incipient glaucoma or urinary bladder neck obstruction. Contraindicated in acute glaucoma, advanced renal or hepatic disease or a hypersensitivity to any of the ingredients.

A. H. ROBINS COMPANY, RICHMOND, VIRGINIA 23220

A·H·ROBINS

2 ways to give your patients a month's therapeutic supply of Vitamin C:

40 pounds of spinach or 30 Allbee® with C



Although raw spinach is an excellent source of vitamin C, your patient would have to eat 40 pounds a month (about 1⅓ lbs. a day) to get as much ascorbic acid as is contained in just one bottle of 30 Allbee with C capsules (taken one capsule daily). If the spinach is cooked, a person would have to ingest more than twice as much because cooking destroys much of the vitamin C, and still more is lost when the liquid is drained off. Allbee with C also contains therapeutic amounts of B-complex vitamins. This handy bottle of 30 capsules gives your patient a month's supply at a very reasonable cost. Also the economy size of 100. Available at pharmacies on your prescription or recommendation.

A. H. Robins Company, Richmond, Va. 23220

A·H·ROBINS

A
BUILDING BLOCK
TO RECOVERY

Orenzyme® Bitabs

Trypsin: 100,000 N.F. Units, Chymotrypsin: 8,000 N.F. Units; equivalent in tryptic activity to 40 mg. of N.F. trypsin

The causes of vaginitis are multiple

Trichomonads... monilia... bacteria
You can depend on AVC—comprehensive therapy that combats all three major vaginal pathogens, alone or in combination.

AVC
Cream (aminacrine hydrochlaride 0.2%, sulfanilamide 15.0%, allantoin 2.0%)

Suppositories (aminacrine hydrachlaride 0.014 Gm., sulfanilamide 1.05 Gm., allantoin 0.14 Gm.)

Contraindications: Known sensitivity to sulfonomides.
Precautions/Adverse Reactions: The usual precautions for topical and systemic sulfanamides should be observed becouse of the possibility af absorption. Burning, increosed local discomfort, skin rosh, urticorio or other manifestatians of sulfonomide toxicity are reasons to discantinue treatment.
Dosage: One applicotorful or one suppository introvoginally ance or twice daily.
Supplied: Cream – Four-ounce tube with or without opplicotor. Suppasitaries – Box af 12 with applicator.

TRADEMARK: AVC AV-007A 7/70 Y-149

THE NATIONAL DRUG COMPANY
DIVISION OF RICHARDSON-MERRELL INC
PHILADELPHIA, PENNSYLVANIA 19144

AVC
The treatment is singular

SECRAN® Vitamin B Complex Elixir

each teaspoonful contains 25 mcg. Crystalline Vitamin B_{12}

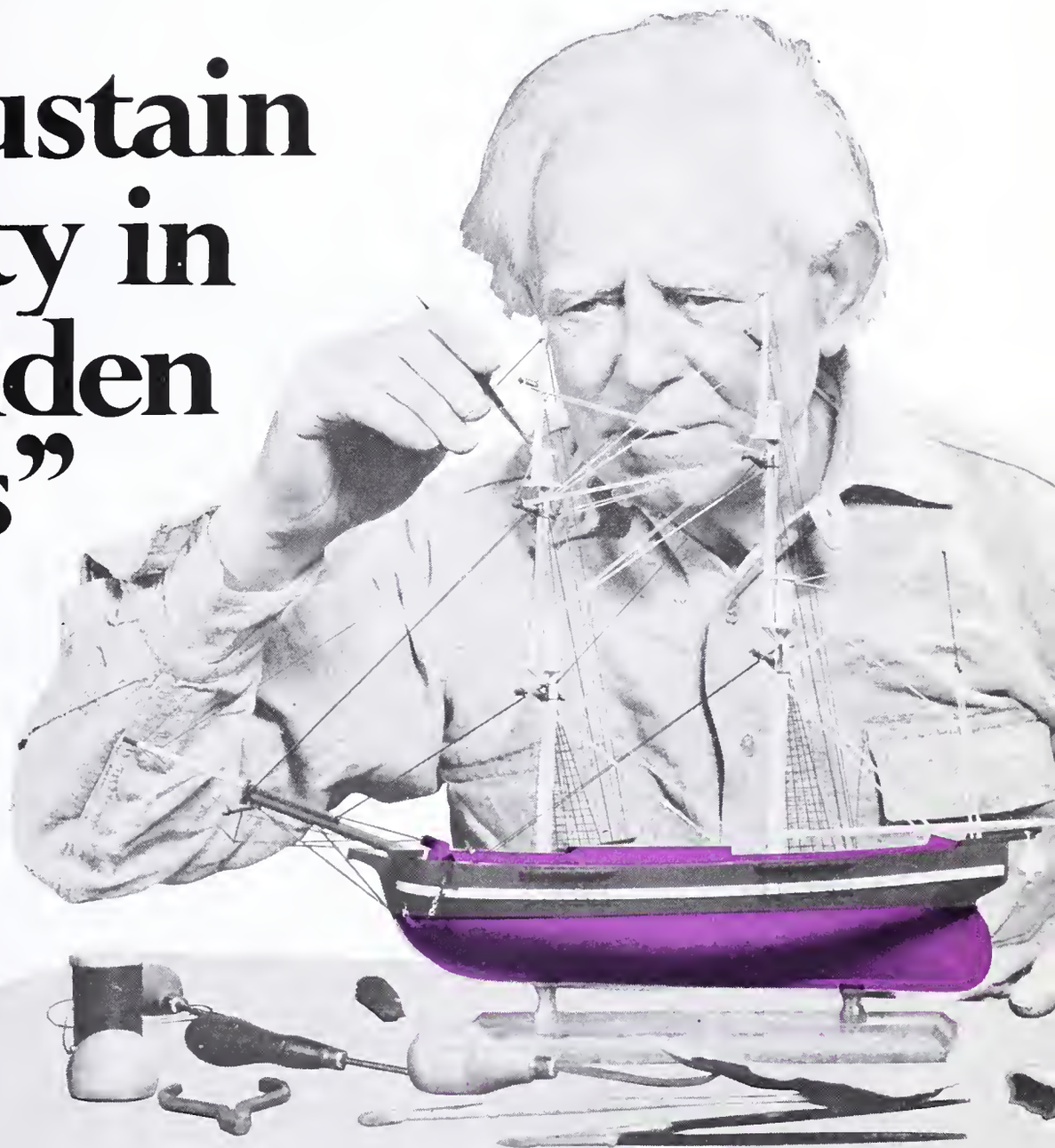
The aging or convalescent patient may develop nutritional deficiency. In such cases, SECRAN speeds the "comeback" with its B complex formula. Helps the active person *stay* active . . . an important factor in the "golden years."

Thanks to the sherry wine base, SECRAN is pleasant to take and provides a comforting sense of warmth to the geriatric or convalescent patient.

So when lack of appetite or other factors cause nutritional deficiency, suggest SECRAN.

Also available in SECRAN/FE, fortified with iron, in liquid and convenient capsules.

To help sustain activity in the "golden years"



SECRAN® Vitamin B Complex Elixir
Each average teaspoonful (5 cc) contains: Vitamin B_{12} Crystalline* (Cyanocobalimin), 25 mcg; Thiamine Mononitrate (B_1), 10 mg.; Nicotinamide Hydrochloride, 13 mg.; Pyridoxine, Hydrochloride* (B_6), 1 mg.; Alcohol, 17%. Multiples of Minimum Daily Requirements in each teaspoon (5 cc.): Thiamine Mononitrate (B_1) 10, Nicotinamide 1.3.
*The Minimum Daily Requirement has not been established
USES: B-Vitamin deficiencies. **AVERAGE ADULT DOSE:** 2 to 4 teaspoonfuls daily, or as directed by physician. **AVAILABLE:** 8 ounces, pint, gallon.

First Texas Pharmaceuticals, Inc. Dallas, Texas 75222
the Concern for Care

SECRAN® is formulated in a delicious sherry wine base.

Each 5 cc. contain erythromycin estolate equivalent to 250 mg. erythromycin base.
When mixed as directed, each 5 cc. will contain erythromycin estolate equivalent to 125 mg. erythromycin base.
When mixed as directed, each cc. will contain erythromycin estolate equivalent to 100 mg. erythromycin base.
Each 5 cc. contain erythromycin estolate equivalent to 125 mg. erythromycin base.
Each tablet contains erythromycin estolate equivalent to 125 mg. erythromycin base.
Each Pulvule® contains erythromycin estolate equivalent to 125 mg. erythromycin base.
Each Pulvule contains erythromycin estolate equivalent to 250 mg. erythromycin base.
The many forms of Ilosone®
Erythromycin Estolate
Lilly
Additional information available upon request.
Eli Lilly and Company
Indianapolis, Indiana 46206
900761

TEXAS MEDICINE

VOLUME 66 NUMBER 9 SEPTEMBER 1970

Devoted to the interests of the medical profession and public health in Texas

BOARD OF PUBLICATION
Charles P. Hardwicke, MD, Austin
Chairman
James A. Hallmark, MD, Fort Worth
John M. Smith, Jr, MD, San Antonio
Vice Chairman
R. Harvey Bell, MD, Palestine
N. L. Barker, MD, Paris
C. W. Yates, MD, Rosenberg
Don G. Harrel, MD, Dallas

TMA OFFICERS
Walter Walthall, MD, San Antonio
President
C. Lincoln Williston, Austin
Executive Secretary

EDITORIAL AND BUSINESS OFFICES
1801 North Lamar Blvd, Austin
Telephone: 477-6704
Marilyn Baker, Managing Editor
Rae Vajgert, Assistant Managing Editor
Sharon Timmons, Assistant Editor
Sharon Walker, Editorial Assistant
Judy Harris, Editorial Secretary
E. Maxwell Jones, Business Manager
Jon R. Hornaday Advertising Director
Anne Shelnutt, Advertising Assistant

PRINTING OFFICES
c/o Stafford-Lowdon Company
1114 West Daggett, Fort Worth 76104

Subscriptions: $3 per year for members; $6 for nonmembers; $8 for foreign; $3 for medical students. Single copy: $1.

Copyright 1970 by The Texas Medical Association. Owned and issued monthly by the Association.

SPEAK UP, (BUT) JOIN NOW!

"Show me first!" my colleague challenged.

"You're the chairman of TEXPAC, and I will expect a full report of your successes immediately after the Nov 3 elections," he said. "Then, if I'm convinced TEXPAC did a good job of electing the right people, I'll join up!"

The elevator door opened and he steamed down the hall, the back of his neck still red from the insult I had thrown him somewhere between the third and second floors.

What had I done? I had asked him for $30 for his 1970 TEXPAC membership dues.

Since that day I have called him, written a letter, and sent him a TEXPAC brochure, trying to point out that our successes depend on getting his check *before* the elections.

I was so persistent because I believe that doctors have got to get involved in the governmental processes which are shaping the form and content of medical care. My hope is that my colleague will realize this and send his check directly to the TEXPAC office in Austin.

Fortunately, the number of affirmative responses TEXPAC has received in 1970 has increased dramatically because, to be quite honest about it, we have done a better job of telling the TEXPAC story. We're making a real effort, through our county chairmen, to let you know who TEXPAC is supporting, and why. This is a grass roots organization, and our political decisions usually are made on the recommendation of the county chairman. And he is appointed by the president of your county medical society.

In the letter to my colleague, I reported that TEXPAC's batting average through the 1970 primary elections was 73%, but that it might have been even higher if he and others had paid their TEXPAC dues at the time they paid their medical society dues. One of the races we lost in this spring's primary involved a classic struggle between an anti-medicine incumbent and a proven conservative who would have been receptive to medicine's views and proposals. The incumbent ran a shrewd, well-organized race, pulled out all the stops, and won a close victory. Our man lost because he didn't have the organization, and he didn't have the organization because he didn't have enough money to build one. I wish we could have helped him more.

In contrast, we have participated this year in some *very* marginal

contests, with scant hope of winning, but have come away with a number of important wins. If these and other friends survive the November elections, we will have some new political friends who will remember that it was medicine's organization that helped them achieve their victories. They won't forget us when it comes time for TMA to discuss health and medical legislation with them next spring. And they will remember the *organization* better than they will the *individual doctors* who may have given them support, because TMA works with them on legislation on a continuing basis, whereas the doctor's only contact may be at election time.

I hope my colleague may yet realize that September and October are also critical months in the TEXPAC program—that we urgently need membership dollars before Nov 3 to help reelect some of medicine's old friends, and to replace some of our perennial antagonists with bright, new shiny faces.

The best news for Texas doctors is that with TEXPAC's growth, TMA's relations with our lawmakers continue to improve. This, of course, is the whole idea of the TEXPAC program: to help elect men who will listen with open minds to medicine's problems and suggestions.

So be kind to your TEXPAC county chairman. He's spending his valuable time and sticking his neck (nose) out for your personal and professional benefit.

This political action program is serious business, and those of us who have been appointed to serve do so with sincere conviction. Let your TEXPAC chairman know you want to share the load and ask him all the questions you want, but don't—please don't—promise your support *after* the elections. To win, we need your help now!

R. A. Stevenson, Jr, MD, Victoria,
Chairman, TEXPAC Board of Directors.

MEDICAL STUDENTS—RADICAL?

Are Texas medical students radical? The question is hard to answer, because the Student American Medical Association chapter at each school is filled with activists. Their goals range logically from medical education to "unknown" drugs and their usage. Texas has some of the most radical of SAMA's radical-liberal oriented students; we have a vast majority of the apathetic, "hand sitting" students who occasionally speak out for or against some issue; and yet we have perhaps the most conservative medical students in the US. Our "medical student" society at any medical school includes the full range of ideas and segments.

A number of problems perplex every medical student no matter what tag is attached to the political-social-economic compartment of his mind. Let us look closely at these problems, and at what you—the physicians of today—can do to help.

The study of medicine instills appreciation for a good basic education. Each of us wants a strong foundation to build upon, for it must support our learning for a lifetime. Some of the antiquities of medical education exist now just as they did 20-30 years ago, and still there are only a few to speak up or even try a change. Oliver Cope stated succinctly, "The practice of medicine today reflects the education of yesterday . . ." Yet this may not be true, because at present one medical school in Texas has an advanced curriculum. I know of two others that are changing in response to several related concerns: (1) training physicians, (2) community health, (3) environmental health, (4) behavioral sciences, and (5) the flexibility to enable the student to see and/or experience many of the multifaceted opportunities in medicine (solo practice, group practice, big city-little city differences, prepaid programs, screening clinics, and sanitariums).

However, curriculum is not the only issue of education—minority admissions dig deep into the side of many Texas schools. What is wrong? No one knows for sure, but you can aid immensely by helping to create an interest in minority students in your community who possess the needed qualities. But remember, do not judge them as you did your classmates; they need recognition of ability, *motivation*, and help to get a good, continuing education. Above all, it must be stated that no one wants to compound today's health crisis by adding incompetent physicians to the health service problem.

Perhaps one of the most important issues that concerns today's students is money: the loan programs which exist and particularly the federal loan program which has been cut. I have seen many articles in which medical school administrations and physicians express great dismay over the cutback in their research funds, but I have seen nothing (except SAMA's dissemination of information) expressing their dismay over the lack of federal money for the continuance of medical education. Through professional associations and political action committees, practicing physicians should be more than happy to give the problem some consideration.

Medical students are concerned about "health care delivery," which more appropriately could be called health service. At present there are some 26 community health projects in medical schools; many are sponsored by, or actively involve, SAMA chapter members. In our state I know of four such projects; soon there may be a fifth if the students of New Mexico and Texas can muster some support from their state medical societies and general practice associations. What are we to do about health service besides starting projects? We can encourage more physicians to establish in areas where they are needed before someone else does the distributing for them. We (you and I) can start by trying to break the persistent academic arrogance concerning the "LMD." Practicing physicians can attack the problem at its basis by trying to keep up with advances in medicine. Those in academic medicine can try to show students all sides of a problem—the critique of the LMD's initial treatment is not enough. In every aspect of medicine, students are interested in finding a weak link and strengthening it. The practice of medicine must reach down, and sometimes out, to the people.

Another major concern of medical students is population and environment. National SAMA has taken a stand for improved liberal abortion laws, liberalization of sterilization procedures, and the control of our population. Before physicians and/or students can attack the problem of population they first must learn to practice what they preach; second, they must stop quibbling over the philosophy and ethics of abortion and look at the horror of dense overpopulation—then decide to make the abortion laws safe "medicolegally." There will be no new abortion laws in Texas until the physicians of this state speak out for them; the population resolution introduced at the 1970 House is only a superficial abrasion on the surface of a metastasizing carcinoma.

Environment is much easier to discuss because everyone agrees on the basic principles and the impact of pollution on health—but where is our better environment? National SAMA has established a standing committee on ecology to study actions that medical students can take in regard to founding a better environment. Why not work together to convince the politicians and the public that medicine is gravely concerned about pollution? Better than that, we can even work together to change some of the pollutants and monsters of our environment.

Many facets of organized medicine in Texas could benefit from student participation:

county medical societies, TMA committees, TMA-medical student projects within our state and with other states, etc. The Texas State Board of Medical Examiners should be able to give their spring exams in May so that seniors could leave at an appropriate time for internships, and second- and third-year students could take part I of the National Board examination in June. Maybe the Texas Organization of Medical Students can work with the TMA and the Texas State Board of Medical Examiners to bring about such a change.

Medical students do not want to polarize society with trivialities; too much of this exists now. We want to work, together with members of our chosen profession, to correct from within before it is corrected from without.

I have only scratched the surface of medical student concerns; the activists, liberals, conservatives, or other "tagged" concerned students of Texas could produce endless lists. Comparing their lists would take us back where we started: medical students cannot all be put in one neat category any more than physicians can.

Dennis W. Whitfield, Galveston,
President, UTMB-SAMA;
Trustee, Region IX.

ANEMIA IS NOT A DISEASE

Anemia is a manifestation of an underlying disease rather than a disease entity, with the hemoglobinopathies being the primary exceptions. Of course, many forms of anemia are termed idiopathic (ie, autoimmune hemolytic anemia), but the list is diminishing as red blood cell kinetics and the various immunologic phenomena that occur in the diseases of man are understood.

Treating anemia without a satisfactory explanation for its cause can produce deleterious results. Often, physicians are lulled into complacency when the anemia is controlled only to find that the unchecked underlying disease has progressed to an irreversible state of morbidity.

Iron deficiency anemia is the most common example of an easily treated form; but iron preparations obscure the underlying cause and serious implications are possible in a man or nonmenstruating woman. The fact that every case of iron deficiency anemia is caused by blood loss must be realized, and the site of bleeding must be located. Iron cannot be lost except through bleeding, and poor dietary intake cannot fully explain the anemia. The body conserves iron tenaciously, and once a man reaches adulthood and the menses cease in a woman, iron accretion takes place continuously.

In this age of "pill taking," the ingestion of aspirin (in one form or another) is a frequently overlooked but common cause for gastrointestinal bleeding. However, even if the anemic patient is a heavy user of salicylates, gastrointestinal cancer (because it may still be in the curable stage) must be ruled out as a possible diagnosis. One of the earliest signs of carcinoma of the stomach or colon is iron deficiency anemia.

Another frequent therapeutic mistake is using a multitherapy hematinic preparation on the assumption that a little bit of everything is good for the red blood cell no matter what ails it. If necessary, one drug should be tried at a time; a therapeutic trial with one agent may aid in defining the etiology of the anemia. Also, hematinic combinations may leave irreversible effects which may obstruct further diagnostic attempts. Following remission of the anemia, permanent damage to the nervous system may occur if vitamin B_{12} deficiency is treated with folic acid.

A patient with anemia can never be considered to be appropriately treated unless a reasonable attempt has been made to determine the cause; then, specific therapy can be instituted to eliminate the underlying disease.

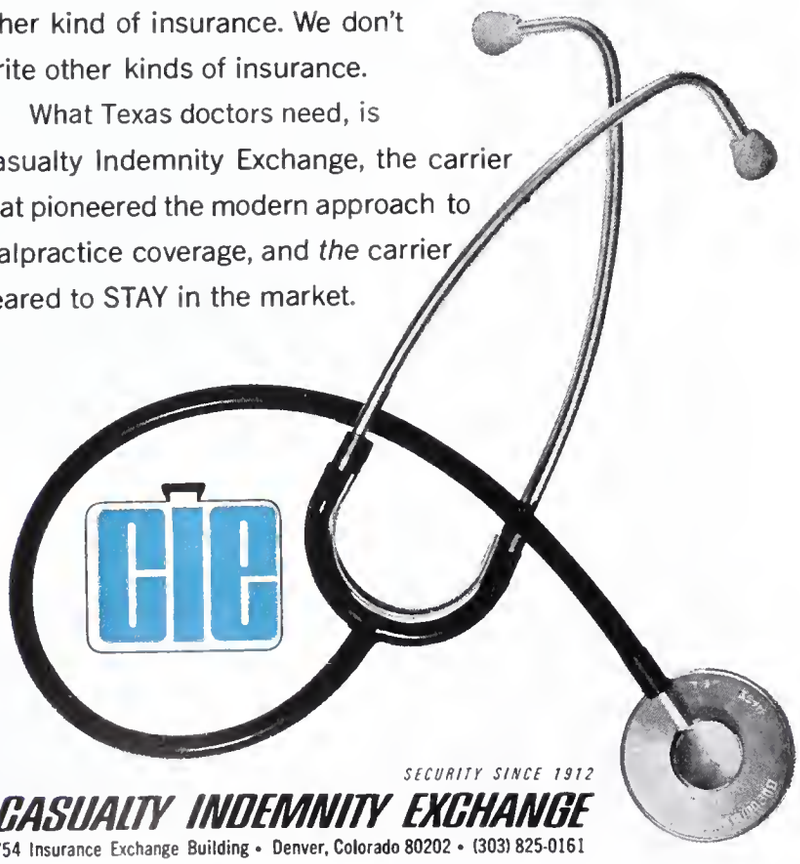
Robert L. Palmer, MD, Temple.

What Texas doctors need, is a Malpractice Liability Carrier that won't fade when trouble comes.

This means the up-to-date carrier. The one that's replete with innovations and new developments in this clouded, sensitive area of liability protection. And the one that doesn't talk malpractice coverage just to get a foot in the door for every other kind of insurance. We don't write other kinds of insurance.

What Texas doctors need, is Casualty Indemnity Exchange, the carrier that pioneered the modern approach to malpractice coverage, and *the* carrier geared to STAY in the market.

Contact your local agent or
RUSSELL GRACE INSURANCE
2304 W. 7th St.
Ft. Worth, Texas 76107
(817) 332-9269
In Dallas, Call
(214) 264-4300



SECURITY SINCE 1912
CASUALTY INDEMNITY EXCHANGE
754 Insurance Exchange Building • Denver, Colorado 80202 • (303) 825-0161

HIGHLAND HOSPITAL

ASHEVILLE, NORTH CAROLINA

Founded 1904

A DIVISION OF THE DEPARTMENT OF PSYCHIATRY OF DUKE UNIVERSITY

Accredited by the Joint Commission on Accreditation and Certified for Medicare

Complete facilities for evaluation and intensive treatment of psychiatric patients, including individual psychotherapy, group therapy, psychodrama, electro-convulsive therapy, Indoklon convulsive therapy, drugs, social service work with families, family therapy, and an extensive and well organized activities program, including occupational therapy, art therapy, music therapy, athletic activities and games, recreational activities and outings. The treatment program of each patient is carefully supervised in order that the therapeutic needs of each patient may be realized.

High school facilities for a limited number of appropriate patients are now available on grounds. The School Program is fully integrated into the hospital treatment program and is accredited through the Asheville School System.

Complete modern facilities with 85 acres of landscaped and wooded grounds in the City of Asheville.

Brochures and information on financial arrangements available

Contact: (1) Mrs. Elizabeth Harkins, ACSW, Coordinator of Admissions

or

(2) Samuel N. Workman, M.D.
Chief of Clinical Services

(3) Charles W. Neville, Jr., M.D.
Assistant Professor of Psychiatry and Medical Director

Area Code 704 - 254-3201

Vasomist

(ANTIHISTAMINIC)

VASOCONSTRICTOR, NASAL DECONGESTANT AND LOCAL ANTIHISTAMINIC

Active Ingredients:
Phenylephrine Hcl 0.25%
Phenylpropanolamine Hcl ...0.50%
Chlorobutanol 0.15%
Tripelennamine Hel 0.50%
In Isotonic Solution

Vasomist

(PLAIN)

VASOCONSTRICTOR AND NASAL DECONGESTANT

Active Ingredients:
Phenylephrine Hcl 0.25%
Phenylpropanolamine Hcl ...0.50%
Chlorobutanol 0.15%
In Isotonic Solution

USE: Temporary relief of nasal congestion due to colds and hay fever.

DIRECTIONS: Adults and Children: Instill two or three drops into each nostril, using no more than needed to provide relief. Repeat every three to four hours as needed but not oftener.

AVAILABILITY

In plastic squeeze bottles containing ¾ fluid oz. and in dropper bottles containing 1 fluid oz.

HUMCO LABORATORY
TEXARKANA, ARK.-TEX.

HUMCO LABORATORY
TEXARKANA, ARK.-TEX.
Our Integrity is Your Guarantee

What the doctors in this country need is a simple, accurate lab system for under $600.

That's why we invented the UNITEST SYSTEM.

Physicians can't operate their offices like doctors did in the old days.

That's when the patient load was lower and so was the overhead, in case you wanted to have lab tests performed right on the premises. There were a lot more qualified technicians for hire, too. Or if you didn't want the bother and payroll of a bigger staff, you sent specimens out to a local lab or a nearby hospital. Then you waited for results to return and added the charge to the bill.

Problem is, that way isn't economically feasible any longer. More sophisticated lab tests have been developed to aid your diagnosis. Fewer skilled personnel are available. The complex equipment required is more expensive. And the cost of space is premium.

Somebody had to solve this king-sized problem. We did.

We perfected the compact UNITEST SYSTEM. You start with the heart and brains, the Unimeter. It sells for below $600. Far below, in fact. Then, you add-on components you don't already own. When you're done, any qualified person in your office can run 14 tests for the most commonly-needed determinations. That includes Blood Glucose, Hemoglobin, B.U.N., Uric Acid and Cholesterol.

And you get accurate test results faster, often before the patient leaves.

Yes, the compact UNITEST SYSTEM is a lot smaller than you'd expect for equipment that does so much. And there are so many functions it does so well, you really owe it to yourself to get more information. Some is on the following page. The card below will bring you all of it. Just complete, detach and mail.

Bio-Dynamics, Inc.
The Simplifiers

9115 Hague Road
Indianapolis, Indiana 46250

Gentlemen:

I am interested in receiving more information about use of the UNITEST SYSTEM in my office.

Name _____

Address _____

City _____ State _____ Zip _____

Phone No. _____

The UNITEST SYSTEM provides these important features:

The Unimeter—The Unimeter 250 is a precisely-calibrated, solid state colorimeter. Rugged in design and simple to operate, it has only three controls: on-off switch, calibration control dial and temperature control button.

The Select-a-Fuge 24 — The most advanced centrifuge in its category ever developed . . . a single unit capable of performing *three* centrifugated preparations where at least two units were previously required . . . and in the shortest possible time for each specimen involved. The Select-a-Fuge 24 can prepare urine specimens at the low speed of 4000 rpm . . . or perform uniformly consistent serum, plasma and hematocrit results at 10,000 rpm. Other preparations requiring graduating intermediate speeds may also be conducted. Select-a-Fuge 24 does all this without changing equipment, without adding or removing parts.

Built-in Incubator — The Unimeter has a convenient built-in incubator which holds twelve tubes at a constant temperature of 37°C. There is an instant push-button temperature check.

Interchangeable Meter Faces—The slip-in meter face cards with color-coded test scales allow the operator to adapt this unit to a variety of tests and to incorporate any new tests which may be added in the future.

Push Button Pipetting—Automatic Pipette controls critical measurements precisely with remarkable ease and speed. Assures dependable results between operators, regardless of their individual skills.

Unitube—The optically correct, glass Unitube contains reagent materials. It also contains the reaction and is used as a cuvette, when the reaction is complete. After the result is recorded the Unitube is discarded. Unitube caps are color-coded for each test.

Unitest Kits — Each kit contains everything necessary to perform the tests. Everything is pre-measured, color-coded, sealed against contamination and disposable. Simple, step-by-step illustrated instructions are enclosed in every kit. Kits are available in a variety of sizes.

For full details, mail this card today!

Bio-Dynamics, Inc.
The Simplifiers

First Class
Permit No. 4810
Indianapolis, Ind.

BUSINESS REPLY MAIL
No postage necessary if mailed in the United States

Postage will be paid by

Bio-Dynamics, Inc.
Box 50100
Indianapolis, Indiana 46250

anxiety: the tyrant

Excessive anxiety can often dominate the patient made vulnerable by illness, surgery, prolonged emotional stress. It can induce or aggravate symptoms, disrupt medical management, divert energy the patient needs for recovery.
The antianxiety action of Librium® (chlordiazepoxide HCl)—used adjunctively or alone—has demonstrated clinical usefulness in virtually every field of medical practice where anxiety complicates the patient's condition.

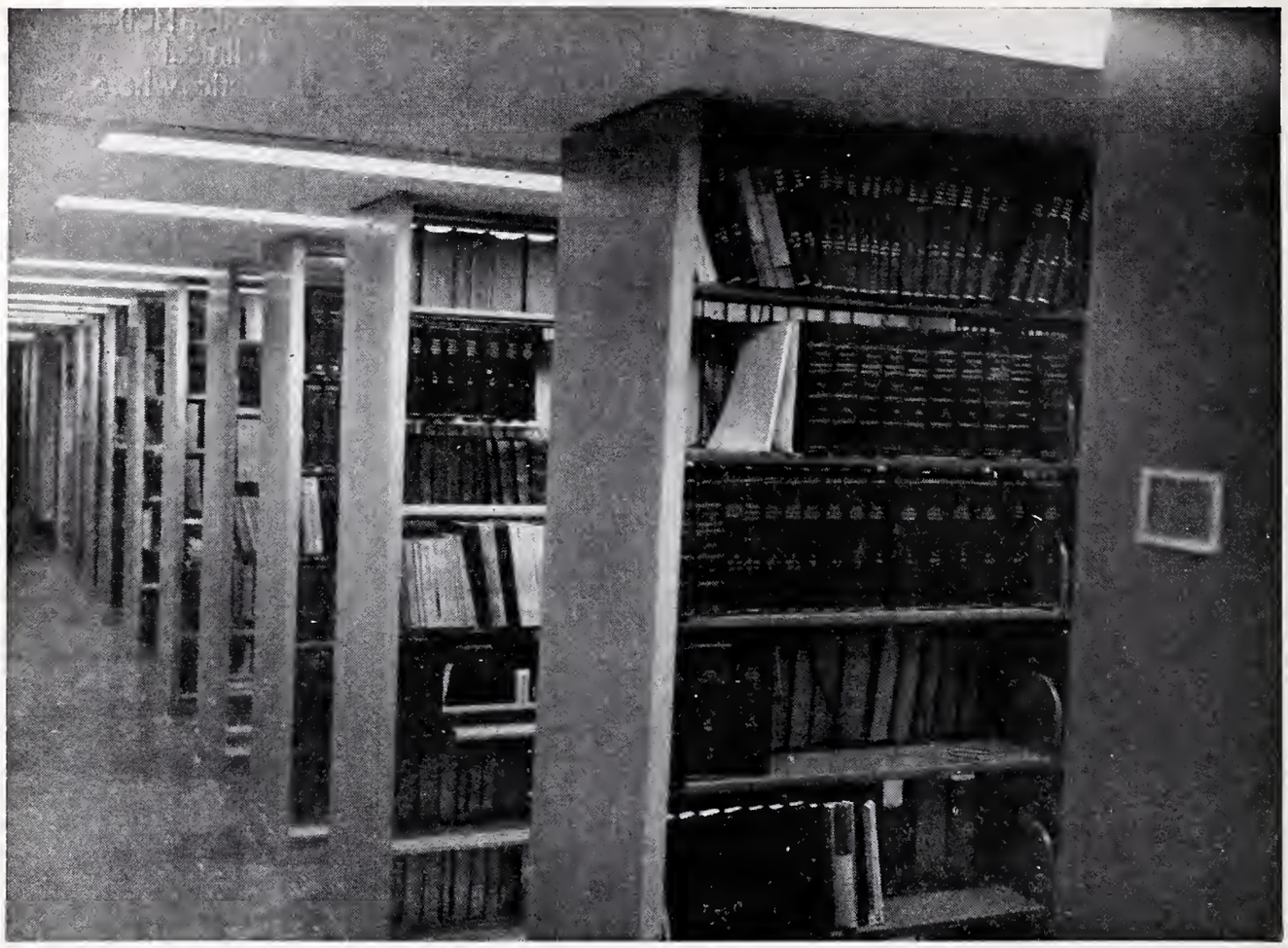
for the patient ruled by anxiety

Librium®
(chlordiazepoxide HCl) 5-mg, 10-mg, 25-mg capsules

Before prescribing, please consult complete product information, a summary of which follows:
Indications: Indicated when anxiety, tension and apprehension are significant components of the clinical profile.
Contraindications: Patients with known hypersensitivity to the drug.
Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. As with all CNS-acting drugs, caution patients against hazardous occupations requiring complete mental alertness (e.g., operating machinery, driving). Though physical and psychological dependence have rarely been reported on recommended doses, use caution in administering to addiction-prone individuals or those who might increase dosage; withdrawal symptoms (including convulsions), following discontinuation of the drug and similar to those seen with barbiturates, have been reported. Use of any drug in pregnancy, lactation, or in women of childbearing age requires that its potential benefits be weighed against its possible hazards.
Precautions: In the elderly and debilitated, and in children over six, limit to smallest effective dosage (initially 10 mg or less per day) to preclude ataxia or oversedation, increasing gradually as needed and tolerated. Not recommended in children under six. Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider individual pharmacologic effects, particularly in use of potentiating drugs such as MAO inhibitors and phenothiazines. Observe usual precautions in presence of impaired renal or hepatic function. Paradoxical reactions (e.g., excitement, stimulation and acute rage) have been reported in psychiatric patients and hyperactive aggressive children. Employ usual precautions in treatment of anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation have been reported very rarely in patients receiving the drug and oral anticoagulants; causal relationship has not been established clinically.
Adverse Reactions: Drowsiness, ataxia and confusion may occur, especially in the elderly and debilitated. These are reversible in most instances by proper dosage adjustment, but are also occasionally observed at the lower dosage ranges. In a few instances syncope has been reported. Also encountered are isolated instances of skin eruptions, edema; minor menstrual irregularities, nausea and constipation, extrapyramidal symptoms, increased and decreased libido—all infrequent and generally controlled with dosage reduction; changes in EEG patterns (low-voltage fast activity) may appear during and after treatment; blood dyscrasias (including agranulocytosis), jaundice and hepatic dysfunction have been reported occasionally, making periodic blood counts and liver function tests advisable during protracted therapy.

ROCHE
Roche
LABORATORIES
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

YOUR TMA MEMBERSHIP SUPPORTS



THE MEMORIAL LIBRARY

The Texas Medical Association Memorial Library is one of the leading medical libraries in the country and is maintained for the use of TMA members. Built upon a collection of 45,000 bound medical volumes, the library also maintains an extensive reprint collection, receives over 1100 medical journals monthly, and owns over 400 professional and lay films. Tape recordings, including some Cassettes, from the current Audio-Digest Foundation editions are available on the subjects of general practice, surgery, internal medicine, pediatrics, obstetrics-gynecology, ophthalmology, anesthesiology, cardiology, and otolaryngology, as well as the AMA News Journal.

Complete informational service of all kinds is available—including scientific, socio-economic, and legislative subjects—from the library and other departments of your TMA. You may come by, write, telephone, or wire your requests, and materials will be mailed the same day, if possible. There is, of course, no charge.

TEXAS MEDICAL ASSOCIATION

1801 North Lamar Boulevard, Austin, Texas 78701
Phone 512 477-6704

The AMA and Its Dues

At its June 1970 meeting in Chicago, the American Medical Association's Board of Trustees shocked almost everyone by requesting an $80 per year per member increase in annual dues. The dues at that time were $70 per year. It is unfortunate that, first, such a large increase was requested and, second, that the reasons were not explained thoroughly and circulated widely far in advance of the meeting.

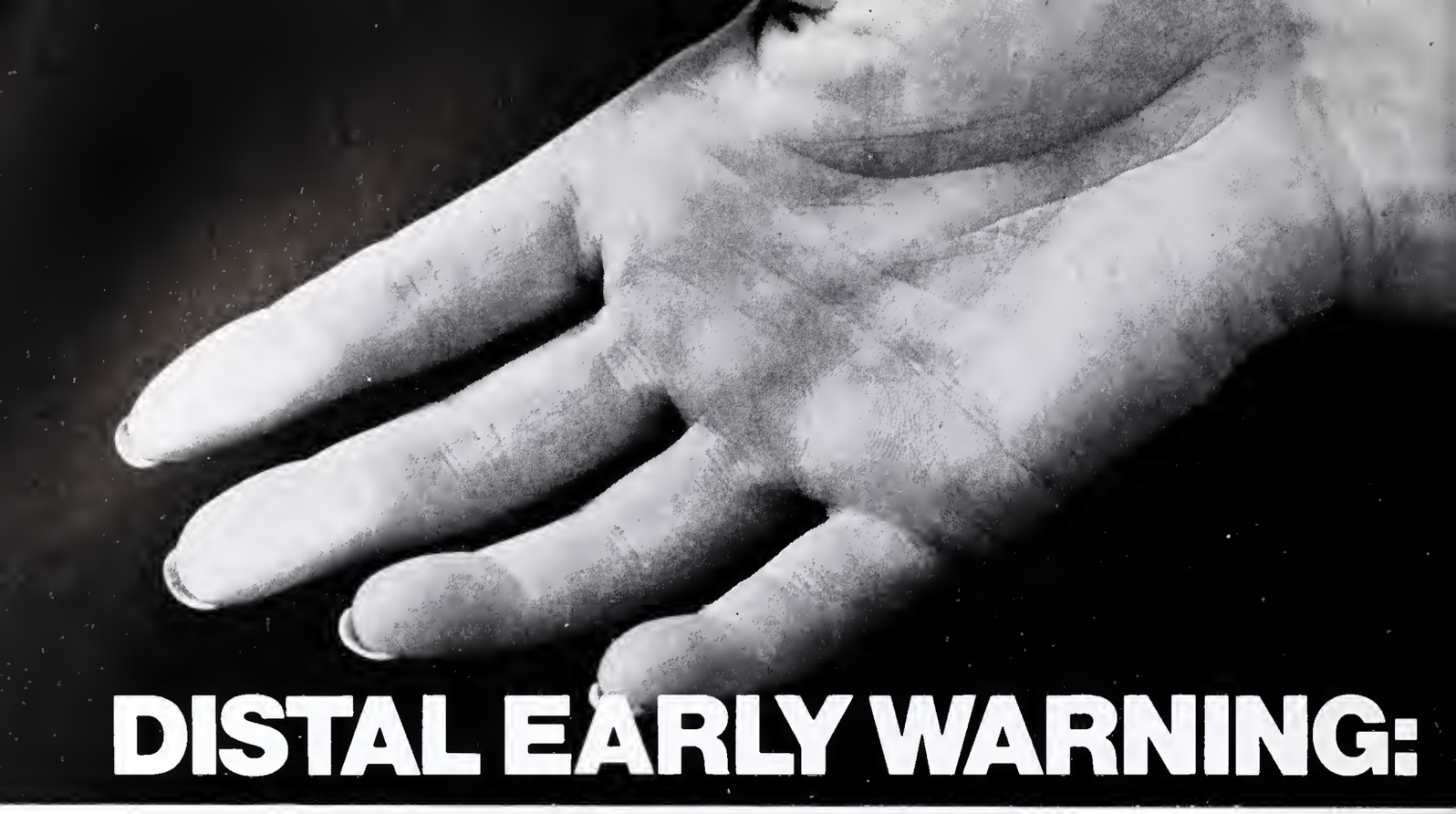
More and more in recent years, the AMA House of Delegates has tended to question the actions of the Board of Trustees. The House considered the requested increase in dues and was made aware that (1) AMA reserves currently are below the level set by the House (one year's operating expense); (2) our advertising revenue will very likely be taxed, possibly retroactively; and (3) to meet current and projected expenses, according to the Board, the AMA will need at least approximately an additional $50 per member in 1971, $64 in 1972, and $85 in 1973. The House took the reins in its hands, voted to set the dues annually and instructed the Board of Trustees to live within the budget.

Four Trustees were elected this year, including our own Dr. James H. Sammons of Baytown. The Board has reorganized itself into its committee structure for the next year and it is well aware of how the House of Delegates feels about it. Certainly, the four new members are aware that many members of the House have this feeling of concern. Yet, the House elects Trustees from among its own members, and must consider the Board to be a part of itself rather than an estranged entity.

The Board of Trustees must now review every activity of the AMA, particularly those activities which require expenditure of budgeted money. The House decided a year ago that we could not afford the Institute of Biomedical Research, and this project is being phased out. Other areas deserve their attention: the tremendous expenditure for travel, per diem allowances for officers, and activities of the Field Service, just to mention a few.

Walter Walthall, M.D.

Walter Walthall, MD, President, Texas Medical Association.



DISTAL EARLY WARNING:

"COLD FINGERS"

Pale fingers.

Usually only one or two fingers blanching in response to a cool or cold environment. Unusual sensitivity to cold may be an early warning of peripheral vascular disease in the upper extremities.

So, too, other distal early warning signs such as mild calf pain, slow or unusual toenail growth, shiny skin and loss of hair on the foot or toes may suggest an impaired peripheral circulation in the lower extremities.

Early diagnosis can mean more viable smooth musculature more capable of responding to vasospasmolytic therapy with Cyclospasmol.

Cyclospasmol...

□ lowers peripheral resistance in limb vessels . . . improves distal run-off, facilitates development of collateral circulation.

□ is a musculotropic without significant adrenergic or cardiostimulant effects.

□ is unrelated to epinephrine, papaverine or nicotinic acid.

A program of progressive walking exercise, cessation of smoking, foot care, proper diet and Cyclospasmol can be of long-term value to many patients with early occlusive disease.

Before arteriosclerosis obliterans becomes painfully evident

Cyclospasmol® (cyclandelate)

For long-term enhancement of peripheral circulation

Photograph professionally posed | See facing page for Brief Summary

Cyclospasmol (cyclandelate)

ACTIONS: Cyclospasmol (cyclandelate) is an orally effective peripheral spasmolytic and vasodilator that acts directly on the vascular smooth musculature to produce a gradual and progressive relaxation that enhances the peripheral and cerebral blood flow. **INDICATIONS:** For adjunctive therapy in occlusive and vasospastic diseases of the vascular system associated with an impaired circulation, such as: intermittent claudication; arteriosclerosis obliterans; thrombophlebitis (to control associated vasospasm and muscular ischemia); nocturnal leg cramps; local frostbite; Raynaud's phenomenon; as an aid to encourage healing of diabetic and trophic ulcers of the legs; and for selected cases of ischemic cerebral vascular disease. A faster response may be expected in conditions in which vasospasm is predominant in the pathological process. The drug is not intended to substitute for an adequate medical or surgical program in the treatment of peripheral or cerebral vascular disease. It is imperative that the patient continue to follow established therapy, e.g., foot care, discontinuance of smoking, etc., while taking Cyclospasmol. Since cerebrovascular disease is diagnosed most frequently only after destruction of nerve tissue, it cannot be expected that signs and symptoms arising from an interruption of neuronal function can be completely reversed by correcting the exciting cause. Nevertheless, restoration of blood flow towards more normal levels with cyclandelate may often produce marked relief from such signs and symptoms as head noises, ringing in the ears, a feeling of weakness, unsteady gait, mental confusion, temporary fluctuations in hearing acuity, poor memory and slurred speech. More important, the drug may provide prophylaxis against further circulatory embarrassment, particularly if the diminished circulation is associated with spasm of the vascular wall. **CONTRAINDICATIONS:** Cyclospasmol is contraindicated in cases of known hypersensitivity to the drug. **WARNINGS: 1.** Cyclandelate should be used with extreme caution in patients with severe obliterative coronary artery or cerebral vascular disease, since there is a possibility that these diseased areas may be compromised by vasodilatory effects of the drug elsewhere. **2. USE IN PREGNANCY:** The safety of cyclandelate for use during pregnancy or lactation has not been established; therefore, it should not be used in pregnant women or in women of childbearing age unless, in the judgment of the physician, its use is deemed absolutely essential to the welfare of the patient. **3.** Although no prolongation of bleeding time has been demonstrated in humans in therapeutic dosages, it has been demonstrated in animals at very large doses. Therefore, the hazard of a prolonged bleeding time should be carefully considered when administering cyclandelate to a patient with active bleeding or a bleeding tendency. **PRECAUTIONS:** Since Cyclospasmol is a vasodilator, it should be used with caution in patients having glaucoma. Consult direction circular before prescribing. **ADVERSE REACTIONS:** Gastrointestinal distress (pyrosis, pain and eructation) may occur with Cyclospasmol. These symptoms occur infrequently and are usually mild. Relief can often be obtained by taking the medication with meals or by the concomitant use of antacids. Mild flush, headache, feeling of weakness or tachycardia may occur, especially during the first weeks of administration. **SUPPLIED:** 200 mg. blue capsules in bottles of 100 and 500; 100 mg. orange tablets in bottles of 100 and 500.

May we send you reprints, detailed literature or professional samples?

IVES LABORATORIES INC.
685 Third Avenue, New York, N.Y. 10017

painless intramuscular therapy for calcium deficiencies:

Calphosan®

calcium glycerophosphate, calcium lactate

To bring effective calcium therapy to the patient, Calphosan may be administered intramuscularly . . . without pain, inflammatory reactions, induration or sloughing. Injections twice weekly for a series of 5 to 10 injections are recommended.

Average dose per injection: One or two 10 ml. injections of Calphosan each week for the first four or five weeks, and on a when-needed basis thereafter.

Calphosan is a specially processed solution of calcium glycerophosphate and calcium lactate, containing 1% of each, in a physiological solution of sodium chloride. Each 10 ml. contains 50 mg. of calcium glycerophosphate, 50 mg. calcium lactate, with 0.25% phenol as preservative. Available in 10 ml. ampules in boxes of 10s and 100s; 60 ml. multiple-dose vials. Also available as Calphosan with B-12. U. S. Patent No. 2657172.

Contraindication: Hypercalcemia; neoplastic diseases; and fully digitalized patients. Do not use intramuscularly in infants and young children. Before starting therapy, consult complete product literature.

Write for free copy of "Calcium: The Ubiquitous and Essential Element" and for samples.

THE CARLTON CORP
Tenafly, New Jersey 07670

VECTORCARDIOGRAPHY — A WORKSHOP

October 19-22, 1970

Mountain Shadows Resort

Scottsdale, Arizona

This is an intensive four-day program covering the field of vectorcardiography and related areas. Major emphasis is placed on theoretical and practical applications of the technique as related to the patient's diagnostic problems. Half of the program is dedicated to individual analysis of the routine vectorcardiograms by the participants under the orientation of the guest and local faculty. This program is intended for those physicians who already have a basic understanding of electrocardiography and wish a close exposure to the values and limitations of vectorcardiography. Registration is limited to a maximum of 60.

PROGRAM DIRECTOR: A. Benchimol, M.D., F.A.C.C., Director, Institute for Cardiovascular Diseases, Good Samaritan Hospital, Phoenix, Arizona

GUEST FACULTY: Marvin Dunn, M.D., F.A.C.C., Paul Hugenholtz, M.D., F.A.C.C. and Ronald Selvester, M.D., F.A.C.C.

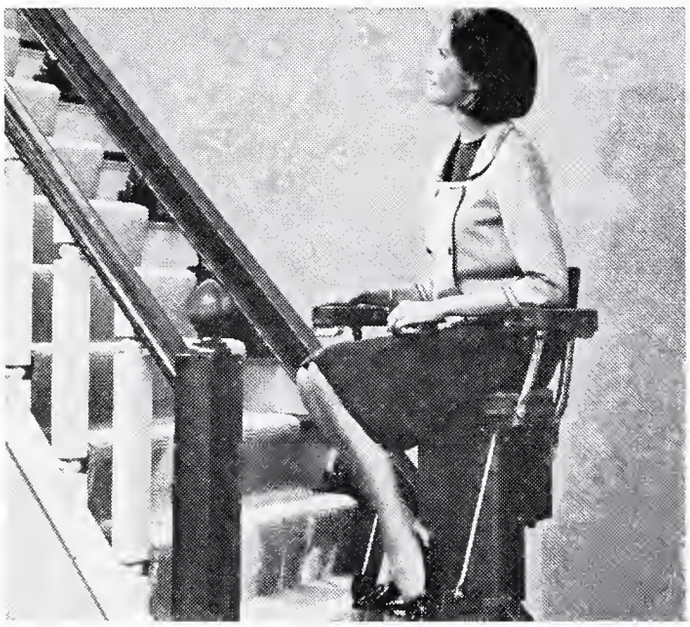
ADVANCE REGISTRATION IS REQUIRED.

FOR INFORMATION WRITE:

American College of Cardiology
9650 Rockville Pike
Bethesda, Maryland 20014

WELCOLATOR

STAIRWAY ELEVATOR



Sit down and ride up! (or down) at the touch of a button. Ideal way to climb stairs. Like living in a one-story home. Comfortable, attractive styling. The Wecolator is superbly engineered, cog drive—no cables, completely safe and virtually maintenance free. Installed on any straight or curved stairway . . . in just a few hours.

Write or Call:

CUSTOM HOME ELEVATOR CO.

P. O. Box 13627 Dept. M
Ft. Worth, Texas 76118 • A/C 817/281-8188

Brief Summary of Prescribing Information–9-9/22/69. For complete information consult Official Package Circular.

Indications: Essential hypertension. Use cautiously in patients with renal insufficiency, particularly if they are digitalized.

Contraindications: Anuria, oliguria, active peptic ulceration, ulcerative colitis, severe depression or hypersensitivity to its components contraindicates the use of Salutensin.

Warnings: Small-bowel lesions (obstruction, hemorrhage, perforation and death) have occurred during therapy with enteric-coated formulations containing potassium, with or without thiazides. Such potassium formulations should be used with Salutensin only when indicated and should be discontinued immediately if abdominal pain, distension, nausea, vomiting or gastrointestinal bleeding occurs. Use cautiously, and only when deemed essential, in fertile, pregnant or lactating patients. *Use in Pregnancy:* Thiazides cross the placenta and can cause fetal or neonatal hyperbilirubinemia, thrombocytopenia, altered carbohydrate metabolism and possibly electrolyte disturbances. Fatal reactions may occur with reserpine during electroshock therapy; discontinue Salutensin 2 weeks before such therapy. Increased respiratory secretions, nasal congestion, cyanosis and anorexia may occur in infants born to reserpine-treated mothers.

Precautions: Azotemia, hypochloremia, hyponatremia, hypochloremic alkalosis and hypokaliemia (especially with hepatic cirrhosis and corticosteroid therapy) may occur, particularly with pre-existing vomiting and diarrhea. Potassium loss or protoveratrine A may cause digitalis intoxication. *Potassium loss responds to potassium-rich foods, potassium chloride or, if necessary, discontinuation of therapy. Stop therapy if protoveratrine A induces digitalis intoxication.* Serum ammonia elevation may precipitate coma in precomatose hepatic cirrhotics. Discontinue therapy 2 weeks before surgery or if myocardial irritability, progressive azotemia or severe depression occur. Exercise caution in patients with chronic uremia, angina pectoris, coronary thrombosis or extensive cerebral vascular disease *or bronchial asthma* and in those with a history of peptic ulceration or bronchial asthma; in post-sympathectomy patients; in patients on quinidine; and in patients with gallstones, in whom biliary colic may occur. Patients who have diabetes mellitus or who are suspected of being prediabetic should be kept under close observation if treated with this agent.

Adverse Reactions: Hydroflumethiazide: Skin rashes (including exfoliative dermatitis), skin photosensitivity, urticaria, necrotizing angiitis, xanthopsia, granulocytopenia, aplastic anemia, orthostatic hypotension (potentiated with alcohol, barbiturates or narcotics), allergic glomerulonephritis, acute pancreatitis, liver involvement (intrahepatic cholestatic jaundice), purpura plus or minus thrombocytopenia, hyperuricemia, hyperglycemia, glycosuria, malaise, weakness, dizziness, fatigue, paresthesias, muscle cramps, skin rash, epigastric distress, vomiting, diarrhea and constipation. *Reserpine:* Depression, peptic ulceration, diarrhea, Parkinsonism, nasal stuffiness, dryness of the mouth, weight gain, impotence or decreased libido, conjunctival injection, dull sensorium, deafness, glaucoma, uveitis, optic atrophy, and, with overdosage, agitation, insomnia and nightmares. *Protoveratrine A:* Nausea, vomiting, cardiac arrhythmia, prostration, blurring vision, mental confusion, excessive hypotension and bradycardia. (Treat bradycardia with atropine and hypotension with vasopressors.)

Usual Dose: 1 tablet b.i.d.

Supplied: Bottles of 60, 600, and 1000 scored 50 mg. tablets.

Salutensin®

hydroflumethiazide, 50 mg./reserpine, 0.125 mg. protoveratrine A, 0.2 mg.

BRISTOL BRISTOL LABORATORIES
Division of Bristol-Myers Company
Syracuse, New York 13201

The antihypertensive therapy that is easy to live with.*

When successive blood pressure readings confirm essential hypertension, consider Salutensin for:

Easy-to-live-with control. Gradual reduction of blood pressure leading to decisive, comfortable control is the common clinical response.

*Salutensin is usually well-tolerated (however, serious side effects can occur; see adjacent column for brief summary of prescribing information).

Easy-to-live with dosage. Two tablets a day usually achieves control. One to two tablets a day often maintains control without need for additional antihypertensive agents.

Easy-to-live with cost of therapy. The one to two tablets a day maintenance dose makes Salutensin economical to stay with. Important, because long-term control calls for long-term therapy.

Salutensin®

hydroflumethiazide, 50 mg./reserpine, 0.125 mg. protoveratrine A, 0.2 mg.

EPIDEMIOLOGIC OVERVIEW OF MENINGOCOCCAL INFECTIONS IN TEXAS, 1964-1968

THE OCCURRENCE OF meningococcal infections has been characterized by a series of epidemic waves at intervals of seven to ten years. Meningococcal disease is not a cause of high morbidity or mortality. It is estimated that of those who harbor the organism in the nasopharynx, about 1 individual in 1,000 develops meningitis or meningococcemia. This points up a high degree of natural immunity to this infection.

The disease may occur as a brief illness and with recovery; or, it may pursue a fulminating course with delirium, stupor, coma, and death within a matter of hours from onset. The incubation period varies from two to ten days. Discharges from the nose and throat of asymptomatic *carriers* are the source of most meningococcal infections. Young children are particularly susceptible with some evidence suggesting a higher incidence in males than in females. In adults, the disease is more common where living conditions are crowded, and fatality rates are highest among the young and the aged.

The disease is most prevalent during the winter and spring. Small outbreaks occur from time to time. At other times, the disease extends over wide areas and the attack rates vary in different communities. Second attacks are extremely rare.

The Communicable Disease Center (CDC) presently recognizes several serologic types of meningococcal organisms [A, B, C, D, X, Y (E), and Z] based on their antigenic differences and epidemiologic characteristics. During World War II, group A (type I) had been involved in most epidemics in the United States. Group B (type II) is usually found in sporadic cases encountered in inter-epidemic years. Group C (IIα) is found in both sporadic cases and in military outbreaks. Very few strains of group D have been isolated in this country. There is relatively little serologic crossing over between groups A, B, C, and D.[1] Presently, group B and group C are responsible for most of the cases in the United States. With modern chemotherapy, the mortality rate has been reduced from 40-50% to less than 5%.[2]

During World War II, sulfadiazine was used as a chemoprophylactic agent; 2 gm of the drug a day for two consecutive days administered to a closed population effectively reduced the carrier state and was responsible for the significant reduction in the number of cases.[3,4]

Sulfadiazine remained the drug of choice for prophylaxis and treatment of meningococcal infections until the spring of 1963, when meningococcal cases continued in several military installations in spite of repeated installation-wide administration of sulfadiazine.[5]

In 1964, sulfonamide-resistant meningococci were isolated in a military outbreak at Fort Ord, Calif. The Fort Ord Training Center was closed temporarily, and there was a reduction in the number of cases of meningitis at that time. It was learned, therefore, that (1) mass chemoprophylaxis was no longer an assured method of controlling meningococcal disease; (2) that sulfonamide-resistant group B meningococci were causing the majority of clinical cases; and, (3) that there was an increased incidence of meningococcal disease in the civil population caused by the same sulfonamide-resistant group B organism.[6]

Carrier rates in young, military-age adults since 1963 reveal infection rates consistently around 20%. The probable infection rate (healthy carriers) during the first 16 weeks of military training is nearly 100%. Clinical dis-

S. J. LERRO, MD

Epidemiologic data on meningococcal infections in Texas from 1964 through 1968 are presented; results of sulfadiazine sensitivity studies on meningococcus isolates are given for 1966-1969, inclusive. Texas data, including mortality, are generally comparable to national figures. Because an increasing number of strains are resistant to sulfadiazine, sensitivity should be determined in each case in order to provide appropriate therapy for the patient and to decide what, if any, prophylactic measures for contacts are indicated.

ease is manifest in trainees at the rate of 1.9/1,000/year; therefore, disease occurs in very few of the recruits infected. Similar data are not available on transmission within other age groups, either military or civilian, since 1960.[7]

The Public Health Service reports that serologic groups B and C were the predominant isolates of the 519 isolates of *Neisseria meningococcus* from blood or spinal fluid submitted to CDC for serotyping or sulfonamide sensitivity testing in 1968. Almost half of the 1968 isolates tested were inhibited by 1.0 mg/100 ml or less of sulfadiazine. About 60% of group B and about 23% of group C isolates were inhibited at this concentration.

Compared with the previous two years, this is a striking increase in sulfadiazine resistance among the organisms of serotype C submitted for sensitivity testing. Since the first report to CDC in 1967 of a case of group A meningococcal meningitis, three more cases have been reported (1969). Two were in Boston and one was in a soldier (not a recruit) at Fort Benning, Ga.

Epidemiologic Survey: The data included in this report for Texas cover 1964 through 1968, inclusive, except for data on sulfadiazine sensitivity studies on *N meningococcus* isolates, which cover 1966 through 1969, inclusive. Laboratory data on sulfadiazine sensitivity studies prior to 1966 are inadequate.

Number of Cases: The average number of *N meningococcus* infections for the five-year period under study was 156.4 cases per year, ranging from 110 cases in 1967 to a peak incidence of 217 cases in 1966 (Table 1).

Age: N meningococcus infection is primarily a disease of children under age ten years. In

AGE GROUP	1964	1965	1966	1967	1968	TOTAL	%
Unknown	2	1	10		4	17	2.2
Under 1	26	31	30	17	28	132	16.8
1-4	32	50	71	42	63	258	33.0
5-9	25	27	25	18	25	120	15.3
10-14	9	6	10	9	18	52	6.8
15-19	11	7	29	5	17	69	8.8
20-24	4	5	16	2	9	36	4.6
25-34	6	4	9	5	6	30	3.8
35-44	4	1	4	3	5	17	2.2
Over 45	11	8	13	9	10	51	6.5
Total	130	140	217	110	185	782	100.0

Table 1. Reported meningococcal infections by age groups in Texas, 1964-1968.

YEAR	WHITE	NEGRO	LATIN AMERICAN	RACE UNKNOWN	TOTAL
1964	96	20	14	—	130
1965	109	22	9	—	140
1966	156	44	16	1	217
1967	77	28	4	1	110
1968	103	61	19	2	185

Table 2. Race and ethnic group distribution of meningococcal infections in Texas, 1964-1968.

YEAR	MALE	FEMALE	SEX UNKNOWN	TOTAL
1964	74	56	—	130
1965	75	65	—	140
1966	139*	78	—	217
1967	70	39	1	110
1968	99†	82	4	185

*Includes 31 military. †Includes 9 military.

Table 3. Reported meningococcal infections in Texas, sex incidence, 1964-1968.

MONTH	1964	1965	1966	1967	1968	TOTAL
Jan	15	21	18	20	34	108
Feb	20	18	42	22	51	153
Mar	21	24	44	19	20	128
Apr	9	13	31	7	14	74
May	10	12	15	8	9	54
June	2	11	17	5	9	44
July	5	6	9	4	9	33
Aug	6	2	7	1	3	19
Sept	6	3	5	1	5	20
Oct	14	7	8	4	7	40
Nov	5	5	8	3	9	30
Dec	17	18	13	16	15	79
Total	130	140	217	110	185	782

Table 4. Monthly occurrence of meningococcal infections in Texas, 1964-1968.

YEAR	TOTAL No. Tested	TOTAL % Inhibited	GROUP B No. Tested	GROUP B % Inhibited	GROUP C No. Tested	GROUP C % Inhibited	ALL OTHERS No. Tested	ALL OTHERS % Inhibited	UNKNOWN
1966									
US	754	59.3	537	52.4	92	84.9	125	70.4	
Texas	21	35.0	20	35.0	0	0	—	—	1
1967									
US	317	56.2	209	49.3	61	62.3	47	78.7	
Texas	16	66.6	12	58.3	3	100.0	—	—	1
1968									
US	519	49.5	246	59.7	196	23.0	77	84.4	
Texas	32	22.6	19	31.5	12	8.3	—	—	1
1969									
US (Jan-Mar)	163	27.6	60	53.3	96	7.3	7	85.7	
Texas	45	46.6	23	69.5	20	25.0	2	0	

US figures from Morbidity & Mortality Weekly Report, CDC, April 19, 1969.

Table 6. Percentage of tested Neisseria meningococcus *isolates inhibited by sulfadiazine in concentrations at or below 1.0 mg/100 ml, United States and Texas, 1966-1969.*

YEAR	TEXAS DEATHS	TEXAS RATE	US DEATHS	US RATE
1964	45	0.4	750	0.4
1965	56	0.5	890	0.5
1966	57	0.5	876	0.4
1967	32	0.3	635	0.3
1968	64	0.6	—	—

Table 5. Deaths from meningococcal infections per 100,000 population, Texas and United States, 1964-1968.

Texas, as in the general population, the incidence of the disease is greatest in childhood and declines steadily with advancing age.

Race and Ethnic Groups: The ratio of white to Negro persons living in Texas is 7:1 according to 1960 census figures. The ratio of *N meningococcus* infections between whites and Negroes in 1964 was 5:1, and progressively increased for Negroes to a ratio of 2:1 in 1968. In all probability, the increased incidence among Negroes may be explained on the basis of more overcrowding in home living conditions than among whites (Table 2).

Sex: Table 3 shows more cases among males than females; the difference is usual with this disease, and is maintained into adult life. The sex ratio becomes indeterminate after age 45.[9]

Seasonal Occurrence: Most cases (>58% in our study) occurred during the first two quarters of the year. Meningococcal infections may, therefore, be classified as occurring primarily during cold weather and being spread by the respiratory route (Table 4).

Deaths: The US and Texas death rates per 100,000 population were comparable (Table 5).

Geographic Distribution: The incidence of disease is higher in heavily populated urban areas than in rural areas (Figs 1, 2).

Sensitivity Studies: Insufficient laboratory data were available on resistant strains of *N meningococcus* prior to 1966. Sensitivity studies conducted on *N meningococcus* isolates submitted for testing during 1966-1969 for Texas were compared to studies performed on isolates received at the CDC from throughout the United States for 1966 through March, 1969. It is difficult to make a statistical comparison of the large number of isolates submitted to the CDC for testing with the fewer number of isolates received at the Texas State Department of Health laboratory for testing during the period of this study. However, for 1966-1968, the percentage of isolates inhibited by 1.0 mg/100 ml sulfadiazine for group B averages 53% for the United States and 42% for Texas; for group C, it averages 56% for the nation and 36% for Texas. For all serological groups tested, the percentage of isolates inhibited by 1.0 mg/100 ml sulfadiazine averages 48% for the United States and 43% for Texas (Table 6).

Groups B and C continue to be the most predominant types in Texas and nationally (Tables 6,7). In the past few years, an increasing number of group C isolates have been reported nationwide. It is noteworthy that from 1966 through 1968, of the group C isolates submitted to the CDC for sensitivity testing, 84.9% (of 92 isolates submitted) were inhibited by the sulfadiazine test standard in 1966, compared to only 23% (of 196 specimens submitted) in 1968 (Table 6). *N meningococcus* organisms of

Serotypes	1966				1967				1968				1969			
	S	R	U	TOTAL	S	R	U	TOTAL	S	R	U	TOTAL	S	R	U	TOTAL
A																
B	7 35.0%	13	1	21	7 58.3%	5	1	13	6 31.5%	13	0	19	16 69.5%	5	2	23
C					3 100%	0	0	3	1 8.3%	11	1	13	5 25.0%	14	1	20
D																
X														1	0	1
Y														1	0	1
Z																
Not Typed																
Not Typable																
Total	7 35.0%	13	1	21	10 66.6%	5	1	16	7 22.6%	24	1	32	21 46.6%	21	3	45

S: Sensitive R: Resistant U: Unknown

Table 7. Meningococcus serotypes sensitive and resistant to 1.0 mg/100 ml sulfadiazine, tested in Texas State Department of Health Laboratory, 1966-1969.

groups B and C remain sensitive to penicillin (1,600 units/mg standard solution) in the range of .01 μg/ml to .925 μg/ml. By contrast, the wide range of sensitivity to 1.0 mg/100 ml sulfadiazine during this study period varied from 20 mg% to 0.05 mg%. In Texas, for 1969, only 25% of group C isolates (of 20 submitted) were inhibited by 1.0 mg/100 ml sulfadiazine (Table 7). Also in 1969 one each of the X and Y (Boshard) serotypes were reported to be resistant to the standard sulfadiazine solution (Table 7).

Discussion: The determination of sulfonamide sensitivity in every case of meningococcal meningitis becomes most important with the increasing number of group B and, lately, group C strains found to be sulfadiazine-resistant. While the prophylactic administration of sulfadiazine is an effective procedure under *appropriate circumstances,* due caution should be observed in its use. It should be given under careful medical supervision. A small proportion of individuals, perhaps 1 in 200, are hypersensitive to sulfonamide drugs and may have reactions of varying intensity. Administration of small doses of sulfonamides to a large population over a long period may result in favoring the survival of a drug-resistant strain. It is better to give the drug over a short period (two to three days) and repeat if necessary one or two weeks later.

Chemoprophylaxis, once terminated, does *not* insure freedom from reinfection.[10] Meningococci surviving in the nasopharnyx of some individuals or introduced by new arrivals may spread again and the carrier rate may reach a level as high, or higher, than that at the time the prophylaxis was begun. However, the procedure has its sphere of usefulness in tiding over a period of emergency, and has had sufficient trial to show that it is practical.

Twelve authorities on infectious diseases were asked by the Bureau of Communicable Disease Control, California State Health Department,[11] to comment on "Which contacts, if any, should receive prophylactic treatment?" Most clinicians agreed that mass prophylactic measures in large open institutions or schools are *not* justified. One group of clinicians stated that prophylaxis is indicated in all *immediate family* contacts, since there appears to be an increased chance of these people contracting the disease. A second group of clinicians does not *routinely* give prophylactic treatment to all close contacts. They prefer to characterize the meningococcus from the index case with respect to serologic group and sulfonamide sensitivity. They recommend that close contacts receive a short course of a sulfonamide, provided that the organism is sensitive to 1.0 mg/100 ml sulfadiazine. They recommend only close observation of the contacts when sulfonamide-resistant organisms are found on culture. Finally, a third group stated that prophylaxis is *not* indicated in any contacts. However, they recommend that close observation of all contacts be maintained and, if any signs of infection appear, the individual should receive *therapeutic* doses of an appropriate antibiotic.

A second question to the 12 experts concerned the use of penicillin for prophylaxis. It was agreed that in order to decide on prophy-

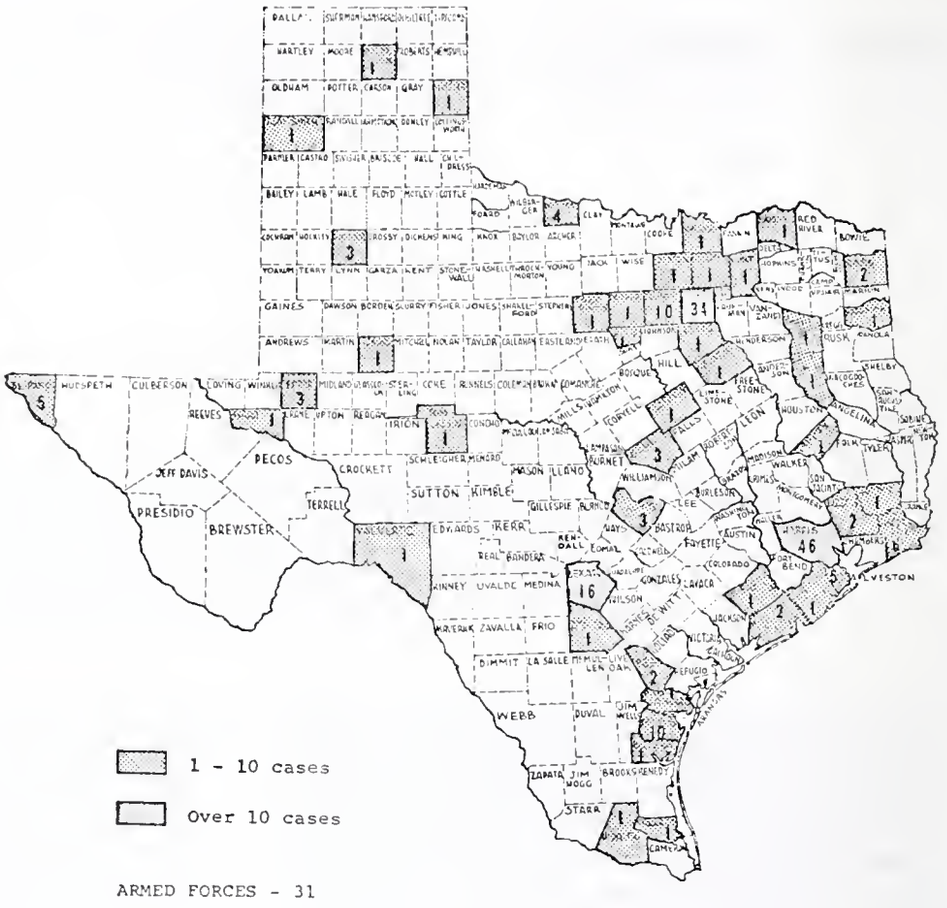


Fig 1. Geographic distribution of meningococcal infections, 1966.

laxis for contacts of persons with meningococcal disease, the antibiotic sensitivity of the meningococcus from the index case and subsequent cases, if they occur, must be known. Penicillin is the antibiotic of choice *for therapy* in large doses (10-20 million units intravenously) where penicillin allergy is not present. The efficiency of smaller oral doses for prophylaxis is open to question. In some instances, doses of oral penicillin of up to 6 million units per day will not eradicate the carrier state. However, some clinicians believe that although the carrier state may not be eliminated, the spread of the meningococcus to the meninges and to other contacts may be halted. It is reported that *Neisseria* meningitis occurred in spite of prophylactic administration of penicillin (up to 1.2 million units of benzathine penicillin per day). If the organism is sensitive to 1.0 mg/100 ml sulfadiazine, then this should be used where prophylaxis is indicated. If the organism is resistant to sulfonamides, oral penicillin may be used. However, where penicillin is used, it must be recognized that meningococcal disease still can occur. *Therefore, clinical observation of the contacts cannot be relaxed.* There is no common agreement or firm data to support any one prophylactic regimen. The following prophylactic schedule is a suggestion of the commonly used dosages of antibiotics as reported by the California State Health Department survey on meningococcal disease in February, 1969:

DRUG	ADULTS	CHILDREN
Penicillin V, oral (phenoxymethyl penicillin USP, or potassium methyl penicillin, USP)	500 mg, qid, x 5 days	250 mg, qid, x 5 days
Sulfadiazine, or sulfisoxazole	250 mg, qid, x 5 days	0.03-0.05 gm/lb/day to maximum of 2 gm/day, x 3 days

Familial Carriers: The circumstances with closed populations, as in the military, in which widespread dissemination is observed (carrier rates as high as 90%) are quite different from those in civilian urban populations in which pockets of high infectivity may be set against low background carrier rates. Multiple cases in households have been amply documented.[12,13] Greenfield and Feldman,[14] in 1967, reported meningococcal meningitis in three first cousins in the Syracuse, NY, area during a six-month period. In the immediate family group, 44% (11 of 25) were carriers, compared to 20% carriers (12 of 60) in the primary contacts

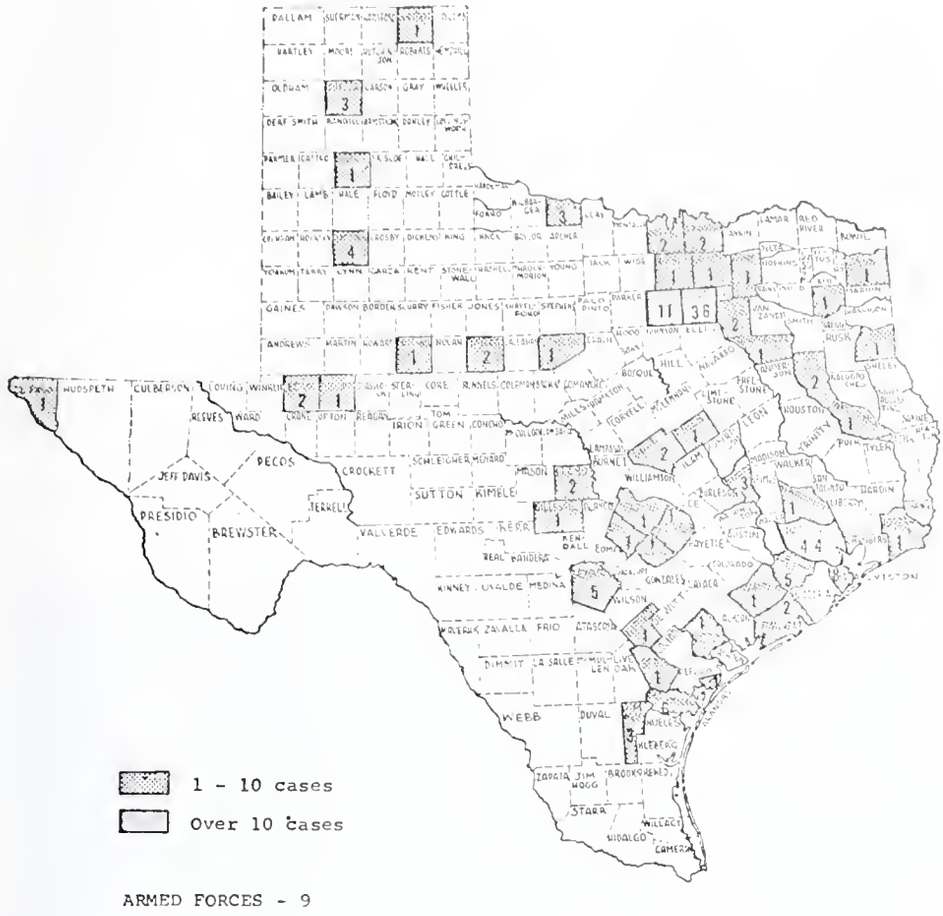


Fig 2. Geographic distribution of meningococcal infections, 1968.

to members of this immediate family group, and further compared to 3% carriers found in samplings of three unrelated populations.

In Kaufman and Malakoff in Texas, four first cousins (Negro girls) contracted meningitis. The cases occurred from Dec 25, 1968, to March 10, 1969. Two of the children (ages 10 and 12 years) died and two (ages 7 and 9 years) recovered, one with deafness as a permanent residual. A close associate to the families, a 4-year-old boy, developed meningitis in December 1969, and recovered with treatment. The only positive carrier found was the father of the patients in the Malakoff cases.

More recently, the CDC *Morbidity and Mortality Bulletin* for the week ending Feb 28, 1970, reports a family outbreak of meningococcal meningitis (group B, sulfa-resistant) in three of eight family members, with one death, in addition to positive throat cultures in three other family members and one close family friend.

Reed and others[15] report that there are more carriers among older persons than among younger persons, despite the fact that the highest attack rates for clinical diseases are found in young children.

Recommended Treatment Schedules for Cases: In terms of *treatment* of meningococcemia and meningitis, sulfadiazine resistance has little import. Penicillin G or sodium ampicillin, in doses of 150 mg/kg of body weight/day, is adequate therapy.[16-18] In the patient who is allergic to penicillin, tetracycline or chloramphenicol are satisfactory alternatives. Initial therapy with tetracycline is 12.5 mg/kg body weight intravenously, followed by 7.5 mg/kg every six hours until definite clinical response follows. The maintenance dose, oral administration, is 30-50 mg/kg/day.[19] Chloramphenicol is used in doses of 50-100 mg/kg/day given intravenously, initially, followed by oral therapy.[19,20] Erythromycin, 2.9 gm, given intravenously each 24 hours in divided doses, also has been used successfully. No maximum allowable intravenous dose is administered initially. Erythromycin may be given orally when the patient has been afebrile for 48 hours to complete a ten-day course. Dosages should be reduced proportionately by weight for children. Cephalothin has *not* been used in the treatment of meningococcal disease and is less active in vitro against *N meningococcus* than penicillin G or ampicillin.[21]

Rifampin: No antimicrobial agent has been uniformly effective in the eradication of *N*

meningococcus from the throat of carriers since the emergence of sulfadiazine-resistant meningococcal organisms. Deal and Sanders,[22] in a study conducted in January and February of 1969, showed that 600 mg of rifampin administered orally daily for four days to 15 chronic carriers was effective in eradicating meningococci from the pharynx of 14 (93.3%) of them. The carrier rate among the control subjects receiving a placebo fell only 13.4%. They concluded that rifampin appears to be superior to currently available antimicrobial agents in eliminating meningococci from known chronic carriers.

Vaccine: A team of investigators at the Walter Reed Army Institute of Research has developed an experimental vaccine (polysaccharide antigens) that provides 90% protection against group C, *N meningococcus*. Antibodies were developed within one week and persisted for eight months to one year or more. Since the vaccine only protects against group C and there are two other major serotypes of meningococci, prevention of meningococcal disease will require the use of *trivalent vaccine* directed against groups A, B, and C.[23]

Summary: Sulfadiazine remained the drug of choice for prophylaxis and treatment of meningococcal infections until 1963, when cases continued to develop in several military installations in spite of repeated installation-wide administration of sulfadiazine. The Public Health Service reports that serotypes B and C were the predominant isolates of *N meningococcus* from blood and spinal fluid samples submitted to CDC in 1968. Since the first report (1967) of a case of group A meningococcal meningitis to CDC, only three cases have been reported in 1969.

During the five years under study, the average number of *Neisseria* meningococcal infections for Texas was 156.4 cases per year, ranging from 217 cases in 1966 to 110 cases in 1967. The incidence of disease is greatest in infancy and declines steadily with advancing age. There were proportionately more cases in Negroes than in whites, and more among males than females. Most cases occurred primarily during cold weather and spread by the respiratory route. Death rates in Texas were comparable to national figures. Heavily populated urban areas had a greater disease incidence than rural areas. The percentage of isolates inhibited by 1.0 mg/100 ml sulfadiazine for group B averaged 53% for the nation and 42% for Texas; for group C it averaged 56% nationally and 36% for Texas. In the past several years more group C organisms have been resistant to sulfadiazine than previously.

The determination of sulfonamide sensitivity in every case of meningococcal meningitis becomes more important with the increasing number of group B and, lately, group C strains found to be sulfadiazine-resistant. Authorities on infectious diseases agree that (1) mass prophylaxis to large open institutions or schools is *not* justified; (2) immediate family contacts should receive a short course of a sulfonamide provided the organism is sensitive to 1.0 mg/100 ml sulfadiazine; (3) that only close medical observation of the contacts is indicated when sulfonamide-resistant organisms are found on culture; (4) when using penicillin for prophylaxis, the antibiotic sensitivity of the meningococcus from the index case and subsequent cases, if they occur, must be known; (5) where penicillin is used for prophylaxis, meningococcal disease can occur; and (6) penicillin is the antibiotic of choice *for therapy* in large doses (10-20 million units intravenously) where penicillin

allergy is not present. Ampicillin, tetracycline, chloramphenicol, and erythromycin also have been used successfully in the treatment of this disease. A prophylactic schedule of the commonly used dosages of antibiotics is suggested.

Multiple cases of meningococcal meningitis in households have been amply documented.

Rifampin appears to be currently superior to other available antimicrobial agents in the elimination of meningococci from known chronic carriers.

Investigators have developed an experimental vaccine (polysaccharide antigens) that provides 90% protection against group C strains. Eventually, a trivalent vaccine directed against groups A, B, and C will be developed.

REFERENCES

1. Dubos RJ, Hirsch, JG, Eds: Bacterial and Mycotic Infections in Man, ed 3. Philadelphia, JB Lippincott Co, p 497.

2. Gordon JE, Ed: Control of Communicable Diseases in Man, ed 10. American Public Health Association, 1965, p 151.

3. Kuhns DM, Nelson CT, Feldman HA, et al: The prophylactic value of sulfadiazine in the control of meningococcic meningitis. JAMA 123:335-339, 1943.

4. Schoenback EB: The meningococcal carrier state. Med Ann DC 12:417-420, 1943.

5. Millar JW, Siess FE, Feldman HA: In vivo and in vitro resistance to sulfadiazine strains of N meningitis. JAMA 186: 139-141, 1963.

6. Leedom JM, Ivler D, Mathies AW, et al: Importance of sulfadiazine resistance in meningococcal disease in civilians. New Eng J Med 273:1395-1401, 1965.

7. Singer RC: Sulfonamide-resistant meningococcal disease. Med Clin N Amer 51:719-727, 1967.

8. NCDC Morbidity and Mortality. Weekly report (Feb 1) 1969.

9. Taylor I, Knowelden J: Principles of Epidemiology. Boston, Little, Brown and Co, 1958, p 188.

10. Feldman HA: Recent developments in the therapy and control of meningococcal infections. DM (Feb) 1966, p 26.

11. California State Department of Public Health: Epidemiologic note, meningococcal disease (Feb 28) 1969.

12. Hoyne A, McEnery ET: Multiple cases of epidemic meningitis in the same family. Arch Pediat 46:699-702, 1929.

13. Norton JF: Meningococcus meningitis in Detroit: 1928-1929, secondary cases. J Prev Med 5:365-367, 1931.

14. Greenfield S, Feldman HA: Familial carriers and meningococcal meningitis. New Eng J Med 277:497-502, 1967.

15. Reed D, Brody J, Huntley B, et al: An epidemic in an Eskimo village due to group-B meningococcus, part 1, epidemiology. JAMA 196:383-387, 1966.

16. Lepper MH, Dowling HF, Wehrle PF, et al: Meningococcic meningitis: treatment with large doses of penicillin compared to treatment with gantrisin. J Lab Clin Med 40:891-900, 1952.

17. Ivler D, Thrupp LD, Leedom JM, et al: Ampicillin in treatment of acute bacterial meningitis. Antimicrobial agents and chemotherapy, 335-345, 1963.

18. Mathies AW, et al: Synopsis of experience with ampicillin in bacterial meningitis. Fifth Interscience Conference of Antimicrobial Agents & Chemotherapy, Washington, DC, 1965.

19. Lepper MH, Spies HW: Nontuberculous bacterial infections of the nervous system. GP 25:83-93, 1962.

20. Florey ME: The Clinical Application of Antibiotics, vol 3, Chloramphenicol and the Tetracyclines. Fair Lawn, NJ, Oxford, 1957, pp 80-81.

21. Eickoff TC, Finland M: Changing susceptibility of meningococci to antimicrobial agents. New Eng J Med 272: 395-398, 1965.

22. Deal WB, Sanders E: Efficacy of rifampin in treatment of meningococcal carriers. New Eng J Med 281:641-645, 1969.

23. Medical Tribune Report, Washington Bureau, No. 27, 1969.

Dr. Lerro, Medical Consultant, Communicable Disease Services, Texas State Department of Health, 1100 W 49th St, Austin, Tex 78756.

TETANUS

JAMES W. SMITH, MD

TETANUS STILL IS a serious health problem, especially in the southern states.[1] Texas is a leading state reporting both neonatal tetanus and tetanus in other age groups. Factors contributing to the geographic localization in the southern states are the low immunization levels in the nonwhite, low socioeconomic groups and the distribution of *Clostridium tetani* spores in the soil.[2,3] In spite of advances in the intensive care of patients, the case-fatality ratio in the United States remains high.[1] One definite reason for this is that with widespread toxoid vaccination programs, tetanus now most frequently affects the elderly and the neonate—two groups with the highest case-fatality ratios. A second possible explanation is that hyperimmune human globulin may not be as efficacious (at least in the quantity recommended) as equine antitoxin.[4]

Pathogenesis: Tetanus is toxemia resulting from infection with *C tetani* following the introduction of organisms (spores) subsequent to an injury.[5] Such an injury may be insignificant in appearance. During the incubation period, spores germinate and a neurotoxin is produced. The mechanism by which this toxin spreads from the site of infection to the susceptible sites in the central nervous system (CNS) remains controversial.

In potency, the toxin is second only to botulin toxin. It is a simple protein of a single antigenic type with a molecular weight of 67,000. In the highly purified state the toxin becomes a toxoid, losing its toxicity but retaining its antigenicity. A potentiation of toxicity occurs in the presence of certain chemicals and proteolytic enzymes.[6]

The toxin is specifically and avidly bound to the gray matter of the nervous tissue (brain gangliosides).[5] However, there is no proof that this fixation is a necessary part of the lethal action of the toxin. The toxin acts both in the CNS and upon peripheral cholinergic nerve endings. The site of the central paralytic action is between the specific interneurons of the inhibitory pathway and the motor neuron.[7] Toxin diminishes and then abolishes all five types of spinal inhibition. This action, similar to that of strychnine, is caused by the prevention of the release of transmitter substance from inhibitory presynaptic terminals. In peripheral nerve endings, spontaneous miniature endplate potentials increase in frequency.[8] Thus, without the effects of the spinal inhibitory pathway, paroxysmal motor spasms of muscles occur spontaneously when induced by stimuli.

Epidemiology: Peak incidence of tetanus is in the very young and the elderly. Striking changes have occurred in the age distribution of tetanus during the past 70 years. In 1900, the mortality per 100,000 for age groups over 1 year was the same. Since 1910, mortality has decreased in all age groups; the factor of decrease has been 50 in groups under age 30, whereas it is 5 in those over age 60. These decreases are due to the widespread use of antitoxin after World War I, the adoption of routine toxoid immunization of infants after World War II, and improved obstetric techniques. However, the southern states lag considerably in immunization programs.[9] The poor obstetric care of the rural population in Texas is demonstrated by the fact that 56% of all cases of neonatal tetanus in the United States in 1966 were in Texas.[1] Most of these cases follow home delivery unattended by a physician.

Mortality is higher in rural than in urban areas, and in nonwhites than in whites. The peak incidence occurs in midsummer. Tetanus neonatorum is more prevalent during warm, moist months presumably because *C tetani* spores increase under these conditions.[3]

Clinical Characteristics: *Source and Site of Injury:* Infection can develop following apparently insignificant wounds, and the infection itself can be relatively insignificant without purulent discharge. Puncture wounds and lacerations account for a majority of the wounds associated with tetanus.[1] Tetanus following surgery has been emphasized;[1] it can follow operations or

Tetanus remains a serious health problem in Texas, primarly affecting neonates and the elderly. Immunization programs need to be expanded to include the young in rural areas and the elderly clinic population. In spite of advances in therapy of tetanus, the case-fatality ratio is quite high. Part of the reason for this is that the age groups affected are difficult to treat. Another possible reason may be that hyperimmune human globulin is not as effective as equine antitoxin in tetanus.

manipulations weeks or even years after the *C tetani* is introduced.[10] Three patients with compound fractures 4 to 12 weeks earlier had tetanus following remanipulation. In one patient, tetanus developed upon the spontaneous breakdown of a three-year-old ankle wound. These cases demonstrate the prolonged viability of *C tetani* within tissue.

Other circumstances associated with high case-fatality rates are tetanus related to abortion, and injection-related tetanus, primarily in drug addiction.[11] Tetanus occurring as a sequel to wounds is found in individuals with infected decubiti and varicose ulcers, frostbite, chronic skin ulcerations, and gangrenous extremities. Tetanus following these wounds is uniformly fatal.[1] Injuries during garden work are common in those over 50 years old.

Incubation Period: The median incubation period is seven to eight days, and 90% of cases begin within 14 days of injury.[1] In the age group over 50, no difference in case-fatality ratio has been noted in relation to incubation period, whereas the ratio was significantly less in individuals under 50 who had a prolonged incubation period. Thus, the age group of a particular series must be known to compare case-fatality ratios. In neonatal tetanus, the greatest number became symptomatic on the sixth or seventh day, and an incubation time of greater than ten days is associated with better survival.

Symptoms: Trismus is the most dependable sign, being present in 80%.[1,10] Local symptoms occur in approximately one-third of the cases and consist of pain at the extremity of site of injury and stiffness of local muscle groups. Localized symptoms often follow trismus. Risus sardonicus with peaking of the eyebrows is common in tetanus, although it may not be as evident in tetanus neonatorum patients.[12] Convulsions are ominous signs, since they are associated with a higher case-fatality ratio. Other early symptoms and signs may include fever (if wound is infected), malaise, headache, dysphagia, dysphonia, spasticity of the skeletal muscle which often leads to the maintenance of opisthotonus, increased salivation, and abdominal rigidity (often mistaken for a local abdominal problem).

The spasms are both tonic and clonic, are extremely painful, and are easily precipitated by noise, movement, or even touch. Severe spasms may interfere with breathing. A British anesthesiologist gave an excellent description of the spasms: "They are characterized by a violent rigidity, usually sudden in onset, but sometimes working up to a crescendo, with every single voluntary muscle in the body thrown into intense, painful tonic contraction. The eyes stare, the jaw clenches, the tongue is bitten, the neck is retracted, the back arched, and opisthotonus is extreme. Often there is a muffled inspiratory cry, as the diaphragm contracts and draws air through the apposed vocal cords. Finally, laryngeal spasm becomes complete, the chest fixed and respiration ceases from muscle spasm. At the same time there is a gross outpouring of secretion, with profuse perspiration and foaming at the mouth."[13]

The differential diagnosis of tetanus is important since treatment of tetanus is potentially hazardous. Other diagnoses to consider include meningitis, retropharyngeal and peritonsillar abscesses, osteomyelitis of the mandible, streptococcal pharyngitis, strychnine poisoning, phenothiazine toxicity, acute abdominal disorder, rabies, and hypocalcemia. Patients with these may have trismus, but they should not have risus sardonicus. Cerebrospinal fluid examination will reveal no cells nor any increase in protein.

Clinical Course and Treatment: The natural history of clinical tetanus follows a rather characteristic pattern.[14] There is an initial buildup phase of about two to seven days in which the signs may worsen. Following the buildup, the signs stabilize and remain relatively stable for one to two weeks. It is during the early stage and the early plateau phase that therapy is so

Age Group	No. Cases	Deaths	Type of Injury
Neonatal	4	4	Cords tied with string, 3, and with rag, 1
1-50 yr	1	0	Splinter in arm
> 50 yr	3	3	Gangrene, 1; burn, 1; unknown, greenhouse employee, 1
Total	8	7 (88%)	

Complications: gastrointestinal bleeding, 6; pneumonia, 4; renal failure, 4.

Table 1. Review of eight tetanus cases at Parkland Memorial Hospital.

difficult and hazardous. The clinical care and treatment necessary in this disease is best described by Jenkins.[12] At present, sedation and antispasmodic therapy is begun with Nembutal or Diazepam. Robaxin, intramuscularly or intravenously, has been utilized if these fail. However, in severe cases, large dosages of 3 to 6 gm/day may be required. Toxicity with this dosage is manifested by metabolic acidosis, renal failure and occasionally convulsions. These are secondary to the polyethylene glycol used as the vehicle in Robaxin. Since other agents, especially curare, are available for the treatment of tetanus, Robaxin should not be used in severe cases.

Debridement of the wound (and hysterectomy if tetanus follows an abortion) is critical. Antibiotics, either tetracycline or penicillin, should be administered since either is effective against *C tetani*. If gangrene has developed and infection with gram-negative rods is a possibility, kanamycin should be administered.

Immune Therapy: The use of antitoxin has been an accepted part of treatment of tetanus since World War I. Equine antitoxin in quantities of 20,000 to 100,000 units had been the accepted mode of therapy of proven tetanus until the 1960s.[12] Since complications, especially serum sickness, in addition to anaphylaxis, are frequent with this large dosage, the availability of hyperimmune human globulin after 1963 provided an alternative to equine material. This homologous antitoxin is devoid of side effects in man.[15] Experimental work indicated that homologous antitoxin persists longer than the heterologous type,[15,16] and the material appeared to have clear advantages in tetanus prophylaxis. However, the rationale given for its use in tetanus is the same as that for tetanus prophylaxis, since "in man the human product has a half-life two to three times longer than horse serum antitoxin, and for this reason (it) may be used in smaller quantity."[17] However, experimental studies of tetanus have shown that any form of life-saving therapy must be started before clinical signs develop, or early in the course of the disease.[18] Also, with intravenous administration in man, a high level of antitoxin activity can be achieved much earlier (6 hours versus 48-72 hours for intramuscular administration). Hence, if antitoxin is to make a difference, intravenous injection has greater theoretical advantages. The equine antitoxin can be given intravenously, but hyperimmune human globulin must be given intramuscularly.

An analysis of patient groups given both homologous and heterologous antitoxin has been done recently by the Communicable Disease Center.[4] A case-fatality ratio of 55% was observed in 97 patients receiving 50,000 or more units of animal antitoxin, but a substantially higher ratio (70%) was noted in 77 patients receiving less than 50,000 units. However, the case-fatality rate for 58 patients receiving more than 3,000 units of hyperimmune human globulin was 78%, which was no different than that found in 70 patients receiving no serological therapy for tetanus (81%). These researchers argue that 1 unit equals 1 unit in terms of protection, and they conclude that larger quantities of hyperimmune human globulin may be necessary.

A review of cases of tetanus at Parkland Memorial Hospital recently shows that the case-fatality ratio is higher now than the 13% reported by Jenkins through 1962 (Table 1). The case-fatality rate (88%) is quite high. This may be because most of the patients are either neonates or over 50 years old; the only one to survive was under age 50. The majority of the patients are in age groups with high case-fatality ratios. In addition, the use of human antitoxin rather than large dosages of equine antitoxin may have been a factor, although this is hard to prove.

Complications: As noted in the review of recent tetanus cases, significant gastrointestinal hemorrhage is a problem. Atropine and antacids might be useful, although they have not proven to be of value in preventing Cushing's ulcers. Renal failure has been a problem, particularly in the elderly. One patient developed renal failure and metabolic acidosis soon after receiving large quantities of Robaxin intravenously. Compression fracture of the vertebrae

is a possibility and x-rays of dorsal and lumbar vertebrae should be obtained.[12] Some patients will have a prolonged period of gait difficulty and jerky arms. Excessive weight loss and muscle wasting are considerable problems in those who survive, as illustrated by a 40 lb weight loss and the need for prolonged physical therapy in the one patient who survived. The most dreaded complication is that of getting tetanus again; one attack does not confer immunity.[19] In India, a 0.5% rate of recurrence was noted.[20] Hence, any patient who survives must be given adequate immunization.[20]

Prevention: The best approach to the prevention of tetanus is to provide immunization programs for all. The success of the program in the United States since World War II is illustrated by the mortality rates, which show that the problem primarily is in the neonate and the elderly who have not been immunized. Yet, many young mothers in the rural south, especially in Texas, and elderly persons are unimmunized. Immunization programs for pregnant women in underdeveloped countries have decreased the incidence of tetanus neonatorum.[21] We should develop a statewide program for rural areas to immunize the mothers and the young.

In addition, we could initiate in earnest an immunization program for the elderly who have not been immunized. It has been shown recently that immunization with toxoid can provide protective levels of antitoxin which persist for 30 years.[22] It has been calculated that the risk of developing tetanus at the end of 12 years is 1/300 million. The basic immunization program for adults is two doses of tetanus and diphtheria toxoid combined, four to six weeks apart, followed by a reinforcing dose one year later. If this were done, booster injections would not have to be given with each wound or laceration. In fact, a number of studies indicate that harm may be done by giving boosters too frequently;[23,24] reactions include local swelling, pain and malaise, urticarial reactions, and angioneurotic edema.

For patients presenting with a wound and no history of previous immunizations, passive prophylaxis with hyperimmune human globulin rather than equine antitoxin should be used because it provides persistent levels for longer periods and has a lower reaction rate. The recommended dose is 250 units.[25] However, just as 3,000 to 5,000 units of equine antitoxin are not completely protective, neither is the hyperimmune human globulin, as is shown by the case report of tetanus developing after passive prophylaxis with human globulin.[26]

REFERENCES

1. LaForce FM, Young LS, Bennett JV: Tetanus in the United States (1965-1966): epidemiologic and clinical features. New Eng J Med 280:569-574, 1969.

2. Levine L, Wyman LA: Nationwide serum survey of United States military recruits, 1962. V. Serologic immunity to tetanus. Amer J Hyg 80:314-319, 1964.

3. Critchley AM: Tetanus neonatorum. Pub Health (London) 71:459-463, 1958.

4. Young LS, LaForce FM, Bennett JV: An evaluation of serological and antimicrobial therapy in the treatment of tetanus in the United States. J Infect Dis 120:153-159, 1969.

5. Sterne M, Van Heyningen WE: "The Clostridia" In: Dugos, Hirsch, Eds: Bacterial and Mycotic Infections of Man. Philadelphia, J B Lippincott Co, 1965, p 545.

6. Traub FB, Hollander A, Friedemann U: The potentiation of tetanus toxoid by broth and serum. J Bact 52:169-177, 1946.

7. Brooks VB, Curtis DR, Eccles JC: The action of tetanus toxin on the inhibition of motoneurones. J Physiol (London) 135:655-672, 1957.

8. Parsons RL, Hofmann WW, Feigen GA: Mode of action of tetanus toxin on the neuromuscular junction. Amer J Physiol 210:84-90, 1966.

9. Levine L, Wyman L: Tetanus immunity in north and south. JAMA 187:518-520, 1964.

10. Altemeier WA, Culbertson WR, Gonzales LL: Clinical experiences in the treatment of tetanus. Arch Surg 80:977-985, 1960.

11. Cherubin CE: Clinical severity of tetanus in narcotic addicts in New York City. Arch Intern Med 121:156-158, 1968.

12. Jenkins MT, Luhn NR: Active management of tetanus based on experiences of an anesthesiology department. Anesthesiology 23:690-709, 1962.

13. Ablett JJL: Tetanus and the anaesthetist; review of symptomatology and recent advances in treatment. Brit J Anaesth 28:258-273, 1956.

14. Christensen NA, Thurber DL: Current treatment of clinical tetanus. Mod Treat 5:729-757, 1968.

15. Rubbo SD: New approaches to tetanus prophylaxis. Lancet 2:449-453, 1966.

16. McComb JA: The prophylactic dose of homologous tetanus antitoxin. New Eng J Med 270:175-178, 1964.

17. Lamanna C, Carr CJ: The botulinal, tetanal, and enterostaphylococcal toxins: a review. Clin Pharmacol Ther 8:286-332, 1967.

18. Turner TB, Valasco-Joven EA, Prudovsky S: Studies on the prophylaxis and treatment of tetanus. II. Studies pertaining to treatment. Bull Johns Hopkins Hosp 102:71-84, 1958.

19. Martin HL, McDowell F: Recurrent tetanus: report of a case. Ann Intern Med 41:159-163, 1954.

20. Vakil BJ, Mehta AJ, Tulpule TH: Recurrent tetanus. Postgrad Med J 40:601-603, 1964.

21. Schofield FD, Tucker VM, Westbrook GR: Neonatal tetanus in New Guinea. Effect of active immunization in pregnancy. Brit Med J 2:785-789, 1961.

22. Peebles TC, Levine L, Eldried MC, et al: Tetanus-toxoid emergency boosters: a reappraisal. New Eng J Med 280: 575-581, 1969.

23. Edsall G, Elliott MW, Peebles TC, et al: Excessive use of tetanus toxoid boosters. JAMA 202:111-113, 1967.

24. Trinca JC: Problems in tetanus prophylaxis: the immune patient. Med J Aust 2:153-155, 1967.

25. Prevention of tetanus: guide-lines for the medical profession regarding the prevention of tetanus. International Conference on Tetanus. Ann Intern Med 65:1079-1080, 1966.

26. Johnson DM: Fatal tetanus after prophylaxis with human tetanus immune globulin. JAMA 207:1519, 1969.

Dr. Smith, Veterans Administration Hospital, Infectious Disease Section, 4500 S Lancaster Rd, Dallas, Tex 75216.

THE MAJOR CAUSE OF DEATH

WILLIAM G. REESE, MD

Premature death most often results from accidents, malignancies, cardiovascular disease, homicide, and suicide. Regardless of which paths the victims follow, they all may commence from the same point: The sign at the start reads, "Anger!"

PHYSICIANS' MAIN GOALS are to prevent premature death and to improve the health of the living. I say *premature* death because eventual death is inevitable and perhaps desirable. For the mature person, regardless of religious belief or nonbelief, the certainty of eventual death may give more meaning to life. If we could eliminate death, ecological considerations would force us to eliminate birth, and this would certainly make life less meaningful. With diminishing quantities of uncontaminated food, water, air and space, perhaps a fair share of life is sufficient.

What is a fair share of life? Answering ambiguously, when life is good, or can become so, that life should be preserved. Through contraception, countless potential lives must be prevented for the well-being and even survival of the living. Some fetal life should be terminated in the interest of the potential person and his associates. And while none of us support euthanasia, most of us abhor the artificial preservation of terminal life. If a person deserves a dignified life, he also deserves a dignified death.

The private practitioner attempts to improve the health of his individual patients. His public health colleague works toward the improvement of health for his community and for entire populations. People in general, and other professionals in particular, are equally concerned with the length and quality of life, but physicians have earned and have been given considerable responsibility toward this end. (As a group, physicians are notoriously irresponsible about their own health, and are themselves a relatively high risk group for heart disease, suicide and drug addictions.[1])

There are many causes of premature death, but *the leading cause is anger*. After a brief review of mortality statistics, I will try to make a case for this bald and seemingly foolish statement.

Mortality Statistics for the United States: If current mortality statistics remain constant, a newborn in this country has more than one chance in two of dying eventually from cardiovascular-renal disease (more than half from heart disease), 5 chances in 100 from accidents (more than half vehicular), and 16 in 100 from malignancy.[2] The 1969 death rate from heart disease, which now accounts for almost 40% of all US deaths, declined slightly from the 1968 level; but motor vehicle fatalities increased about 3%.[3] The three leading causes of death from ages 45 to 75 and over are heart disease, cancer and stroke, in that order.[4] Accidental deaths occupy the first position from ages 1 to 44, with vehicular accidents supreme from ages 15 to 24. In the latter age period, homicide is the third leading cause.

In the third decade of life, an extremely im-

portant period from social and economic perspectives, we find that in 1955 the rank order of causes of death were: accidents, neoplasms, heart disease, homicide and suicide—together accounting for 70% of third-decade deaths.[5] Undoubtedly some of the vehicular deaths represented homicide or suicide or both. Homicides were almost as frequent as cardiac deaths and a little more frequent than suicides, but deaths from suicide are under-reported. The homicides do not include the institutionalized murders which our "enlightened" societies call war. Even so, the annual vehicular deaths in this country approximate the number of US war dead since the beginning of the Vietnam tragedy.

Frazier[6] quotes Josephson as follows: "A study of adolescent emergency room visits in New York City has shown that half had been the victims of accident or violence. Nationwide, violent accidents take a heavy and increasing toll among the young—more than any other cause of death. Among males in the 15 to 24-year age group, accidents, homicides and suicides may account for more than two-thirds of all death. The largest increases in suicide rates have been registered among the young." According to the same article, during the 1953-1963 decade the suicide rate increased three times as rapidly for nonwhite males as for white males to approximately the same incidence for white and nonwhite. In considering death and disease, we must not forget that poverty and poor health are close companions. The ghetto poor (and no doubt the rural and reservation poor) at every age suffer from higher mortality rates, higher incidence of major diseases, shorter life expectancy and underutilization of health facilities.[4,6] There are also diseases of affluence. Ford develops the thesis that social and technological changes produce new sources of death and disability; for example, pollution and new prescribed drugs.[7]

The killers are also maimers. In 1967 more than 3 million motor vehicle victims needed medical care.[8] One study attributed 40% of vehicular deaths to head injury.[7] The equal number surviving head injury were left with varying degrees of impairment, with 13% being totally disabled for employment.

These glibly listed causes of death could more accurately be called proximate or death-certificate causes. But did a specific man die because of collision injuries, or because he was drunk, or because he went to the bar because he was mad at his wife, or because of an immature hostile-dependent personality, or because of a fatal combination of factors? What really killed Cock Robin? My central thesis is that the main cause of death is excessive and misdirected anger. The central position of anger is evident in murders of passion, murders of mob violence and in infanticides of child abuse.

Suicide: It is not difficult to make a case for the anger of suicide. Of course there are suicides resulting from despair over real or imagined circumstances. There are the suicides of some of the accident-prone victims who lose in their particular games of Russian roulette. There are the slower, more covert suicides of those addicted to alcohol and other drugs or to food or tobacco. Suicides are not limited to depression, but one study reports that 15% of depressives die from suicide.[9] The unwitting accomplices in these deaths are often the relatives, friends and even physicians who disregard signals which may be loud and clear.

The paramount feature of the depressive suicide is anger—the anger of the person directed or misdirected against himself. Menninger[10] views suicide as the transformation of a wish to kill to a wish to be killed, to a wish to die. With varying details of formulation, most analysts and psychiatrists agree to the central position of hostility in depressive suicide. The murder-suicides of pairs of families are spectacularly tragic, if not frequent; but even in solitary suicide, hostility toward survivor(s) may be a significant factor. One of my patients lost interest in suicide when he decided that his wife would welcome his demise.

Alcoholism: Alcoholism is highly associated with overt suicide and with accidental deaths. "Recent studies show that about half of all fatal highway crashes involve drivers who had been drinking,"[11] and another study indicts alcohol in 22% of all home accidents.[12] "According to estimates accepted by the 28th International Congress on Alcohol and Alcoholism, there are more than 5 million alcoholics in the US. In 1963, 10,500 deaths in this country were attributed to alcoholism. Insurance figures put the life expectancy of alcoholics at 10 to 12 years less than that for the nonalcoholic. Two million arrests were made in 1964 for drunkenness. The World Health Organization reports that the US has moved ahead of France as the

nation with the world's highest incidence of alcoholism."[13] The younger generation seems to favor other addictions which may or may not cause greater morbidity and mortality.

Addictive problems seem to have much in common with depressive disorders. "The final conclusion in the life of the drug (or alcohol) addict tends to suicide, marked deterioration, or a depressive-paranoid psychosis."[14] Much of the psychiatric literature emphasizes libidinal features and particularly oral fixation. I have been equally impressed by the hostile-dependence of such people and the considerable degree and extent of their destructiveness directed simultaneously at themselves and others. They are not just caricatures of hungry, craving infants, but of spiteful children who would destroy their frustrators and themselves in the process.

Cardiovascular-Renal Diseases: In terms of mortality, the cardiovascular-renal diseases of particular concern are essential hypertension, coronary thrombosis and atherosclerosis. There is little doubt that emotional factors are important in the evaluation and treatment of these conditions. For example, the patient with acute myocardial infarction needs physical and emotional rest, and relief from the mutually abetting pain and anxiety. The victim needs drugs, oxygen and confidence in his doctor. The latter factor may tip the critical balance. Proper global treatment is equally important for the stroke victim and, in both types of vascular disease, comprehensive rehabilitation is essential. Emotional factors in the etiology of cardiovascular disease and death are more complex, but no less important.[15] The observation that healthy young men in primitive tribes may be cursed to death seems to be fairly well authenticated. In exploring possible mechanisms, Richter[16] demonstrated that wild rats may be frightened to death in the laboratory, apparently through the mechanism of vagal inhibition. Extensive research has extended and modified Cannon's pioneering observations on physiological concomitants of fight and fright, but review of this literature is beyond the scope of this article.

Pavlov's American student, Gantt, has worked extensively on cardiovascular conditional reflexes. He and his students[17] (four of whom are in our laboratories) have conditioned heart rate, blood pressure, renal hypuria and coronary blood flow—all in dogs. According to Thomas,[18] Russian experimenters claim that chronic frustration of primitive urges may produce enduring hypertension in primates.

Certainly we must be wary of generalizing from lower animals to man, and we cannot attempt to produce disease in man, but must instead utilize observational research. While engaged in some unpublished research with hypertensive patients in our laboratory, Wilson noted considerably higher systolic blood pressure readings when his patients knew their blood pressures were recorded (cuff method) than when they did not know they were being recorded (digital monitor). In other laboratories, using operant conditioning techniques, human subjects have been conditioned to lower blood pressure and control ectopic beats.[19]

Levy and his group showed that in man labile hypertension, commonly related to emotional stress, is often followed by sustained hypertension. Earlier, Pfeiffer and Wolff[21] demonstrated in about half of 35 subjects with hypertension but no evidence of renal disease that emotionally stressful topics raised systolic and diastolic blood pressure and produced renal vasoconstriction as measured by renal plasma flow.

One of my normotensive patients,[22] who was thoroughly trained in hypnosis, gave some interesting cardiovascular responses to suggestions of various moods. Fig 1 shows that the responses to suggestions of anger were even more pronounced than those to suggestions of anxiety. However, this patient could not tolerate nor scarcely recognize her own anger, and the hypnotic suggestion produced at least as much anxiety as anger. Probably humans rarely experience any pure emotion.[22] Nevertheless, Moses and others[23] reported that rage and resentment were the predominant affects of patients with pressure elevations above

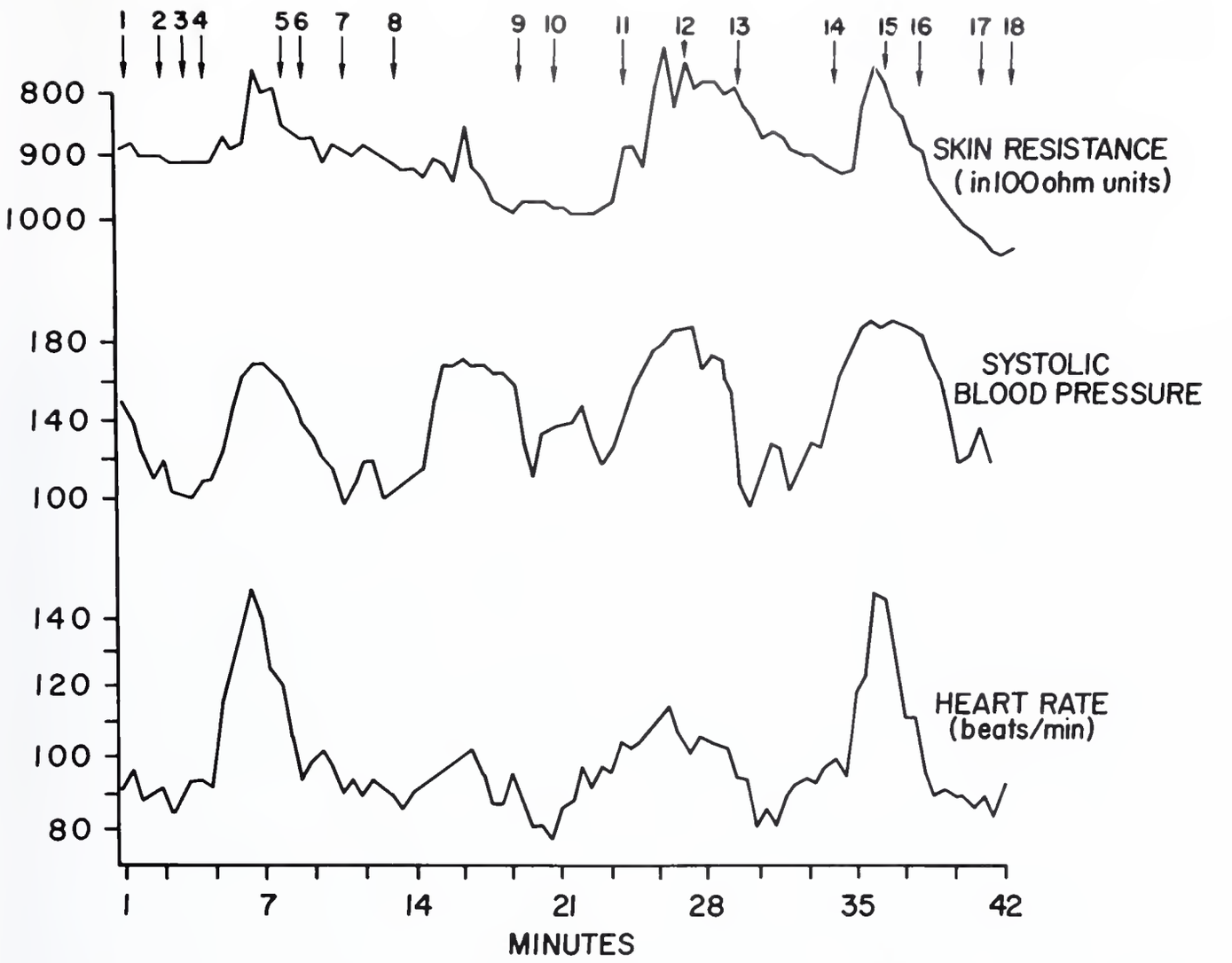


Fig 1. Physiological functioning in one normotensive patient during hypnosis. The numbered arrows mark the following events: 2-3, suggestions of relaxation; 4, rapid hypnotic induction; 5, first trance terminated because of anxiety; 6-7, relaxation suggested; 8, second induction; 9-10, calm relaxation suggested; 11, anxiety suggested; 12, relaxation suggested; 13, sadness suggested; 14, irritation and anger suggested; 15, mounting anxiety with denial of anger; 16, second trance terminated; 17-18, relaxation.

160/100 mm Hg. In 1939 in the first volume of *Psychosomatic Medicine,* Alexander[24] and Saul[25] reported that hypertensive patients show strong aggressions and anxiety beneath their external friendliness. Unlike the bound hostility in every neurosis, Saul[25] found the hostility in hypertensives to be intense, chronic, inhibited, near to awareness and near to overt expression. This formulation again indicts hostility as a surreptitious killer in a pattern analogous to suicide since the unbound, generally controlled, reflected anger takes its toll of the cardiovascular system, albeit at the physiological level.

Friedman and Rosenman[26] make a good case for a behavior pattern, manifested by tremendous competitive drive and effort, which predisposes to coronary heart disease.

Malignant Neoplasm: The management of patients with malignancy is stressful to patient, family and physician, and the physician's skill in sensitive interpersonal relations and his own emotional maturity and stability are of paramount importance. For a discussion of some of these issues I refer you to the recent book by Kubler-Ross, "On Death and Dying."[27] Parenthetically, I find it strange that psychiatrists are so little involved with regional medical programs for heart, cancer and stroke.

Blumberg and colleagues[28] found differences in the personality characteristics of cancer patients who had rapidly advancing disease as compared with those who had far outlived expectancy. They concluded that intense emotional stress may profoundly stimulate rate of neoplastic growth, and postulated differences in host resistance. In an extensive review of this and 74 other articles, Perrin and Pierce[29] state that "the psychological reactions and defenses of persons to the development of can-

cer secondary to emotional trauma are reported to be similar to those found in neurotic patients. Particularly prominent are depression and guilt." In general, however, these authors seriously questioned the adequacy of research design in most of the studies reviewed. As unlikely as it now seems, I shall keep an open mind to the possibility that emotional factors may have something to do with the *etiology* of neoplasm. Certainly emotional factors are related to host resistance to infections and play some role in allergic mechanisms.

General Formulation: I believe that I have made a case for the significance of emotional factors in the etiology of premature death. I have singled out *anger* as a key factor in deaths associated with accidents, homicides, suicides, addictions and essential hypertension. This, of course, is oversimplification for the purpose of emphasis. Anger is a normal feeling which, in moderation, is quite appropriate in some situations. Anger becomes abnormal and destructive when it leads to pathological behavior or to pathophysiologic and pathologic changes. Chronic defenses against anger produce an inhibited, joyless character structure in some and self-righteous bigotry in others. Handled neurotically in those with hypertrophied superegos, anger may generate anxiety, obsessive-compulsiveness, or various types of clinical depressions. Handled impulsively it may lead to rage and overt ego-alien destructiveness. Handled antisocially in those bereft of conscience, it may lead to ego-syntonic violence. Handled dyssocially by youth gangs or misguided mobs who use the wrong means for the right ends, it may lead to gross destruction of person, property and social institutions. Handled psychophysiologically anger may lead to physiological maladaptation, functional impairment and somatic damage. The vicissitudes of anger depend upon multiple complex factors of heredity, experience and circumstance. The determining factors are biological, ecological, sociological, educational and psychological. Of course anger is only one of the drives involved in psychodynamics and psychopathology—but perhaps sex has had top billing long enough. Anyway, frustrated sex drives may lead to anger as well as anxiety.

Prevention: Obviously the physician is vitally concerned with the identification and elimination of causes of death. The surgeon must decide for himself whether to invest some of his time and skill in trauma prevention programs. How much effort should the pediatrician invest in poison-prevention programs? The general practitioner must decide whether and how to participate in drug education programs and in the informed treatment of alcoholics. All of us must learn to recognize and arrange for appropriate treatment of the suicidal risk. The psychiatrist must decide whether he should spend more of his time in crisis intervention and other preventive programs.

Perhaps most of us should invest more time and wisdom in improving health delivery systems.[30] If we were not so important to our fellow citizens, we would be less criticized. Whom the Lord loveth he chasteneth—with great assistance from the masses. Although we could do with more love and less criticism, we cannot hide completely behind the rationalization. Perhaps we are most vulnerable when accused of insufficient attention to the health needs of those who are poor in funds and rich in pathologic complaints. It is the job of society, of which we are part, to eliminate poverty and to improve our physical and social environment. It is our duty to work with the rest of society toward the reduction of premature death and the improvement of health of all. Having almost subdued the other species including bacterial pathogens, man must now conquer himself. Unless he can better domesticate his own hostility, *Homo sapiens* may join the list of extinct species leaving no one to write the epitaph. Rather than this, let us implement the "Declaration of Interdependence" of Earth Day 1970. We must preserve man for the world and the world for man.

REFERENCES

1. Suicide, drug addiction called risk factors in doctor's life. The House Physician Reporter 8(5):1, 1968.

2. Chances of dying from important causes. Statist Bull Metrop Life Insur Co 50:3-4, 1969.

3. Statistics for 1969 show mortality rate decline. Texas Med 66:96 (March) 1970.

4. Blum, HL, et al: Health Planning 1969. San Francisco, Western Regional Office, American Public Health Association.

5. Kampmeier, RH: Carnage on the road. Southern Med Bull 56:5-7, 1968.

6. Frazier, SH: Violence. Psychiat Dig 31:11, 1970.

7. Ford, AB: Casualties of our time. Science 167:256-263, 1970.

8. Over 3,000,000 motor vehicle injuries needed medical care during 1967. Medical Tribune 10(96):20, 1969.

9. Goodwin, DW: Psychiatry and the mysterious medical complaint. JAMA 209:1884-1888, 1969.

10. Menninger K: Man Against Himself. New York, Harcourt, Brace, 1938.

11. Allstate Insurance Companies: Drunk Drivers and Highway Safety. Northbrook, Ill, S537-1.

12. Environment and genes held factors in etiology of congenital heart ill. Medical Tribune 11(16):20, 1970.

13. Psychiatric News: p 3 (Nov) 1968.

14. Hill LB: Psychopathology. Unpublished. 1947.

15. To sleep: to die. JAMA 211:1535-1536, 1970.

16. Richter CP: in: Gantt WH, Ed: Physiological Bases of Psychiatry. Springfield, Ill, Charles C Thomas, 1958, p 112.

17. Reese WG, Dykman RA: Conditional cardiovascular reflexes in dogs and men. Physiol Rev 40(Supp 4):250, 1960.

18. Thomas C: Psychophysiologic aspects of blood pressure regulation; the clinician's view. Psychosom Med 26:454-480, 1964.

19. The not so autonomic nervous system. Roche Medical Image and Commentary 12(2):28, 1970.

20. Levy RL, Hillman CC, Stroud WD, et al: Transient hypertension. JAMA 126:829-833, 1944.

21. Pfeiffer JB Jr, Wolff HG in: Life Stress and Bodily Disease. Baltimore, The Williams & Wilkins Co, 1959, p 929.

22. Reese WG, Sundermann RH, Galbrecht CR, et al: Physiological concomitants of affect during psychiatric interviews. J Psychosom Res 13:347-355, 1969.

23. Moses L, Daniels GE, Nickerson JL: Psychogenic factors in essential hypertension. Psychosom Med 18:471-485, 1956.

24. Alexander F: Emotional factors in essential hypertension. Psychosom Med 1:173-179, 1939.

25. Saul LF: Hostility in cases of essential hypertension. Psychosom Med 1:153-161, 1939.

26. Rosenman RH, Friedman M, Straus R, et al: Coronary heart disease in the western collaborative study group. JAMA 195:86-92, 1966.

27. Kubler-Ross E: On Death and Dying. New York, The Macmillan Co, 1969.

28. Blumberg EM, West PM, Ellis FW: A possible relationship between psychological factors and human cancer. Psychosom Med 16:277-286, 1954.

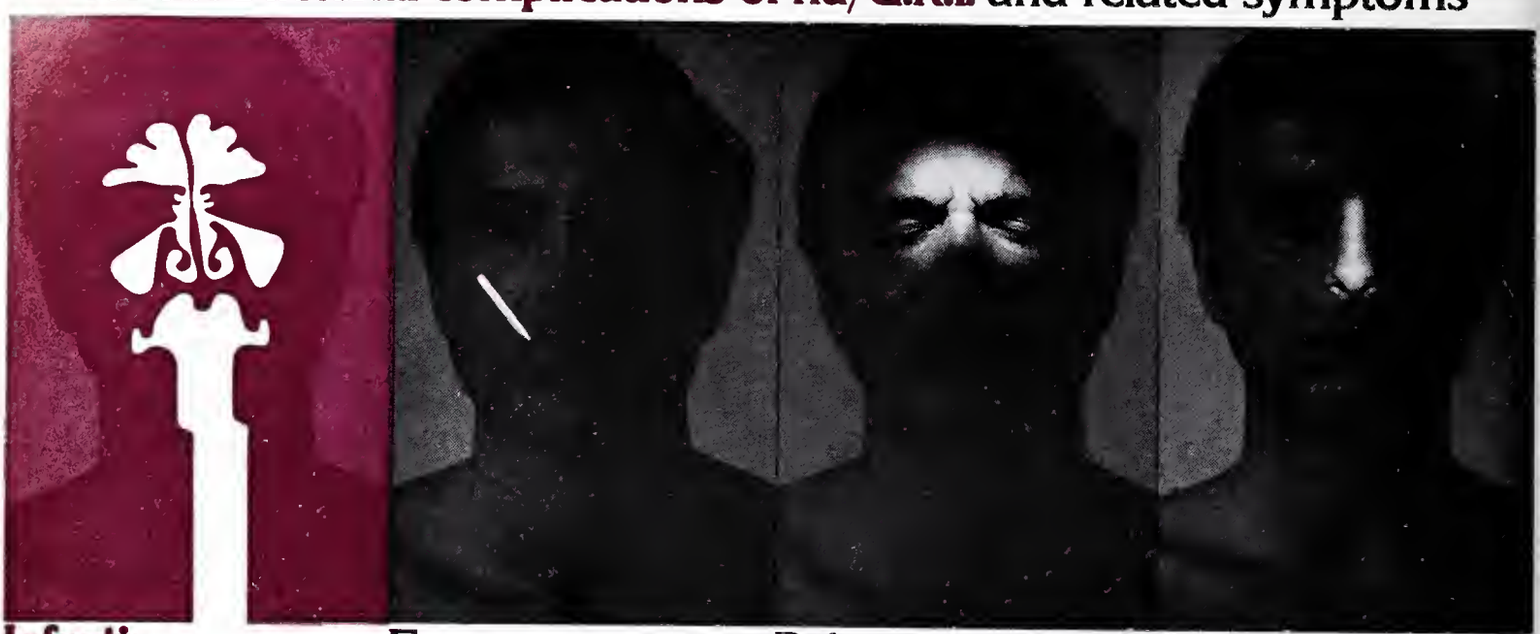
29. Perrin GM, Pierce IR: Psychosomatic aspects of cancer. Psychosom Med 21:397-421, 1959.

30. Reese WG: Evasion of responsibility of physicians in planning health services. J Arkansas Med Soc 62:165-168, 1965.

Dr. Reese, University of Arkansas Medical Center, 4301 W Markham, Little Rock, Ark 72201.

'Group' therapy

for the bacterial complications of flu/U.R.I. and related symptoms



Infection
A broad-spectrum antibiotic to combat susceptible bacterial infections

Fever **Pain**
An analgesic/antipyretic to bring down fever, ease pain, and malaise

Congestion
An antihistamine for the symptomatic relief of nasal congestion

Tetrex® APC with Bristamin®

(tetracycline phosphate complex with analgesics and antihistamine)

For complete information consult Official Package Circular. (5) 4/2/70.

Indications: Upper respiratory infections due to sensitive bacteria where concomitant symptomatic relief of fever, malaise and congestion is desired.

Contraindications: Hypersensitivity to one or more components.

Warnings: Photodynamic reactions have been produced by tetracyclines. Natural and artificial sunlight should be avoided during therapy. Stop treatment if discomfort occurs. With renal impairment, systemic accumulation and hepatotoxicity may occur. In this situation, lower doses should be used and serum estimations may be necessary during prolonged therapy. Tooth staining and enamel hypoplasia may be induced during tooth development (last trimester of pregnancy, neonatal period and childhood).

Precautions: Antihistamines may cause drowsiness and patients should not perform tasks requiring mental alertness while taking this agent. Bacterial or mycotic superinfections may occur. Infants may develop increased intracranial pressure with bulging fontanels. Cases of gonorrhea with a suspected primary lesion of syphilis should have darkfield examinations before receiving treatment. In all other cases where concomitant syphilis is suspected, monthly serological tests should be performed for a minimum of 4 months.

Adverse Reactions: Glossitis, stomatitis, nausea, diarrhea, flatulence, proctitis, vaginitis, dermatitis and allergic reactions may occur.

Usual Adult Dose: 2 capsules q.i.d. Children 6 to 12 years of age: ½ the adult dose.

Continue therapy for at least ten days in Group A beta-hemolytic streptococcal infections. Administer 1 hour before or 2 hours after meals.

Supplied: Capsules—in bottles of 24 and 100.

A.H.F.S. Category 8:12

BRISTOL

BRISTOL LABORATORIES
Division of Bristol-Myers Co.
Syracuse, New York 13201

Sandoz announces...

a new agent for
the alcohol-dependent patient
who wants to quit
and
a program for the Texas physician
who wants to help

a major tranquilizer with specific advantages for the alcohol-dependent patient:

1. Alleviates tension, anxiety, and depression; may also ease prevalent neurotic symptoms in personality disorders.
2. No reported habituation or addiction.
3. Antiemetic properties to control nausea and vomiting.
4. Has not caused hepatic dysfunction or interfered with functional recovery of impaired liver.
5. Four tablet strengths to allow flexibility of dosage (usual starting dose: for the problem drinker, 10 mg. t.i.d.; for the frank alcoholic, 25 mg. b.i.d.).
6. Injectable form available for acute episodes.

a program for early recognition and successful treatment:

Alcoholism in Texas*

State Rank

totol no. olcoholics	9th
no. per capito	34th
per copita consumption†	32nd

Texas Physicians' Report
(compored with U.S. average)

	%Tex.	%U.S.
see 5 or more problem drinkers in 2-month period	30.2	37.1
holf or more seen ore women	39.6	37.4
treot, rother thon refer	69.1	72.6
more community services needed	61.7	63.0

*based on preliminary doto supplied by Center of Alcohol Studies, Rutgers Univ. †absolute alcohol

The Ins-and-Outs of Alcoholism: A series of recordings and other mailings, each concerned with a particular aspect of the alcohol problem. Recognized authorities in the field discuss the scope, recognition and treatment of alcohol-dependent patients. Also included will be **The Alcoholic Directory**, a nationwide survey of treatment centers.

Interested? Complete and mail this coupon to:
Dept. SERENTIL/Sandoz Pharmaceuticals
Route 10/Hanover, N. J. 07936

SANDOZ

Dr. _____
(PLEASE PRINT)

Street _____

City _____ State _____ Zip _____

See next page for prescribing information.

SERENTIL®
(mesoridazine)
new weapon in the fight against alcoholism

INDICATIONS: In clinical studies, Serentil (mesoridazine) has been found useful in the following disease states:

Alcoholism—Acute and Chronic: Serentil ameliorates anxiety, tension, depression, nausea and vomiting in both acute and chronic alcoholics without producing hepatic dysfunction or hindering the functional recovery of the impaired liver.

Schizophrenia: Serentil is effective in the treatment of schizophrenia. It substantially reduces the severity of Emotional Withdrawal, Conceptual Disorganization, Anxiety, Tension, Hallucinatory Behavior, Suspiciousness and Blunted Affect in schizophrenic patients. As with other phenothiazines, patients refractory to previous medication may respond to Serentil.

Behavioral Problems in Mental Deficiency and Chronic Brain Syndrome: The effect of Serentil was found to be excellent or good in the management of hyperactivity and uncooperativeness associated with Mental Deficiency and Chronic Brain Syndrome.

Psychoneurotic Manifestations: Serentil reduces the symptoms of anxiety and tension, prevalent symptoms often associated with neurotic components of many disorders, and benefits personality disorders in general.

CONTRAINDICATIONS: As with other phenothiazines Serentil (mesoridazine) is contraindicated in severe central nervous system depression or comatose states from any cause. Serentil is contraindicated in individuals who have previously shown hypersensitivity to the drug.

WARNINGS: Where patients are participating in activities requiring complete mental alertness (e.g., driving), it is advisable to administer the phenothiazines cautiously and to increase the dosage gradually.

Usage in pregnancy: The safety of this drug in pregnancy has not been established; hence, it should be given only when the anticipated benefits to be derived from treatment exceed the possible risks to mother and fetus.

Usage in children: The use of Serentil in children under 12 years of age is not recommended, because safe conditions for its use have not been established.

Attention should be paid to the fact that phenothiazines are capable of potentiating central nervous system depressants (e.g., anesthetics, opiates, alcohol, etc.) as well as atropine and phosphorus insecticides.

PRECAUTIONS: While ocular changes have not to date been related to Serentil, one should be aware that such changes have been seen with other drugs of this class.

Because of possible hypotensive effects, reserve parenteral administration for bedfast patients or for acute ambulatory cases, and keep patient lying down for at least ½ hour after injection.

Leukopenia and/or agranulocytosis have been attributed to phenothiazine therapy. A single case of transient granulocytopenia has been associated with Serentil (mesoridazine).

ADVERSE REACTIONS: Drowsiness and hypotension were the most prevalent side effects encountered. Side effects tended to reach their maximum level of severity early with the exception of a few (rigidity and motoric effects) which occurred later in therapy.

With the exceptions of tremor and rigidity, adverse reactions were generally found among those patients who received relatively high doses early in treatment. Clinical data showed no tendency for the investigators to terminate treatment because of side effects.

Serentil has demonstrated a remarkably low incidence of adverse reactions when compared with other phenothiazine compounds.

Central Nervous System: Drowsiness, Parkinson's syndrome, dizziness, weakness, tremor, restlessness, ataxia, dystonia, rigidity, slurring, akathisia, motoric reactions (opisthotonos) have been reported.

Autonomic Nervous System: Dry mouth, nausea and vomiting, fainting, stuffy nose, photophobia, constipation and blurred vision have occurred in some instances.

Endocrine System: Inhibition of ejaculation and lactation have been noted rarely.

Skin: Itching, rash, hypertrophic papillae of the tongue and angioneurotic edema have been reported.

Cardiovascular System: Hypotension and tachycardia have been reported. EKG changes have occurred in some instances (see Phenothiazine Derivatives: Cardiovascular Effects).

Phenothiazine Derivatives: It should be noted that efficacy, indications and untoward effects have varied with the different phenothiazines. The physician should be aware that the following have occurred with one or more phenothiazines and should be considered whenever one of these drugs is used:

Autonomic Reactions: Miosis, obstipation, anorexia, paralytic ileus.

Cutaneous Reactions: Erythema, exfoliative dermatitis, contact dermatitis.

Blood Dyscrasias: Agranulocytosis, leukopenia, eosinophilia, thrombocytopenia, anemia, aplastic anemia, pancytopenia.

Allergic Reactions: Fever, laryngeal edema, angioneurotic edema, asthma.

Hepatotoxicity: Jaundice, biliary stasis.

Cardiovascular Effects: Changes in the terminal portion of the electrocardiogram, including prolongation of the Q-T interval, lowering and inversion of the T-wave and appearance of a wave tentatively identified as a bifid T or a U wave have been observed in some patients receiving the phenothiazine tranquilizers, including Serentil (mesoridazine). To date, these appear to be due to altered repolarization and not related to myocardial damage. They appear to be reversible. There is no evidence at present that these changes are in any way precursors of any significant disturbance of cardiac rhythm.

Hypotension, rarely resulting in cardiac arrest, has been noted.

Extrapyramidal Symptoms: Akathisia, agitation, motor restlessness, dystonic reactions, trismus, torticollis, opisthotonos, oculogyric crises, tremor, muscular rigidity, akinesia—some of which on rare occasions have persisted for several months or years especially in patients of advanced age with brain damage.

Endocrine Disturbances: Menstrual irregularities, altered libido, gynecomastia, weight gain. False positive pregnancy tests have been reported.

Urinary Disturbances: Retention, incontinence.

Others: Hyperpyrexia. Behavioral effects suggestive of a paradoxical reaction have been reported. These include excitement, bizarre dreams, aggravation of psychoses and toxic confusional states. More recently, a peculiar skin-eye syndrome has been recognized as a side effect following long-term treatment with phenothiazines. This reaction is marked by progressive pigmentation of areas of the skin or conjunctiva and/or accompanied by discoloration of the exposed sclera and cornea. Opacities of the anterior lens and cornea described as irregular or stellate in shape have also been reported.

DOSAGE AND ADMINISTRATION: Oral: The dosage of Serentil (mesoridazine), as in most medications, should be adjusted to the needs of the individual. The lowest effective dosage should always be used. When maximum response is achieved, dosage may be reduced gradually to a maintenance level.

Alcoholism: For most patients the usual starting dose is 25 mg. b.i.d. The usual optimum total daily dose range is 50-200 mg. per day.

Schizophrenia: For most patients, regardless of severity, a starting dose of 50 mg. t.i.d. is recommended. The usual optimum total daily dose range is 100-400 mg. per day.

Behavioral Problems in Mental Deficiency and Chronic Brain Syndrome: For most patients a starting dose of 25 mg. t.i.d. is recommended. The usual optimum total daily dose range is 75-300 mg. per day.

Psychoneurotic Manifestations: For most patients the usual starting dose is 10 mg. t.i.d. The usual optimum total daily dose range is 30-150 mg. per day.

Injectable Form: In those situations in which an intramuscular form of medication is indicated, Serentil (mesoridazine) Injectable is available. For most patients a starting dose of 25 mg. is recommended. The dose may be repeated in 30 to 60 minutes, if necessary. The usual optimum total daily dose range is 25-200 mg. per day.

HOW SUPPLIED: Tablets: 10 mg., 25 mg., 50 mg., and 100 mg. mesoridazine (as the besylate). Bottles of 100.

Ampuls: 1 cc. [25 mg. mesoridazine (as the besylate)]. Inactive ingredients—Disodium Edetate, U.S.P., 0.5 mg.; Sodium Chloride, U.S.P., 7.2 mg.; Carbon Dioxide Gas (Bone Dry), q.s.; Water for Injection, U.S.P., q.s. to 1 cc. Boxes of 20 and 100.

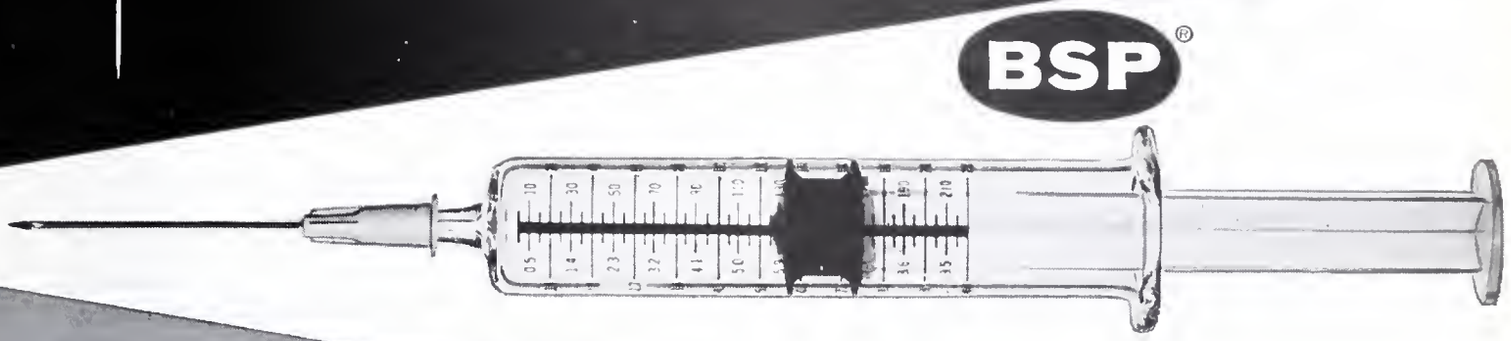
SER70-101

Sandoz Pharmaceuticals, Hanover, N.J.

BSP® DISPOSABLE UNIT

HW&D BRAND OF SODIUM SULFOBROMOPHTHALEIN INJECTION, USP

(50 mg. per ml.)



BROMSULPHALEIN® IN A STERILE, DISPOSABLE, ECONOMICAL UNIT

The Bromsulphalein test is a convenient, sensitive, reliable test of liver function.

The precalibrated syringe contained in the BSP Disposable Unit makes weight calculations unnecessary, providing proper dosage regardless of patient-weight. Each unit contains complete directions for use, precautions and contraindications.

The all-inclusive BSP Disposable Unit provides economic unit dispensing.

Complete literature available on request.

HYNSON, WESTCOTT & DUNNING, INC.

Baltimore, Maryland 21201

(BSP04)

Stress Fractures

Eight patients with ten fractures in the lower extremities are presented; these fractures were caused by jogging or similar activity. Each patient recovered without serious sequelae. There are some dangerous types of stress fractures that can cause serious consequences—the femoral neck fractures may permanently disable the individual. There is little doubt that the "aerobics" type of activity is beneficial. It is important, however, to emphasize to the patients undertaking this activity that they follow the graduated schedule of exercises specifically, and that they not attempt to accelerate their training by proceeding too fast.

THERE HAVE BEEN numerous reports of stress fractures in military personnel.* A recent clinical study by Morris and Blickenstaff has indicated how prevalent this problem is, particularly in military recruits.[16] On the other hand, there are no large series of civilian cases which indicate that stress fractures are a special hazard in any particular occupation or endeavor.

One significant study indicates what is taking place microscopically from seven days to seven months before the fracture occurs.[14] There also are several theories as to the cause of stress fractures.[19, 22] In 1939, Roberts and Vogt indicated that an infectious agent likely was associated with the etiology of the fractures.[22] The majority of reported cases have been in people who have held sedentary positions and then suddenly have been put in a training program of exercise and endeavor. There seems to be a definite relationship to race in that 99% of the patients reported have been Caucasian.[19]

It is also important to stress that some of these fractures have been confused with malignant tumors.[17] This, of course, could lead to serious consequences if amputation or radical surgery were carried out.

Definition and Etiology: This fracture has been called by various names including stress reaction, fatigue fracture, stress fracture, march fracture, and many others.[19] The name, of course, is important only for clear communication. "Fatigue fracture" would better express the overall process; nearly all fractures result from some kind of stress, so "stress fracture" is not specific enough. There is good evidence that the initial microscopic picture indicates that in the first week there is active reabsorption of bone due to osteoclastic activity, but no osteocyte death or microfractures.[14] This reabsorption by the osteoclasts is complete at approximately three weeks, and the callus formation is at its highest level at approximately six weeks. These findings were from biopsies done in patients who had ceased activity after the symptoms began. Many of us have seen the end result of the reaction if activity and weight-bearing is not ceased, and, of course, this would be an overt fracture with possible displacement.

One could ask whether this is a breakdown in Wolff's law, or merely confirms Wolff's law which, briefly stated, is: "Every change in the form and function of a bone or in its function alone is followed by a certain definite change in its internal architecture and secondary alterations in its external conformation," or, stated more simply, "All changes which may occur in the function of the bone are tended by a definite alteration in its internal structure."[10]

*1-5, 7, 11, 12, 15, 16, 19, 20

in Joggers

CHARLES E. GRAHAM, MD

It is my theory that Wolff's law indeed is not violated here, but actually is in operation as indicated by the osteoporosis in the early phase of this reaction. This, I think, represents an attempt of the bone to reorganize its internal structure by osteoclastic activity and then, later, osteoblastic activity to realign the trabeculae so as to prevent collapse of the bone. One case, however, indicates that there is a realignment of the internal and external architecture of the bone to withstand more stress from the activity that the body is undergoing.

Patients: This report concerns a civilian population, and in general all of the cases have in common the physical fitness endeavor of jogging. In this series are nine patients with ten fractures, all having occurred since mid-July, 1967. About one-half of the patients were following—or thought they were following—a program as set forth in a book by Col. Kenneth Cooper.[6] The indictment here, of course, is not of the book because it has useful and indeed helpful information, provided the patient will follow it. The indictment, if any, in this series, is of the patient and his failure to follow the well-programmed instructions.

This series includes four stress fractures of the os calcis, three of the fibula, two of the femur, and one of the tibia. In none of these cases did we see the femoral neck stress fracture, which is severely disabling if it becomes displaced.[4]

Symptoms: Pain is the most common symptom. However, in one case where the fracture was complete, the pain was minimal until the femur collapsed. In most of the cases the pain started approximately two weeks after onset of activity, but generally x-rays were normal at that time, and pain and swelling in the area were the only findings. In one case the pain preceding a fractured femur was referred to the knee, which was x-rayed and found to be normal.

Case Reports: *Case 1:* A 31-year-old white man who had been jogging for approximately four weeks was doing well until the beginning of the third week, when he started having pain in his heel area. The roentgenograms were essentially normal and the patient was told to come back in approximately two to three weeks for a re-evaluation; he also was instructed to discontinue his jogging. A roentgenogram approximately four weeks after the initial examination and approximately six weeks after the start of his jogging exercises showed two stress lines in the os calcis which indicated stress fractures (Fig 1). The patient was cautioned to continue weight bearing, but to stop his jogging program for a few more weeks.

He was not seen until about six months later at which time he was complaining of pain in his left ankle. He had taken up jogging again, on his own, and three weeks before I saw him he had felt pain in his left ankle area and decided that he had better come in and have it checked again. A roentgenogram showed a stress fracture of the fibula (Fig 2).

Case 2: A 37-year-old white woman, about eight months pregnant, had noticed pain in her left heel area three weeks earlier. She had been doing quite a bit of walking and occasionally had done some jogging with her husband who was undergoing the aerobics course, but had complained of no other injury. She was tender about the left heel area between the attachment of the Achilles tendon and the ankle joint (Fig 3).

Case 3: A 32-year-old white woman had been participating in a jogging club for approximately three weeks. One week before I saw her, she started having pain in her heel and noticed

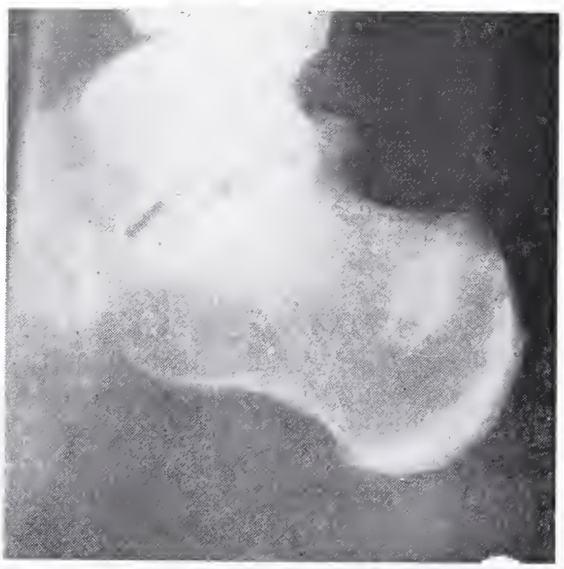
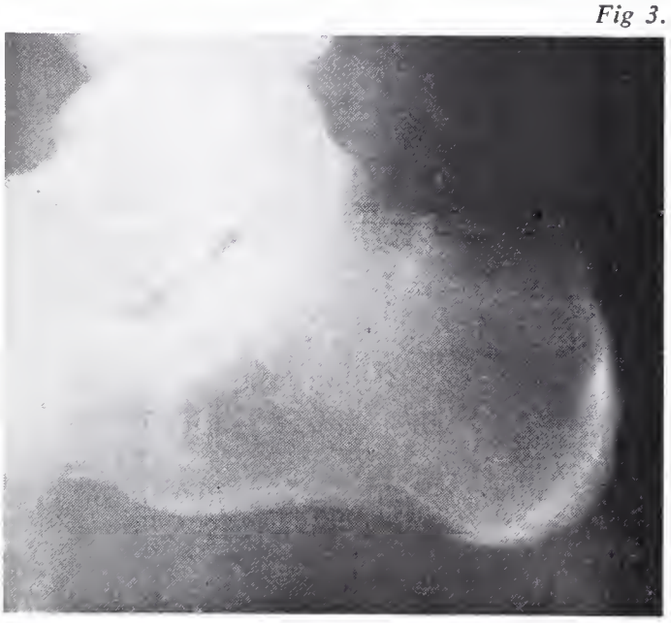


Fig 1.

Fig 2.

Fig 3.



that two or three other people in the club had the same problem. She came in to have her symptoms evaluated mainly for her benefit, but also to help and inform the other club members as to what might be wrong with their heels. She was tender about the os calcis around the attachment of the Achilles tendon and up toward the ankle joint (Fig 4).

Case 4: A 40-year-old white woman had been jogging for about four weeks, and had pain in the left ankle for one week so severe that she had stopped jogging. Physical examination showed tenderness over the lateral malleolus and fibula area near the ankle joint (Fig 5, notice arrow).

Case 5: A 35-year-old white man worked for a large industrial plant and had to walk several miles a day; occasionally he jogged just to break the monotony. He had been having pain in his right ankle for about one month but recalled no injury—just the excessive walking and some jogging occasionally. Physical examination showed tenderness over the fibula at the ankle joint area (Fig 6).

Case 6: A 16-year-old cross-country runner had no trouble until he decreased his activity during the Christmas vacation and started retraining three weeks later. After two weeks of jogging and running the cross-country again, he noticed pain in his knee and slightly below the knee area. His private physician thought that he had a malignant tumor of the tibia area. Physical examination showed tenderness and some swelling over the tibia, approximately 4 inches distal to the knee area. Also, the patient was knock-kneed (Fig 7, see arrow).

Case 7: A 10-year-old white boy had been jogging in association with soccer, and had been kicking the soccer ball with his right foot. He had pain in his right leg, especially in the right knee area, for three weeks. He had been playing soccer for approximately five weeks. Physical examination showed normal range of motion in the right hip and right knee, but tenderness to palpation in the right femur area. The initial roentgenogram is shown in Fig 8, and the arrows point to three zones of sclerosing activity. Fig 9 shows the periosteal reaction on the medial aspect of the femur three weeks after stopping the patient's activity (note ar-

row). Fig 10 shows the femur three months after the onset of symptoms.

Case 8: This patient was not a jogger; he had jumped off a 9-ft fence approximately 24 hours before examination. This case is included to emphasize the difference between stress and acute fractures, which possibly cannot be seen on the initial examination. The patient was complaining of severe pain in his heels 24 hours after his injury; the physical examination showed tenderness about the os calcis, but the roentgenogram showed no abnormality (Fig 11). Considering the patient's symptoms, we thought that he had a fracture which was not visible radiographically, and he was encouraged to stay off his feet and return in three weeks for reevaluation. He then had less pain, but had some swelling and induration around the os calcis, and roentgenograms showed fractures which were healing. These fractures are in the lower area of the os calcis, and not in the upper area between the Achilles tendon and the ankle mortise or the talocalcaneal joint as in the stress fractures (Fig 12).

Treatment: Except for the one femoral fracture that was displaced, all of these fractures were treated with initial immobilization with an Ace bandage and decreased physical activity. It was necessary to hospitalize the patient with the femoral fracture displaced in the subtrochanteric area. I put him in traction, and later in a body spica cast. Unfortunately, he started ambulating too soon after the cast was removed, against medical advice, and eventually it was necessary to do a Jewett nailing in order to hold the distal and proximal fragments together and in alignment.

Generally, fractures of the os calcis, fibula and tibia of this nature are best handled by non-weight bearing or partial weight bearing on crutches, using an Ace bandage as an adjunct to decrease the amount of swelling; but it must be emphasized that in cases of femoral neck stress fractures it is necessary to permit non-weight bearing only until the fracture is solidly healed.

Fig 4.

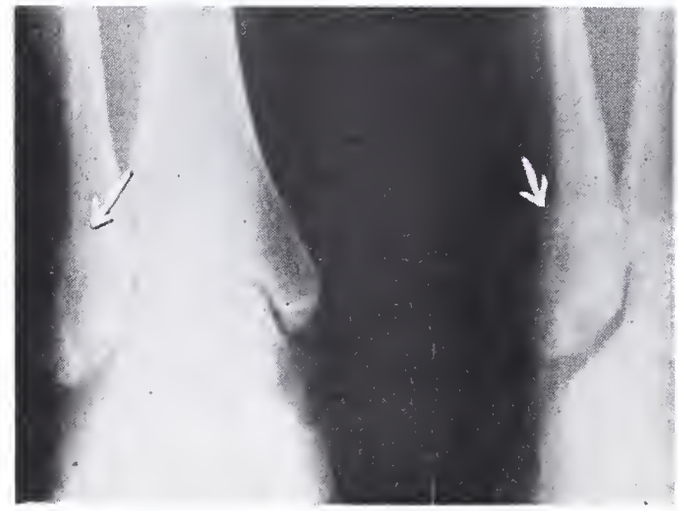
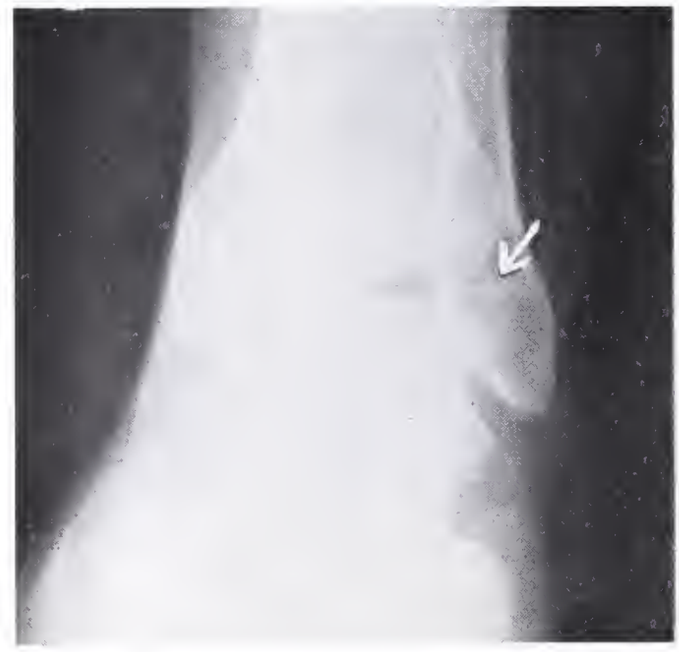


Fig 5.

Fig 6.



REFERENCES

1. Asal D: Uberlastungsschaden am knochensystem bei sol daten. Arch f Klin Chir 186:511-522, 1936.

Fig 9.

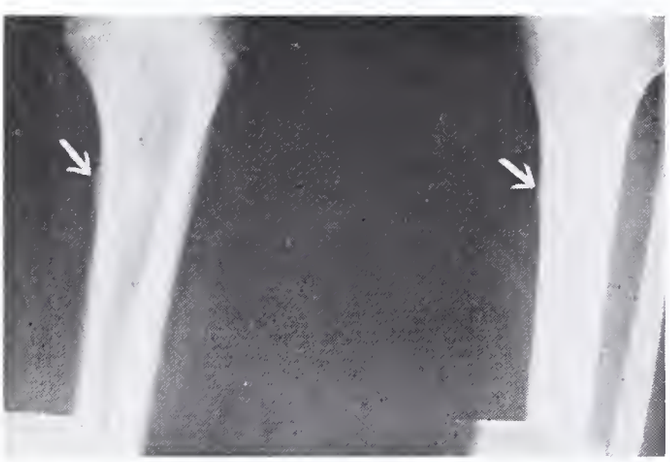


Fig 7.

Fig 8.

2. Bernstein A, Stone JR: March fracture, report of 307 cases and new methods of treatment. J Bone Joint Surg 26:743-750, 1944.

3. Hullinger CW: Insufficiency fracture of the calcaneus, similar to march fracture of the metatarsal. J Bone Joint Surg 26:751-757, 1944.

4. Blickenstaff LD, Morris JM: Fatigue fracture of the femoral neck. J Bone Joint Surg 48:1031-1047, 1966.

5. Branch HE: March fractures of the femur. J Bone Joint Surg 26:387-391, 1944.

6. Cooper K: Aerobics. New York, Bantam Books, 1968.

7. Darby RE: Stress fractures of the os calcis. JAMA 200: 1183-1184, 1967.

8. Devas MB: Stress fracture in children. J Bone Joint Surg 45:528-541, 1963.

9. Devas MB: Stress fractures of the femoral neck. J Bone Joint Surg 47:728-738, 1965.

10. Dorland's Illustrated Medical Dictionary, ed 24. Philadelphia, W B Saunders, 1965.

11. Ernst J: Stress fracture of the neck of the femur. J Trauma 4:71-83, 1964.

12. Gilbert RS, Johnson HA: Stress fractures in military recruits—a review of twelve years' experience. Milit Med 131:716-721, 1966.

13. Hirsch C, Frankel VH: Analysis of forces producing fractures of proximal end of the femur. J Bone Joint Surg 42B:633-640, 1960.

14. Johnson LC, Stradford HT, Geis RW, et al: Histogenesis of stress fractures (abstract). J Bone Joint Surg 45A:1542, 1963.

15. Kroening PM, Shelton ML: Stress fractures. Amer J Roentgen 89:1281-1286, 1963.

16. Leavitt DG, Woodward HW: March fractures, statistical study of 47 patients. J Bone Joint Surg 26:733-742, 1944.

17. Levin DC, Blazina ME, Levine E: Fatigue fractures of the shaft of the femur; simulation of malignant tumor. Radiology 89:883-885, 1967.

18. Mann TP: Fatigue fracture of the tibia. 3 cases at naval training establishment. Lancet 2:8-10, 1945.

19. Morris JM, Blickenstaff LD: Fatigue Fractures—A Clinical Study. Springfield, Ill, Charles C Thomas, 1967.

20. Provost RA, Morris JM: Fatigue fracture of the femoral shaft. J Bone Joint Surg 51:487-498, 1969.

21. North KA: Multiple stress fractures simulating osteomalacia. Amer J Roentgen 97:672-675, 1966.

22. Roberts SM, Vogt EC: Pseudofracture of tibia. J Bone Joint Surg 21:891-901, 1939.

23. Wolfe HRI, Robertson MJ: Fatigue fractures of femur and tibia. Lancet 2:11-13, 1945.

Dr. Graham, 812 S Central Expressway, Richardson, Tex 75080.

Fig 10.

Fig 11.

Fig 12.

Menrium® treats the menopausal symptoms that bother him most.

ROCHE
Roche
LABORATORIES
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

His wife has a lot of different menopausal symptoms, but only a few really irritate *him*. Her hot flashes, her vertigo, her palpitations—that's *her* problem. What really bothers him is her nervousness, her irritability and her excessive anxiety, often expressed by endless "book-shuffling, chain-smoking, reading-lamp" insomnia!

Menrium takes care of hot flashes, vertigo, palpitations in most menopausal women. Menrium provides the well-known antianxiety action of chlordiazepoxide (Librium®) and water-soluble esterified estrogens. It therefore relieves more symptoms than either component separately. It takes care of the vasomotor symptoms as well as the emotional symptoms. This means the symptoms that bother his wife most. And the symptoms that irritate him most.

So, to help them both get through *her* menopause, remember Menrium.

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Management of manifestations generally associated with the menopausal syndrome—anxiety and tension, vasomotor complaints and hormonal deficiency states.

Contraindications: Women with cancer of breast or genitalia, except inoperable cases, and those with known hypersensitivity to chlordiazepoxide and/or esterified estrogens.

Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. As with all CNS-acting drugs, caution patients against hazardous occupations requiring complete mental alertness (*e.g.*, operating machinery, driving). Exclude other possible causes of menopausal syndrome manifestations, such as pregnancy. Though physical and psychological dependence have rarely been reported on recommended doses, use caution in administering to addiction-prone individuals or those who might increase dosage; withdrawal symptoms (including convulsions) similar to those seen with barbiturates have been reported following discontinuance of chlordiazepoxide HCl. Potential benefits of use in pregnancy, lactation or women of childbearing age should be weighed against possible hazards to mother and child. Clinical data inadequate on safety in pregnancy.

Precautions: In elderly and debilitated patients, limit dosage to smallest effective amount of chlordiazepoxide (initially 10 mg or less per day) to preclude ataxia or oversedation; increase gradually as needed and tolerated. Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider individual pharmacologic effects—particularly in use of potentiating drugs such as MAO inhibitors and phenothiazines. Observe usual precautions in patients with impaired renal or hepatic function. Paradoxical reactions to chlordiazepoxide (*e.g.*, excitement, stimulation and acute rage) have been reported in psychiatric patients. Employ usual precautions in the treatment of anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation very rarely reported in patients receiving Librium® (chlordiazepoxide) and oral anticoagulants.

Adverse Reactions: Untoward effects seen with either compound alone may occur with Menrium. With chlordiazepoxide, drowsiness, ataxia and confusion reported in some patients, particularly in the elderly and debilitated; while usually avoided by proper dosage adjustment, these are occasionally observed at lower dosage ranges. Also reported have been a few instances of syncope; isolated occurrences of skin eruptions, edema, minor menstrual irregularities, nausea and constipation, extrapyramidal symptoms, increased and decreased libido, and occasional reports of blood dyscrasias, including agranulocytosis, jaundice and hepatic dysfunction. Periodic blood counts and liver function tests advisable during protracted treatment. Changes in EEG patterns (low-voltage fast activity) observed during and after chlordiazepoxide treatment.

With estrogens, headache, nausea and vomiting, anorexia, gastrointestinal discomfort, dysuria and urinary frequency, jitteriness, breast engorgement, formation of breast cysts, skin rashes and pruritus occasionally seen. Administration may also be associated with uterine bleeding and/or followed by withdrawal bleeding.

Usual Dosage: One tablet t.i.d. for 21 days, followed by one-week rest periods.

Menrium® T.I.D.

5 mg chlordiazepoxide	5-2	0.2 mg water-soluble esterified estrogens
5 mg chlordiazepoxide	5-4	0.4 mg water-soluble esterified estrogens
10 mg chlordiazepoxide	10-4	0.4 mg water-soluble esterified estrogens

Ultrastructural Changes in Fallopian Tube Epithelium at Term Gestation and During the Postpartum Period

Specimens of proximal and distal portions of the fallopian tubes of women at term pregnancy and postpartum were examined with light and electron microscopy. At terminal gestation, the fallopian tube epithelium had the characteristics of cytologic inactivity. The postpartum specimens varied considerably from this appearance. Their general configuration was one of proliferation and cellular activity as judged by an increase in cellular volume, proliferation of granular endoplasmic reticulum, and higher mitochondrial prevalence. Alterations were noted in both ciliated and secretory epithelial cell types, with the greater degree of change occurring in the secretory cell type. Whatever stimulated the cytoplasmic transition acted initially and primarily on the proximal cells during the early postpartum period.

BOTH THE FALLOPIAN tube and the uterus undergo cyclic change in mature women. In the uterus, these are classically described as proliferative, secretory and menstrual phases. If fertilization occurs and implantation is successful, these changes are interrupted by those necessary to support the growth of the embryo. The fallopian tube also varies in its appearance under the cyclic influence of the female hormones. Although early investigators described changes similar to those seen in the uterus, even to the point of tubal menstruation,[1] more recent studies have shown this concept to be invalid. However, cyclic changes of a different nature do occur in the fallopian tube and have been reported.[1-4] Still other changes occur when pregnancy ensues.

Alteration in the female hormones occurs between the period of terminal gestation and 72 hours postpartum. These hormonal changes are reflected in the fallopian tube epithelium at both the light and electron microscope levels. This article illustrates these data.

Materials and Methods: Specimens from the proximal and distal segments of the fallopian tube were obtained from four pregnant women at the time of cesarean section. Similar specimens were obtained from four women 72 hours postpartum. The specimens were prepared for light microscopy by fixation with a 10% formalin solution and sections were stained with hematoxylin and eosin. Specimens for electron microscopy were fixed at 4 C in a 1.33% osmium tetroxide solution buffered to a pH of 7.4 with s-collidine for one hour. Sucrose (0.55 gm/10 cc) and 1% calcium chloride (0.2 cc/10 cc) also were added to the fixative. Fixation was followed by dehydration using increasing concentrations of cold ethanol. The tissue was allowed to come to room temperature and further dehydration was accomplished with 100% propylene oxide. The tissue was then embedded in Araldite. One-micron sections of the embedded tissue were stained with paragon multiple stain and the appropriate areas identified by light microscopy. Thin sections were obtained using an LKB Ultrotome III and post-stained with uranyl acetate and lead citrate. Evaluation was accomplished with the Philips EM 200 electron microscope.

Observations: Two cell types in the fallopian tube were noted, ciliated and secretory (non-ciliated). These varied in the distal and proximal segments as well as in the pregnant and postpartum women.

Secretory Cells: 1. Distal Secretory Cell, Term Pregnancy: Nuclei were large and irregular (Fig 1). Nucleoli were prominent and sometimes multiple. Agranular endoplasmic reticulum was rarely demonstrable. Granular endoplasmic reticulum, with a slight distention of

DOUGLAS V. HORBELT, BA

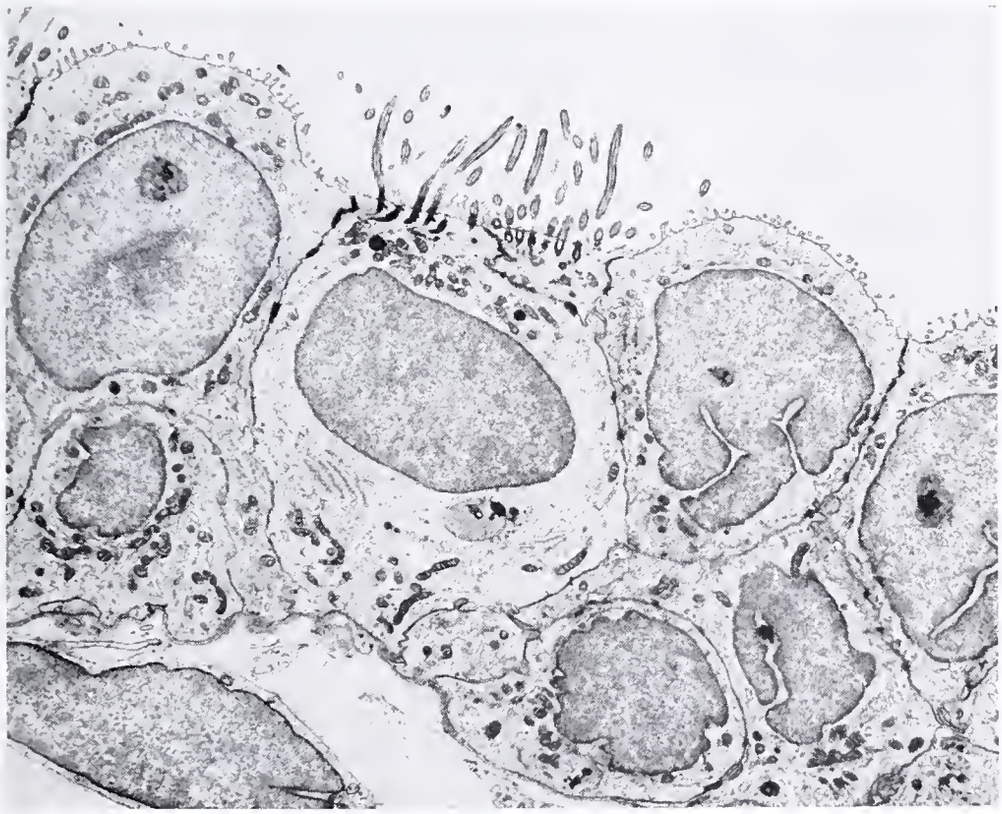


Fig 1. The term pregnancy secretory cells are pictured here. Note the irregular nuclear shape and high frequency of nucleoli. Desmosomes and tonofilaments are also prevalent. Mitochondria, Golgi and granular endoplasmic reticulum are demonstrable. A ciliated cell is also pictured. X 4,700.

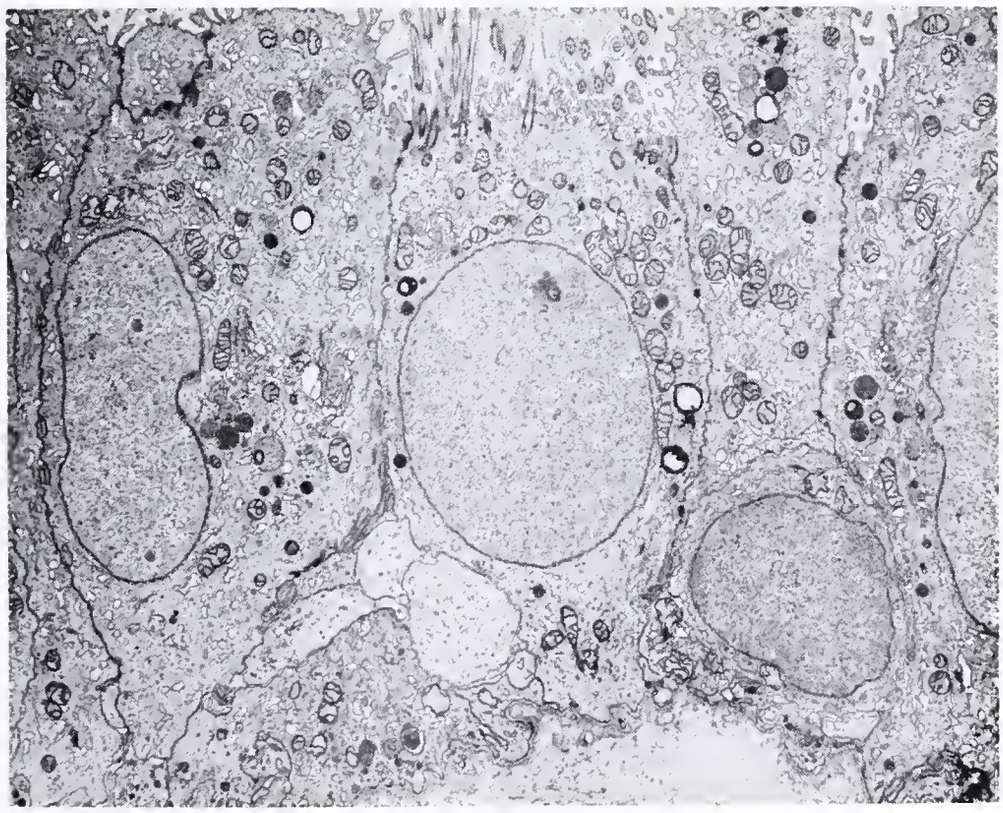


Fig 2. This photomicrograph is of the secretory and ciliated cells during the postpartum period. Both cell types have a large prevalence of organelles. The secretory cells protrude into the lumen, and their nuclei are less irregular than those of term pregnancy. Well developed Golgi and endoplasmic reticulum are present in both the ciliated and secretory cell, but they are more prominent in the secretory cell. X 4,700.

the cisternae, was commonly observed. The mitochondria were spherical to oblong in shape, exhibited few cristae and were not numerous. Golgi were not prominent and polyribosomes were infrequent. Multivesicular bodies were seldom observed. Primary lysosomes, giant lysosomes (as described by Cavasos and Lucas),[11] lipid droplets and microbodies were not seen in this cell type. Well developed desmosomes and numerous tonofilaments were present. The microvilli of the luminal border were sparse and poorly developed. The apices of these cells did not protrude into the lumen significantly.

2. Proximal Secretory Cell, Term Pregnancy: The majority of these cells were similar to the distal secretory cells of term pregnancy. Their apices protruded more into the lumen and there were fewer desmosomes and tonofilaments. Some cells did exhibit an intensification in cytoplasmic organization with a relative increase in numbers and complexity of organelle composition.

3. Distal Secretory Cell, Postpartum: Compared to the specimens from the pregnant period, the postpartum specimens showed the nuclei to be much more regular in configuration. Fewer of these nuclei possessed nucleoli which were comparatively smaller. Granular endoplasmic reticulum was more plentiful and often more distended. There was an increase in number and size of mitochondria and more cristae were noted in the individual mitochondrion. Golgi were more common and more prominent in appearance. Polyribosomes were present in greater numbers. Occasional cells resembling the secretory cells of luteal endometrium were seen. A few cells showed clusters of giant lysosomes, and others contained lipid droplets. There was a decrease in the prominence of desmosomes and numbers of tonofilaments. The microvilli were well developed and the apical portions of cells often were seen to protrude into the lumen. There was an increase in overall cellular volume. Some cells had the same structure as their counterparts during the pregnant period.

4. Proximal Secretory Cells, Postpartum: The changes described in the distal secretory cells were seen also in the proximal secretory cells (Figs 2 and 3). Although occasionally there were only subtle differences between the distal and proximal secretory cells, the changes usually were much more prominent at the proximal end.

Ciliated Cells: 1. Distal and Proximal Ciliated Cell, Term Pregnancy: Proximal (Fig 4) and distal ciliated cells appeared to be identical and will be discussed together. Their nuclei were large, spherical and regular in configuration. Nucleoli were eccentric and infrequent. Most cellular inclusions and organelles occurred in the supranuclear region. Granular endoplasmic reticulum was sparse and slightly distended, and agranular endoplasmic reticulum was virtually absent. The mitochondria were oblong to elongated in shape with prominent cristae. Rarely were mitochondria observed out of the supranuclear region. The few Golgi observed had a large number of vesicles associated with them. Polyribosomes occurred irregularly. A very few cells showed multivesicular bodies. Lipid droplets were extremely sparse. Primary lysosomes, giant lysosomes and microbodies were not observed. Desmosomes and tonofilaments were prominent in these cells. Microvilli and cilia were present on the apical surface of these cells. The cilia exhibited the classical "9 + 2" morphology with basal corpuscles and rootlet fibers in the cytoplasm. The microvilli were well developed and extended approximately one-third the distance of the cilia. The basal ends of these cells were noticeably deficient in cellular organelles. These cells possessed the classical characteristics of a ciliated epithelial cell.

2. Distal Ciliated Cells, Postpartum: These cells were essentially identical in configuration to those seen in the pregnant period. Only a slight increase in cellular volume was noted.

3. Proximal Ciliated Cells, Postpartum: A few changes from the pregnant period were observed in the proximal ciliated cells of the postpartum period (Fig 2). There was an increase in nuclear size. The granular endoplasmic reticulum was more distended and more frequent, occurring even in the basal portion of the cell. Polyribosomes were increased. Golgi were more frequent, better developed and exhibited some distention. A few multivesicular bodies were observed. More numerous lipid droplets were present and appeared larger. The number of desmosomes and tonofilaments decreased greatly. There was an increase in cellular volume.

Discussion and Results: Classically, fallopian tube epithelia are divided into three categories: (1) the ciliated cell, (2) the nonciliated cell or secretory cell, and (3) the peg cell or intercalary cell described by Novak and Everett.[5] The ciliated cell is cuboidal with a spherical nucleus. These cells have cilia and microvilli and appear with less dense cytoplasm in light and electron microscopic preparations. Nonciliated or secretory cells stain darker and are more columnar than cuboidal in nature. They have a

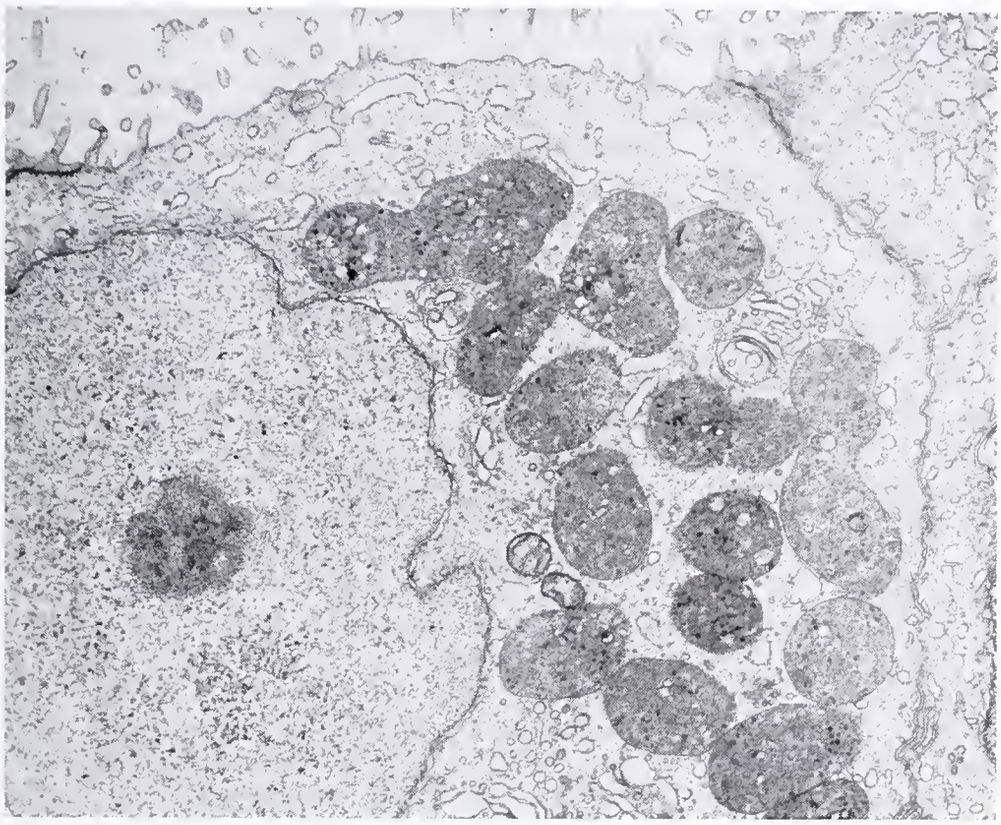


Fig 3. This is a photomicrograph of a secretory cell with giant autophagic lysosomes similar to those described by Cavasos.[11] Note the cytoplasmic inclusions and profiles within the limiting membrane. The luminal border with the microvilli of the secretory cell is pictured also. X 13,630.

Fig 4. This photomicrograph exhibits a ciliated cell characteristic of the term pregnancy period. The organelles occur almost exclusively in the supranuclear region. The cilia are of the classical "9 + 2" configuration. These cells are in contrast to the ciliated cells of the postpartum period (Fig 2). X 6,580.

large, oblong nucleus. These cells are readily distinguishable from the peg cell or "Stiftchenzellen."[6] The peg cell is darkly stained by hematoxylin and eosin. The narrow peg cells usually are wider on the apical end than on the basal end. Novak and Everett[5] demonstrated transitional stages from a secretory cell to a peg cell; thus the latter is not another functional cell type. The current concept is that the peg cell is an obsolete secretory cell which is being degraded and discarded.

Many investigators[5,7] note the relative lack of mitotic figures which occur in the tubal epithelium. One theory is that ciliated cells lose their cilia in pregnancy[1] and become secretory cells. Others attribute tubal epithelial regeneration to a cell which Snyder[8] saw many years ago. Pauerstein and Woodruff[9] called it an "indifferent" cell or a reserve cell; it is small and lies close to the basement membrane. They found that its nucleus contains much more genetic material than the regular diploid cell. They labeled the genetic material in these cells, and later found traces of the radioactive labeling material in the epithelia. From this, Pauerstein and Woodruff[6,9] conclude that this should be classified as the fourth cell type.

The electron microscope revealed two distinctly separate categories of epithelial cells. The ciliated cell type had large and spherical nuclei.[2,6] Mitochondria occurred in the supranuclear region of the cell in association with the basal corpuscles and rootlets of the cilia. Cellular organelles were predominantly in the supranuclear region. Desmosomes, tonofilaments and granular endoplasmic reticulum were demonstrable.[1,6] Multivesicular bodies and lipid droplets were seldom seen. Hashimoto and others[1] reported the occurrence of microbodies or peroxisomes in the cytoplasm of the epithelial cells of the fallopian tube. No such structure was observed in this investigation in either the ciliated or secretory cells. Joel[10] reported small amounts of glycogen in the ciliated cells, the greatest amount seen immediately before the beginning of the secretory phase of the menstrual cycle. This investigation did not reveal any concrete indication of glycogen nor was our procedure designed to do so. In some ciliated cells of the postpartum proximal fallopian tube, the cytoplasm was lighter in areas which made it appear as though a substance was dissolved during preparation. The same leaching pattern appeared in collidine-osmium-fixed hepatocytes and was associated with glycogen deposition.

The other cell type demonstrable with electron microscopy was the secretory cell. This cell had a large, irregularly shaped nucleus.[1] Cytoplasmic organelles were randomly distributed throughout the cytoplasm. Spherical to oblong shaped mitochondria were few in number. Granular endoplasmic reticulum and polyribosomes were present.[2] The Golgi seen in these cells were of classical configuration and associated with many vesicles.[1] Desmosomes and tonofilaments were prominent in these cells.[1,2] There were more secretory cells in the proximal end of the tube with increasing numbers of ciliated cells toward the distal end until at the distal end the ratio was reversed.[1]

Clyman,[2] Hashimoto and associates,[1] and Shimoyama[3,4] described many ultrastructural changes in the cells of the fallopian tubes during the menstrual cycle. All of these authors recognized changes which occurred in the secretory cells, and Clyman further maintained that ultrastructural changes also occurred in the ciliated cells. He identified such changes as an increase in the number of mitochondria and the appearance of a few secretory granules in the cytoplasm.[2] Hashimoto and associates and Shimoyama[1,3,4] did not see any ultrastructural alterations of the ciliated cells during the menstrual cycle. During the transition from term pregnancy, we observed ultrastructural changes in the ciliated as well as the secretory cells.

According to Lehto[7] and others,[6] the size of the cells of the epithelium of the pregnant period was decreased by approximately 50%. In this study, postpartum cells were larger in cytoplasmic and nuclear volume. Their granular endoplasmic reticulum increased in occurrence and distention, as did the configuration and number of the Golgi. The number of polyribosomes was increased. An increase in the number of mitochondria, an increase in the number of cristae and an elongation of the mitochondria themselves were observed. Lipid droplets and giant autophagic lysosomes were first demonstrable during this period. Desmosomes and tonofilaments were less frequently seen. The apical portion of the cells protruded slightly into the lumen. This protrusion is similar to the cupola[6] which is visible with light microscopy on the 15th day of the menstrual cycle. The secretory cells showed more changes than the ciliated cells, and these changes were more prominent in cells of the proximal end than the distal end.

Conclusions: The ultrastructure of the fallopian tube epithelium in the pregnant and postpartum periods was examined. The conditions observed led us to the following conclusions:

The ultrastructure of the secretory cells of

the pregnant period was characteristic of a "resting" cell. There was only a small amount of granular endoplasmic reticulum, only rare secretory granules, and few polyribosomes. The Golgi present had no distention of the lamellar membrane stacks. Small spherical mitochondria with few cristae were sparsely distributed, but desmosomes and tonofilaments were frequent. The size of the cell was smaller than was reported for tubal epithelium in the nonpregnant period.

During the postpartum period, the nuclei were less irregular and had fewer nucleoli. More activity was seen in the increased number of Golgi and an increase in the polyribosomes in the cytoplasm. Ribosomes are believed to be synthesized in the nucleus (nucleolus) and expelled into the cytoplasm in order to function in protein synthesis. Granular endoplasmic reticular proliferation and distention is considered indicative of protein production. The mitochondria showed an increase in number, size and prevalence of cristae; this, too, suggested increased cellular activity. All of these features indicate that the postpartum secretory cell was being converted from the "resting" state to a functional state.

Other observations also supported this concept. For example, cells which actively secrete rarely have a large number of desmosomes or tonofilaments present. In postpartum secretory cells, desmosomes and especially tonofilaments were considerably decreased. A few secretory cells showed multiple giant lysosomes as described by Cavasos and Lucas[11] in endometrial secretory cells. They described three types of giant lysosomes: (1) the giant lysosome of leukophagic origin, (2) the giant lysosome of isocytophagic origin, and (3) the giant lysosome of autophagic origin. They described the autophagic giant lysosome as being supranuclear in position, associated with the nucleus and the Golgi, having a diameter of 4 - 7μ and occurring in groups. The giant lysosomes of the fallopian tube secretory cells corresponded to this description. They also assigned a function to the giant autophagic lysosomes, stating that they occurred in relation to cellular proliferation. They believed that these were produced when some cytoplasmic or nuclear material was damaged or obsolete. Another evidence of increased cellular activity was the increase in cell volume during the postpartum period. All these alterations indicated an increased state of epithelial activity in the postpartum period.

These changes were evident in varying degrees in virtually all secretory cells located at the proximal portion of the fallopian tube. At the distal portion not all secretory cells seemed to be involved. It is suggested that whatever stimulated the secretory cells to resume function after pregnancy, worked initially and primarily on the secretory cells of the proximal portion of the tube. Transition in the distal end was slower. Some cells never were transformed, and these were what we believed to be the β-nonciliated cells that Shimoyama[3] and Hashimoto and others[1] described in the distal end of the fallopian tube.

During the postpartum period, ciliated cells also appeared to be more cytologically active. The transition was to a lesser degree than observed in the secretory cells.

REFERENCES

1. Hashimoto M, Shimoyama T, Kosaka M, et al: Electron microscopic studies on the epithelial cells of human fallopian tube (report II). J Jap Obstet Gynec Soc 11:92-100, 1964.

2. Clyman MJ: Electron microscopy of the human fallopian tube. Fertil Steril 17:281-301, 1966.

3. Shimoyama T: Electron microscope study of the epithelial cells of the fallopian tube mucosa of the mature woman. J Jap Obstet Gynec Soc 15:1237-1246, 1963.

4. Shimoyama T: Electron microscope studies of the epithelial cells of the mucous membrane of the human fallopian tubes, with special reference to the fine structure of the tubal epithelial cells in the fetus, during pregnancy, and in old age. J Jap Obstet Gynec 15:1307-1314, 1963.

5. Novak E, Everett HS: Cyclical and other variations in the tubal epithelium. Amer J Obstet Gynec 16:499-530, 1928.

6. Woodruff JD, Pauerstein CJ: The Fallopian Tube; Structure, Function, Pathology and Management. Baltimore, The Williams and Wilkins Co, 1969.

7. Lehto L: Cytology of the human fallopian tube. Acta Obstet Gynec Scand 42: suppl 4:1-95, 1963.

8. Snyder FF: Changes in the human oviduct during the menstrual cycle and pregnancy. Bull Johns Hopkins Hosp 35:141-146, 1924.

9. Pauerstein CJ, Woodruff JD: The role of the "indifferent" cell of the tubal epithelium. Amer J Obstet Gynec 98:121-125, 1967.

10. Joel K: The glycogen content of the fallopian tubes during the menstrual cycle and during pregnancy. J Obstet Gynaec Brit Emp 46:721-730, 1939.

11. Cavasos F, Lucas FV: Giant lysosomes and their associated structures in the normal human endometrium. Amer J Obstet Gynec 106:434-446, 1970.

12. Bloom W, Fawcett DW: A Textbook of Histology, ed 9. Philadelphia, WB Saunders Co, 1968.

13. Björkman N, Fredricsson B: Ultrastructural features of the human oviduct epithelium. Internat J Fertil 7:259-266, 1962.

14. David A, Czernobilsky B: A comparative histologic study of the uterotubal junction in the rabbit, rhesus monkey and human female. Amer J Obstet Gynec 101:417-421, 1968.

15. Deane HW: Histochemical observations on the ovary and oviduct of the albino rat during the estrous cycle. Amer J Anat 91:363-393, 1952.

16. Dudkiewicz J: Cytomorphology of epithelial cells of fallopian tubes obtained by aspiration from operative specimens. Amer J Obstet Gynec 102:82-90, 1968.

17. Joel K: The lipoid content of the fallopian tubes during menstrual cycle and during pregnancy. J Obstet Gynaec Brit Emp 46:731-735, 1939.

18. Rhodin JAG: An Atlas of Ultrastructure. Philadelphia, WB Saunders Co, 1963.

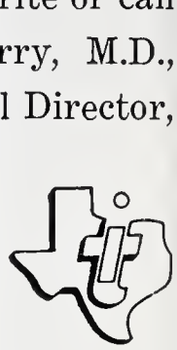
Mr. Horbelt, Moody Foundation-American Cancer Society Electron Microscopy Laboratory, Departments of Obstetrics and Gynecology and Pathology, The University of Texas Medical Branch, Galveston, Tex 77550.

TI Needs an Occupational Physician for the Houston Operation

We are seeking a physician who is a professional in the field of occupational medicine and a capable administrator. We prefer a physician with a background in, or some knowledge of industrial hygiene and bio-mechanics in the electronics industry.

You will be THE PHYSICIAN at our new Houston facility. It offers you an excellent opportunity for growth. There is a wide variety of problems to be solved such as: Human factors engineering, toxic metals and vapors, epidemiology of occupational disease, Workmen's Compensation, etc. You will be responsible for managing a modern and effective program for our Houston employees under the general direction of the Corporate Medical Director.

Texas Instruments is a world wide corporation engaged in the research, development, manufacture and sale of electronic devices and related materials and services with headquarters in Dallas, Texas. If you are interested, please write or call collect E. L. Berry, M.D., Corporate Medical Director, (214) 238-3441, P. O. Box 5474, Dallas, Texas 75222



An Equal Opportunity Employer

TEXAS INSTRUMENTS

INCORPORATED

Drip stopped, Congestion cleared

For upper respiratory allergies and infections, up to 12 hours clear breathing on one tablet. Dimetapp Extentabs® does an outstanding job of helping to clear up the stuffiness, drip and congestion of colds and upper respiratory allergies and infections. Each Extentab keeps working up to 12 hours. And for most patients drowsiness or overstimulation is unlikely.

INDICATIONS: Dimetapp is indicated for symptomatic relief of the allergic manifestations of respiratory illnesses, such as the common cold and bronchial asthma, seasonal allergies, rhinitis, conjunctivitis, and otitis. CONTRAINDICATIONS: Hypersensitivity to antihistamines. Not recommended for use during pregnancy. PRECAUTIONS: Until patient's response has been determined, he should be cautioned against engaging in operations requiring alertness. Administer with care to patients with cardiac or peripheral vascular diseases or hypertension. SIDE EFFECTS: Hypersensitivity reactions including skin rashes, urticaria, hypotension and thrombocytopenia, have been reported on rare occasions. Drowsiness, lassitude, nausea, giddiness, dryness of the mouth, mydriasis, increased irritability or excitement may be encountered. DOSAGE: 1 Extentab morning and evening. SUPPLIED: Bottles of 100 and 500.

A·H·ROBINS

A. H. Robins Company
Richmond, Va. 23220

Dimetapp® Extentabs

Dimetane® (brompheniramine maleate), 12 mg ; phenylephrine HCl, 15 mg.; phenylpropanolamine HCl, 15 mg.

Mylanta®
24 million hours a day.

Through the day, every day,
ulcer patients take
one million doses of Mylanta
for relief of ulcer pain.

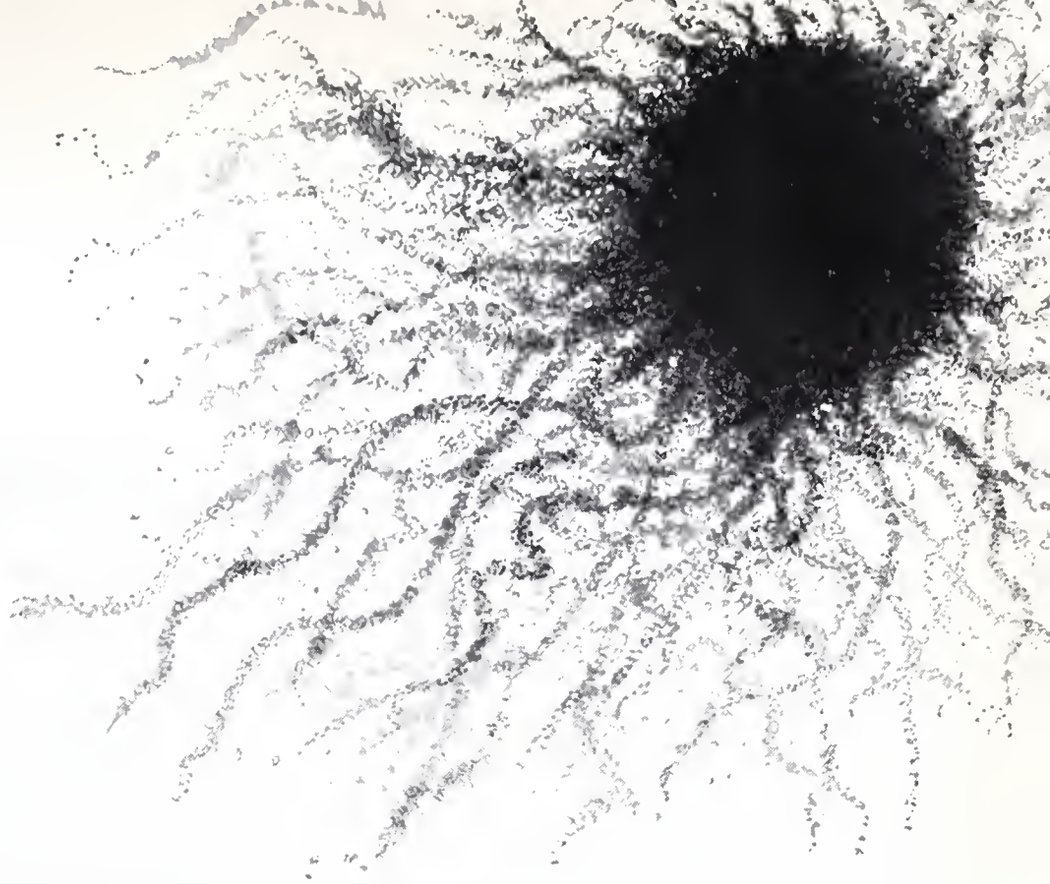
Mylanta®
LIQUID/TABLETS

aluminum and magnesium hydroxides plus simethicone

Good taste = patient acceptance
Relieves G.I. gas distress*
Non-constipating

*with the defoaming action of simethicone

Stuart PHARMACEUTICALS Pasadena, Calif. 91109
Division of Atlas Chemical Industries, Inc., Wilmington, Del. 19899



Corticosteroid therapy week after week.

then antibiotic therapy last week.

and monilial overgrowth this week.

For many patients on long-term corticosteroid therapy, the addition of oral antibiotic therapy may trigger monilial overgrowth in the intestine. When you anticipate such a problem, take action with DECLOSTATIN 300. It combines the broad-spectrum potency of demethylchlortetracycline with the antifungal effectiveness of nystatin—it helps avoid monilial take-over. Experience has shown DECLOSTATIN to be highly useful for many women patients; individual culture studies will show exactly where this usefulness may best be applied.

it doesn't let monilia begin where bacteria end.

Declostatin® 300

Demethylchlortetracycline HCl 300 mg and Nystatin 500,000 units Capsule-Shaped Tablets Lederle

Effectiveness: Because its antibacterial component is DECLOMYCIN® Demethylchlortetracycline, DECLOSTATIN should be equally or more effective therapeutically than other tetracyclines in infections caused by tetracycline-sensitive organisms. The antifungal component, nystatin, protects against superinfection by antibiotic-resistant fungal overgrowth (particularly monilia) in the intestinal tract.

Contraindication: History of hypersensitivity to demethylchlortetracycline or nystatin.

Warning: In renal impairment, usual doses may lead to excessive accumulation and liver toxicity. Under such conditions, lower than usual doses are indicated and, if therapy is prolonged, serum level determinations may be advisable. A photodynamic reaction to natural or artificial sunlight has been observed. Small amounts of drug and short exposure may produce an exaggerated sunburn reaction which may range from erythema to severe skin manifestations. In a smaller proportion, photoallergic reactions have been reported. Patients should avoid direct exposure to sunlight and discontinue drug at the first evidence of skin discomfort. Necessary subsequent courses of treatment with tetracyclines should be carefully observed.

Precautions: Overgrowth of nonsusceptible organisms may occur. Constant observation is essential. If new infections appear, appropriate measures should be taken. In infants, increased intracranial pressure with bulging fontanels has been observed. All signs and symptoms have disappeared rapidly upon cessation of treatment.

Side Effects: Gastrointestinal system—anorexia, nausea, vomiting, diarrhea, stomatitis, glossitis, enterocolitis, pruritus ani. Skin—maculopapular and erythematous rashes; a rare case of exfoliative dermatitis has been reported. Photosensitivity; onycholysis and discoloration of the nails (rare). Kidney—rise in BUN, apparently dose-related. Transient, reversible, nephrogenic diabetes insipidus with excessive thirst and polyuria (rare). Hypersensitivity reactions—urticaria, angioneurotic edema, anaphylaxis. Teeth—dental staining (yellow-brown) in children of mothers given this drug during the latter half of pregnancy, and in children given the drug during the neonatal period, infancy and early childhood. Enamel hypoplasia has been seen in a few children. If adverse reaction or idiosyncrasy occurs, discontinue medication and institute appropriate therapy. Demethylchlortetracycline may form a stable calcium complex in any bone-forming tissue with no serious harmful effects reported thus far in humans.

Average Adult Daily Dosage: One tablet b.i.d. Should be given 1 hour before or 2 hours after meals, since absorption is impaired by the concomitant administration of high calcium content drugs, foods and some dairy products. Treatment of streptococcal infections should continue for 10 days, even though symptoms have subsided.

Lederle LEDERLE LABORATORIES, A Division of American Cyanamid Company, Pearl River, New York 448-9

Clinicopathologic

The patient, a 25-year-old chemical plant worker, was hospitalized because of sharp pain in the left lower quadrant of the abdomen. He had spiking fever; numerous blood cultures were negative. He was treated with massive doses of antibiotics. On the 96th hospital day he died after a sudden episode of dyspnea, gallop rhythm, and shock.

PROTOCOL: *Dr. Obenour:* A 25-year-old unmarried white man who worked in a chemical plant was referred to Methodist Hospital Aug 29, 1968, because of sharp, constant, poorly localized pain in the left lower quadrant of the abdomen. It had been present for ten days and was not related to meals, position, or time of day. He had no anorexia, nausea, vomiting, constipation, melena, or diarrhea. The stools were well formed without blood or mucus. Ten days before admission he had dysuria and gross hematuria and was treated with penicillin and streptomycin, but still had urethritis and mild dysuria on admission. Past history was of interest in that he had returned from Vietnam in July 1968.

Physical Examination: His temperature was 101 F, blood pressure 142/70 mm Hg, pulse rate 80/minute, and respirations 13/minute. There were no petechiae. The fundi were normal. A grade 2/6 diastolic murmur was noted in the accessory aortic area and a grade 2/6 systolic murmur was heard in the pulmonic area and the apex. Bowel sounds were normal and there was no organomegaly or rebound tenderness. There was suprapubic, right costovertebral and prostatic tenderness.

Laboratory Data: A roentgenogram of the chest showed a minimal pleural effusion and patchy infiltrate in both lung bases. A flat plate of the abdomen was normal. An intravenous pyelogram was unremarkable except for minimal urine retention in the bladder after voiding. Laboratory studies showed these values: hemoglobin, 12.2 gm/100 ml; hematocrit, 36%; white blood cell count (WBC) 14,300/cu mm with 85% polymorphonuclear leukocytes, 3% lymphocytes, and 8% monocytes; platelets were adequate. Urinalysis showed 5-6 WBCs/HPF, 8-10 RBCs/HPF, light bacteria, and rare granular and WBC casts. Fasting blood glucose was 87 mg/100 ml, and amylase 15 mg/100 ml.

Hospital Course: Ampicillin and kanamycin administration were begun. A thoracentesis yielded small amounts of bloody fluid containing 4,050 RBCs, 329 WBCs (90% monocytes, 10% polymorphonuclear leukocytes), 2.6 gm/100 ml protein, and 126 mg/100 ml sugar. Cultures for acid-fast bacilli, fungi, anaerobes, and aerobes were all negative. Cytologic studies showed no neoplastic cells. A pleural biopsy showed areas of acute inflammation without granulomas or neoplastic cells. Bone marrow cultures for acid-fast bacilli, fungi, and bacteria were all negative. Peripheral smears for malaria were negative. Three urine cultures and six blood cultures were negative.

The patient's abdominal complaints persisted and his fever repeatedly spiked to 102.8 F. The heart murmurs persisted and ampicillin and kanamycin were stopped on the sixth hospital day, at which time laboratory values were: hemoglobin, 10.5 gm/100 ml; hematocrit, 31%; WBC, 21,600/cu mm, with 87% polymorphonuclear leukocytes and 9% lymphocytes; serum glutamic oxaloacetic transaminase (SGOT), 203 units; serum glutamic pyruvic transaminase (SGPT), 61 units; lactic dehydrogenase, 1,240 units; total bilirubin, 0.4 mg/100 ml; blood urea nitrogen (BUN), 22 mg/100 ml; serum creatinine, 1.3 mg/100 ml; serum sodium, 136 mEq/liter; serum potassium, 3.9 mEq/liter; serum chlorides, 96

Conference

William H. Obenour, MD
Henry D. McIntosh, MD
Robert S. MacIntyre, MD
M. Sidney Anderson, MD
Montague Lane, MD, Guest Editor
Harlan J. Spjut, MD, Guest Editor

mEq/liter; and serum carbon dioxide content, 27 mEq/liter. Urinalysis showed 3-8 coarsely granular casts, 10-20 WBCs, 1-3 RBCs, rare WBC casts, pH 5.0, specific gravity 1.013, and no glucose or ketones. Urethral cultures were negative for gram-negative diplococci. Serum antibody titers for histoplasmosis, coccidioidomycosis, and blastomycosis were negative. A test with intermediate strength purified protein derivative (PPD) gave negative results.

On the eighth hospital day penicillin and streptomycin treatment was begun. Painful superficial thrombophlebitis was noted in both legs, and the right lower side of the chest became painful with cough. No rub or hemoptysis was noted. A lung scan was normal. The chest roentgenogram was unchanged and an electrocardiogram (ECG) was normal.

Splinter hemorrhages in the nail beds were noted on the tenth hospital day, but the patient said these had been present for several months. Heparin treatment was begun at that time. Three blood cultures were positive, one for *Gaffkya* and two for anaerobic diphtheroids. The diastolic murmur disappeared.

On the 20th hospital day the patient became afebrile, but his vague abdominal and right chest pain persisted. Laboratory values were: BUN, 14 mg/100 ml; serum sodium, 137 mEq/liter; serum potassium, 5.3 mEq/liter; serum chlorides, 97 mEq/liter; serum carbon dioxide, 25 mEq/liter; SGOT, 62 units; SGPT, 45 units; lactic dehydrogenase, 1,760 units; total bilirubin, 0.3 mg/100 ml; hemoglobin, 10.8 gm/100 ml; hematocrit, 35%; WBC, 6,300/cu mm with 63% polymorphonuclear leukocytes, 20% lymphocytes, 10% monocytes, 1.2% reticulocytes, and platelets, 422,000/cu mm; serum iron, 23 μg/100 ml; total iron binding capacity, 154 μg/100 ml. Urinalysis showed numerous bacteria, 10-12 WBCs, 10-12 RBCs, pH 6, specific gravity 1.028, and 2-3 finely granular casts. All blood and urine cultures since the tenth day were negative. The thrombophlebitis abated and heparin was stopped.

On the 23rd day the patient experienced sudden sharp pain in the left flank; it was aggravated by cough and deep breaths, and lasted for several hours. He remained afebrile and urinalysis showed 4-5 WBCs and 20-25 RBCs. An electroencephalogram (EEG) showed diffuse slowing with no focal abnormalities.

The streptomycin was stopped on the 27th day because of symptoms of headache, vertigo, nausea, and vomiting.

On the 33rd day, while still receiving 48 million units of penicillin daily, the patient's temperature rose to 101 F and he developed a dry nonproductive cough with a red injected throat and mild cervical adenopathy.

On the 34th day his temperature was 103.6 F and his heart rate was 140/minute. He complained of poorly localized abdominal pain. Blood and urine cultures remained negative. Chest roentgenogram showed a large amount of pleural fluid on the right side with a small amount on the left. Persistent infiltrate was noted in the right lower lobe. Laboratory values were: prothrombin time, 16.9 seconds (patient), 11.2 seconds (control); lactic dehydrogenase, 480 units; hemoglobin, 8.7 gm/100 ml; hematocrit, 28%; WBC 7,600/cu mm with 60% polymorphonuclear leukocytes, 33% lymphocytes, and 4% monocytes. The urine was yellow and hazy, and showed values of pH 5, specific gravity 1.024, 40-50 WBCs in clumps, 10-15 RBCs, and light bacteria.

A thoracentesis and pleural biopsy on the 36th day yielded 400 cc of bloody pleural fluid. Analysis showed RBC, 40,000/cu mm; WBC, 3,550/cu mm with 12% monocytes and 88% polymorphonuclear leukocytes; protein, 4.59 gm/100 ml; sugar, 112 mg/100 ml. Cytology was negative. All cultures were negative for acid-fast bacilli, fungi, and bacteria. The pleural

biopsy specimen again showed inflammation without granuloma or tumor.

On the 41st day an exploratory laparotomy, liver biopsy, incidental appendectomy, and ligation of the inferior vena cava were done. No abnormalities were seen at surgery, and no thrombi were found in the inferior vena cava. The liver specimen was histologically normal, and all cultures were negative. The penicillin was stopped.

On the 48th day the systolic murmur increased in intensity and the patient noted increased fatigue. He was mildly dyspneic without cyanosis. His temperature was 101 F; hemoglobin, 8.0 gm/100 ml; hematocrit, 25%; WBC, 7,700/cu mm with 81% polymorphonuclear leukocytes, 16% lymphocytes, platelets adequate, and 1.1% reticulocytes. RBC morphology showed hypochromia, polychromia, and rare target cells. All urine and blood cultures remained negative. A repeat malaria smear was negative as was a stool guaiac test for occult blood. He received 2 units of packed cells and was started on oral iron.

Midicel was started on the 58th day when the patient's temperature rose to 104 F and two urine cultures showed less than 110 colonies of coagulase + *Staphylococcus aureus*. In addition to the persistent grade 2/6 systolic murmur, a grade 2/4 diastolic murmur which varied with respiration was heard at the third intercostal space along the left sternal border. The patient also complained of sharp left flank pain. Urinalysis showed 30-40 WBCs, 10-15 RBCs, and light bacteria.

Midicel was stopped on the 61st day. The patient's temperature remained in the 101 to 102 F range. A repeat EEG remained diffusely abnormal without any focal abnormality. Decubitus chest roentgenograms showed a large amount of free pleural fluid on the right with a persistent parenchymal infiltrate in the right lower lobe. The left lung was clear. An intravenous pyelogram and flat plate of the abdomen were normal.

On the 64th day, muscle and pleural biopsies and thoracentesis were done; 35 cc of yellow blood-tinged fluid was obtained. Analysis showed protein, 4.2 gm/100 ml; sugar, 100 mg/100 ml; RBC, 10,000/cu mm; and WBC, 650/cu mm with 66% monocytes and 33% polymorphonuclear leukocytes. Pleural, skin, and muscle histology was unremarkable.

The right radial pulse was absent on the 68th day. The heart was of normal size and activity. The first heart sound was prominently split. A grade 2/6 systolic ejection murmur was heard at the apex, left sternal border, and the base. A grade 1/6 diastolic murmur was heard at the base and to the right and left of the sternum. No gallops or adventitious sounds were heard. Repeat PPD and fungal skin tests were negative, except for 1 cm of induration for histoplasmosis. The patient remained febrile (102 F).

A left percutaneous renal biopsy on the 70th day showed focal glomerular lesions with some glomeruli being partially hyalinized. No evidence of arteritis was found.

Cardiac catheterization on the 76th day showed normal intracardiac pressures, normal cardiac output, and no shunts. A cineangiogram showed aortic insufficiency (2+). Heart blood cultures were negative. Ampicillin, 2 gm intravenously every six hours, was started. The patient's vague abdominal pain persisted. All blood cultures remained negative for bacteria, brucella, fungi, and acid-fast bacilli. Results of serologic tests for Q fever and fungi were negative. A low-grade fever persisted.

On the 82nd hospital day the diastolic murmur disappeared and the temperature remained below 100 F. The patient remained anemic (hemoglobin 8.4 gm/100 ml) and had lost 40 lb since admission, when he had weighed 160 lb. The chest roentgenogram showed minimal infiltrate with pleural scarring and persistence of a small amount of pleural fluid in the right lung base. The left lung was clear. Since admission, 45 of the 48 blood cultures showed no growth.

On the 95th day the patient experienced a sudden episode of dyspnea, tachycardia with a loud pulmonic second sound, and agitation. An ECG showed incomplete right bundle-branch block and right axis deviation with nonspecific ST-T wave changes and inverted T waves in leads 2, 3, AVF, and V_1-V_3. A chest roentgeno-

gram showed increased infiltrates and fluid in the right lung base. The heart appeared to be slightly enlarged.

The next day the patient's nail beds became cyanotic. Severe dyspnea and a gallop rhythm developed, and the patient went into shock and did not respond to Aramine. At emergency surgery, purulent pericarditis without evidence of pulmonary emboli was found, but the patient died shortly thereafter (Dec 3, 1968).

Discussion: *Dr. McIntosh:* CPCs are among the oldest pedagogical exercises; they are to physicians as boxing and bull fighting are to sports fans. Spectators go to a bull fight or a prize fight hoping to see blood. So it is with a CPC. Spectators go to the CPC hoping to see the discussant outwit the pathologist or the reverse.

There is, however, a difference between a CPC and a boxing match. Since the days of the Civil War, when England's eighth Marquess of Queensberry took an interest in boxing, there have been rules that govern prize fighting. There are no rules governing the CPC; no holds are barred in this sport. The mere mention of a CPC brings out the most deceitful tactics that are used in modern medicine.

The benign terms that introduce the participants of the CPC—"discussant" and "pathologist"—really mean "two professionals engaged in mortal conflict." The term "abstractor" sounds benign enough, but it really has a sinister character; the abstractor frequently omits the pertinent information that is necessary to make the diagnosis. For example, in this case, he didn't point out that the patient's illness started with herpes zoster; having found this bit of information I don't know exactly what to do with it, but nevertheless, this is what an abstractor is supposed to do. The abstractor also introduces vague bits of information which the inexperienced CPC man will consider to be obvious red herrings. The more experienced CPC man looks for such apparently benign bits of information and attaches real significance to them. He certainly doesn't discount them without thinking of what meaning might be hidden in the most innocuous phrases.

The discussant of the CPC can use any technique to get the necessary information. I had a colleague* who was a real pro at CPCmanship; he always seemed to find the proper diagnosis. Before I left my former institution, I asked him how he did it. He said that it was really quite simple: He narrowed the case down to four diagnoses, and then went to the library and tried to check out the pertinent references. When he found one of the conditions for which there were many references missing, he asked who had checked them out. If the pathologist had the reference material, my colleague knew he was in the right ball game. The only problem with that technique is that you need a 360 computer to really work it successfully. There is, however, another useful technique in CPCmanship. During the week before the event, drop "good morning" from your vocabulary and greet your colleagues instead with "Hi, it's a tough CPC this week, huh?" Then you wait and you watch and you listen; if you are really astute, this technique will pay off.

It doesn't take much experience to realize that I don't know the answer to this CPC. Let's get on with the case.

The patient was 25 years old. He was sick a long time—three and one-half months. He was a chemical plant worker—a good CPCer would quickly dismiss that as a red herring. Similarly, he had been in Vietnam; that might be a pink herring, but we will not belabor these points. In the first paragraph there are two additional bits of information: (1) The patient had abdominal pain without altered bowel function, which indicates that there was no pathologic disorder in the intestinal tract; and (2) he had dysuria, hematuria and urethritis. With true ex officio deceit, the experienced CPC abstractor omitted the fact that this man had several episodes of gonococcal urethritis.

In the second paragraph there are pearls in the physical findings: the man had fever, he had a murmur, and he had right costovertebral and prostatic tenderness. (I learned that the man actually had pus coming from the penis.) There are several important negatives here, such as absence of tachycardia (heart rate 80/minute). I could find only four times that

*Dr. Robert E. Whalen, Division of Cardiology, Department of Medicine, Duke University Medical Center, Durham, NC.

the heart rate was above 100/minute until the last two days of life. Similarly, the patient had no tachypnea and there were no petechiae, retinal hemorrhages, or exudates.

The roentgenogram of the chest showed a minimal effusion with a patchy infiltrate. There was slight anemia, leukocytosis, and the urine on microscopic examination had some red cells, white cells, and granular casts. Dr. Suki, can we assume that the presence of white cell casts in the urine means that there is disease in the kidney?

Dr. Wadi Suki: White cell casts are definitely abnormal; we can assume disease in the kidney.

Dr. McIntosh: The patient was started on ampicillin and kanamycin. Dr. Williams, what's the difference in the spectrum of ampicillin and the cost of ampicillin versus penicillin?

Dr. Temple Williams: Ampicillin was the first broad-spectrum antibiotic related to penicillin. It was so overused that its spectrum is now narrower. The primary use in this case would have been to cover the possibility of enterococcus. One could cover that just as well with penicillin and streptomycin for much less money. Ampicillin is a very expensive drug, but it has a broader spectrum than penicillin, which includes enterococcus and some of the gram-negative organisms.

Dr. McIntosh: The patient had a thoracentesis; the fluid was bloody; the protein content was 2.6 gm/100 ml, subsequently 4.6 gm/100 ml. This is an exudate. The fluid was sweet; it had a sugar content of 100 mg/100 ml, therefore there probably were not many "bugs" growing in it. All of the bacteriologic and cytologic studies were negative. The abdominal complaints persisted. The patient continued to have fever; anemia and leukocytosis developed. The SGOT, SGPT, and lactic dehydrogenase levels were elevated; there is no mention of creatine phosphokinase. The elevated enzymes indicate that there were cells, perhaps tumor cells, liver cells, or muscle cells, that were leaking their intracellular "goodies." Something was happening to the cell membranes so that the "goodies"—the enzymes—inside were getting out. There is little evidence to indicate liver involvement, and I am intrigued with the possible suggestion of tumor involvement. Superficial thrombophlebitis with chest pain developed. I believe there is evidence to support the diagnosis of pulmonary embolism; the staff also thought this, and the patient was treated with heparin for ten days during which time his condition improved and then worsened. It was apparent that the staff was uncertain as to the diagnosis. The patient was treated empirically with 48 million units of penicillin per day. The dosage probably reflects the anxiety of the house staff and their uncertainty as to the diagnosis. The less certain one is of the diagnosis, the more penicillin one gives. The roentgenograms at this time showed bilateral involvement.

It is important to realize that during this middle phase of the illness, despite the massive penicillin therapy, the patient was intermittently febrile; his pulse rate did not rise, however. In addition he had a nonproductive cough, mild cervical adenopathy, 40 lb weight loss, and a recurrence of the abdominal pain. Bloody pleural effusion developed, the protein content of which was 4.6 gm/100 ml. The patient became anemic (hemoglobin 8.7 gm/100 ml) but there was no leukocytosis. The anemia was partly iatrogenic; if blood letting for the 48 blood cultures and innumerable other blood studies was not sufficient to explain the anemia, it also could have been a result of the unknown chronic illness. The urine continued to have WBCs in clumps, and 10-15 RBCs. All of the fluids of the body except the cerebrospinal fluid were cultured; biopsies were taken from many organs. None were revealing.

Finally, on the 41st day of his illness, the patient had an exploratory laparotomy. In seeking a diagnosis in cases of fever of unknown origin, exploratory laparotomy usually is not rewarding. About 70% to 80% show no unsuspected disease, and yet this case was such a diagnostic enigma that the procedure was justified. The inferior vena cava was ligated because it was thought that the patient had had recurrent pulmonary emboli. I have not been in the practice of suggesting ligation of the inferior vena cava until it has been demonstrated that

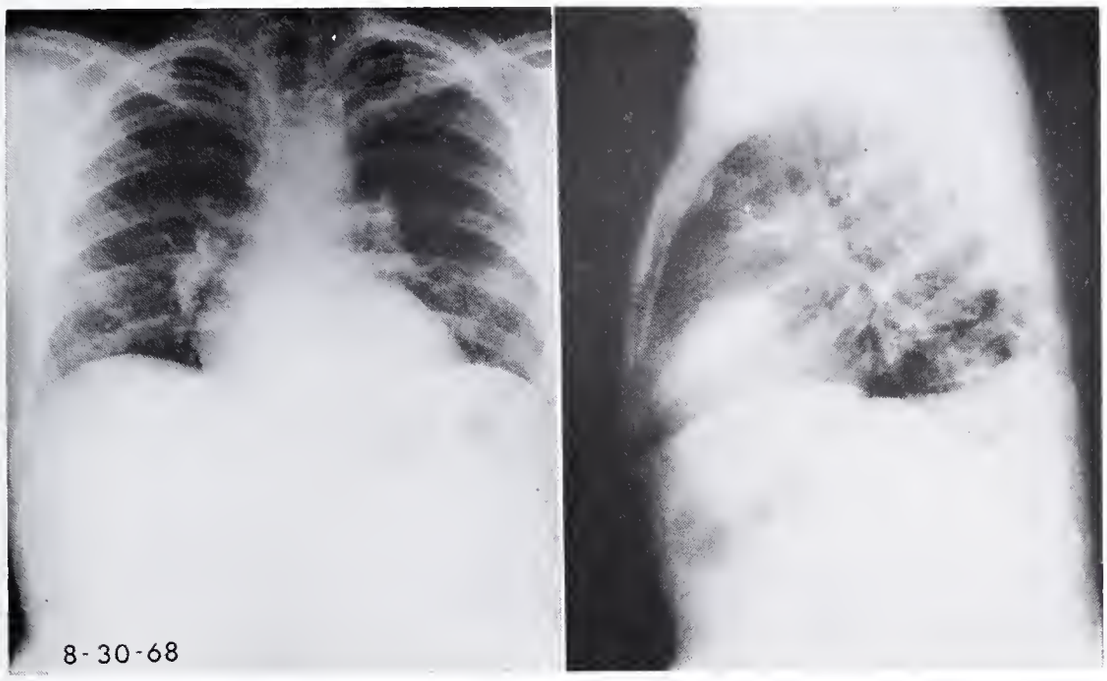


Fig 1. Abnormality of the right lower lobe initially was thought to represent pneumonitis.

Fig 2. Sept 4, 1968. Development of pleural abnormality, left.

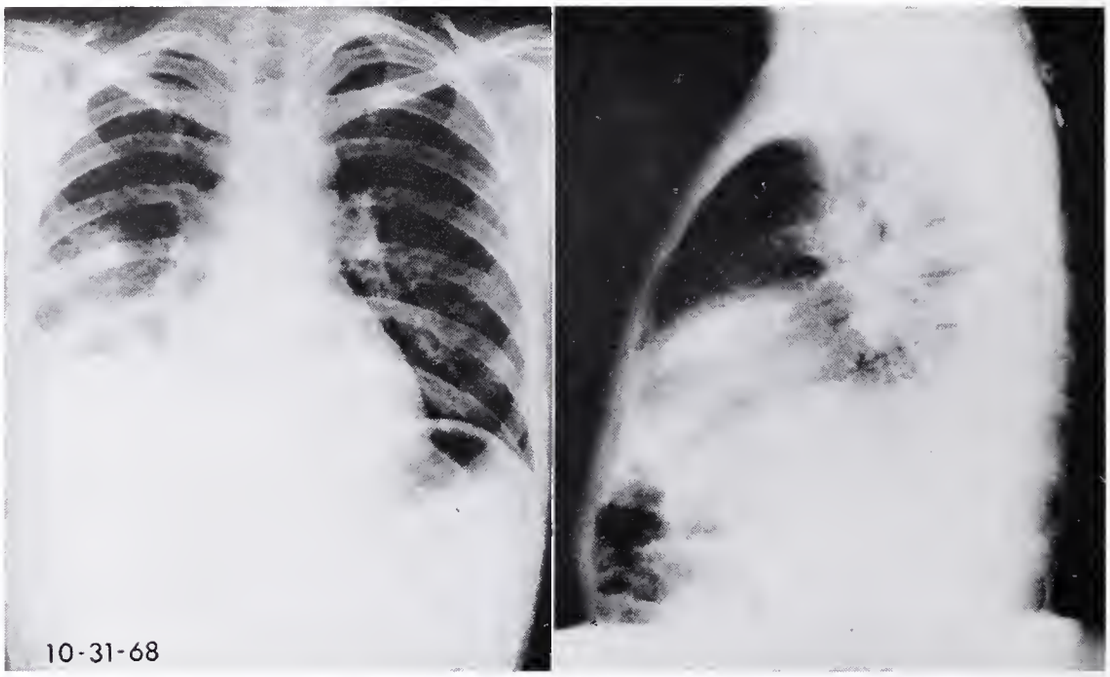


Fig 3. Partial clearing of right sided pleural and parenchymal abnormality (Oct 31, 1968).

the pulmonary emboli continue despite adequate heparin therapy. Also, there was an elective appendectomy. When an exploratory laparotomy is undertaken, there is enough trouble already. I don't think it is wise to look for more potential trouble. Thus, I would not support an elective appendectomy.

The murmur changed in intensity. The aortic insufficiency murmur was present at times, absent at others. This variability simply reflects the change in the patient's hemodynamics by the development of anemia, and so on. Information that the urine culture grew *S aureus* is a red herring, I would think. Results of a cardiac catheterization indicated that the patient did not have failure since the pressures and the cardiac output were all normal. It is of interest that he had an arterial occlusion of his right radial pulse. He then entered a shock-like condition which was thought to result from a massive pulmonary embolus. He was taken to the operating room without diagnostic studies to demonstrate the pulmonary occlusion; no pulmonary embolus was found; he did not survive surgery. In suspecting massive pulmonary emboli, I have been mistaken so frequently that I do not suggest taking the patient to the operating room without demonstrating obstruction by contrast studies. You may have to support the patient on the pump while the studies are being done, but I think that most people have had a similar experience to that in this case. A pericardial biopsy, obtained at the time of this operation, was said to have demonstrated a purulent pericarditis. This is a red herring. The pathology report simply says that there was "acute inflammation of the pericardium." I think that again "my abstractor" was trying to mislead me. Dr. MacIntyre, may we see the x-rays?

Radiological Findings: *Dr. MacIntyre:* This man had 20 different sets of chest films, two intravenous pyelograms, and three examinations of the abdomen. The films of the abdomen showed no significant abnormality. The two pyelograms showed only a small residual in the bladder following voiding and no anatomical abnormality of the collecting systems. The first chest film (Aug 30, 1968) showed an abnormality at the right base posteriorly (Fig 1). This was seen to best advantage on the lateral projection and showed both parenchymal and

Fig 4. Further clearing of abnormality on the right. Prominence of ascending aorta noted for the first time (Nov 27, 1968).

pleural involvement. The differential would be between pneumonitis and pulmonary embolus with infarction. On Sept 4, 1968 (Fig 2, left) an abnormality was seen on the left which appeared to be entirely pleural in character. At this time, and certainly by Oct. 3, 1968 (Fig 2, right) one might be tempted to entertain the possibility of one of the collagen diseases. The clinical picture and the recurrent parenchymal and pleural abnormalities on the right would not sustain such a diagnosis. By Oct 31, 1968 (Fig 3) more pleural fluid had developed on the right. Lateral and decubitus films showed a significant amount of subpulmonary fluid accumulation. Fig 4 (Nov 27, 1968) showed, for the first time, some prominence of the ascending aorta. This examination showed that both the parenchymal and pleural lesions had nearly cleared.

From our standpoint, the patient had episodes of recurrent pleural and parenchymal lesions on the right and a single episode of pleural abnormality on the left with no recognizable parenchymal lesion. The most likely radiographic diagnosis would have to be multiple pulmonary emboli.

Discussion: *Dr. McIntosh:* The other point that we should emphasize, Dr. MacIntyre, is that his heart did not increase in size nor change configuration during the entire illness. We did, however, see the possible change in the aorta. Is it possible that it could have been there all along, and that we demonstrated it by a different projection?

Dr. MacIntyre: I don't believe so. I don't think that it would have been apparent on only one of the numerous roentgenograms.

Dr. McIntosh: Then we have support for the impression that the patient had multiple pulmonary emboli. The problem with this as the sole diagnosis is the character of the fluid. It was an exudate late in the illness. This is not usual with just pulmonary emboli. But I am certain that there will be evidence that a part of this patient's problem was caused by multiple pulmonary emboli. We can't explain the waxing and waning of the course without having something like pulmonary emboli that can get worse and get better.

I believe that the pathologist will find a preexisting deformity of the aortic valve. This could be either a bicuspid aortic valve or mild

Fig 5. Gross photograph of aortic valve showing different sizes of vegetations.

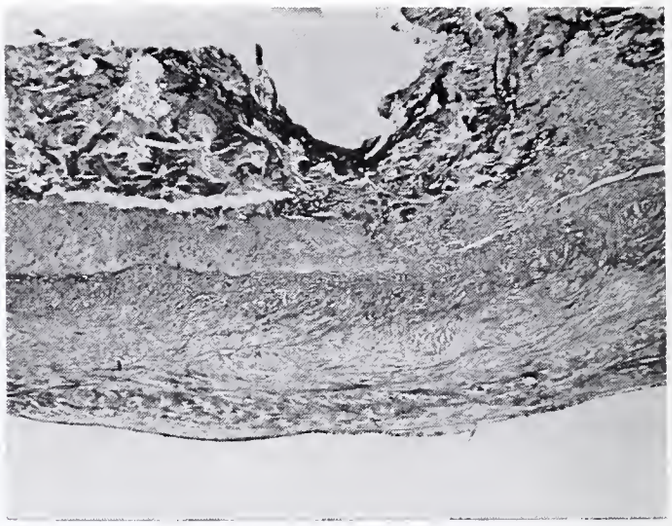


Fig 6. Nonbacterial thrombotic material (top) applied to surface of uninflamed aortic cusp (bottom). Masson trichrome, x 87.

rheumatic involvement, and could explain the diastolic murmur along the left sternal border. I do not think this is on the basis of pulmonary insufficiency associated with pulmonary hypertension due to the pulmonary emboli. I emphasize that as far as the heart is concerned, hemodynamically there was no evidence of failure. We will come back to this point.

The third diagnosis is urethritis, and I am inclined to believe that this is related to his experiences in Vietnam with gonococcus and may not be a part of the primary diagnosis.

Now the final diagnosis: I considered for a long time the possibility of subacute bacterial endocarditis. There are many reasons why this diagnosis is not a good one, but it is about as good as any of the others I could think of. I dismissed it because I felt that the disease must be on the aortic valve, and it would be most unlikely for a man to have subacute bacterial endocarditis that would continue and not lead to valve destruction of such a degree that evidence of failure would develop. The absence of an enlarged spleen is bothersome, but I will not go into that. The second possibility is one of the systemic collagen diseases. Again there are problems with this diagnosis, the most obvious being that many tissue biopsies were obtained and all of them were negative for collagen diseases. Lastly I considered the possibility of tumor. A myxoma of the heart, mesotheliomas, etc, can present as a systemic illness, as can a hypernephroma or a small tumor with metastases. I favor neoplasm as the primary cause of this illness. Where the primary is, I don't know. It is extremely difficult to conceive of metastases causing a pleural effusion of the magnitude seen in this patient without malignant cells being found in the sediment, the pleural biopsy, or seen by the surgeon when he opened the chest.

I do not know what the patient's problem was, but one has to make a diagnosis and I predict that he had a tumor, a small hypernephroma that was missed during laparotomy; he had a few scattered metastases: He was a sick man; the coagulation of his blood was altered and he developed pulmonary emboli. The other findings were incidental. Having said this I am going to sit back and hope to learn what he had and how I missed the proper diagnosis.

Dr. Obenour: Does anyone have any questions?

Dr. Norman Fleisher: Some may recall a patient at the Houston Veterans Administration Hospital a few years ago who was sick with recurrent fever for months on end: There was one element in Dr. McIntosh's patient that is reminiscent of this previous patient, namely the embolus to the radial artery. I believe that Dr. David Rogers described the occurrence of rela-

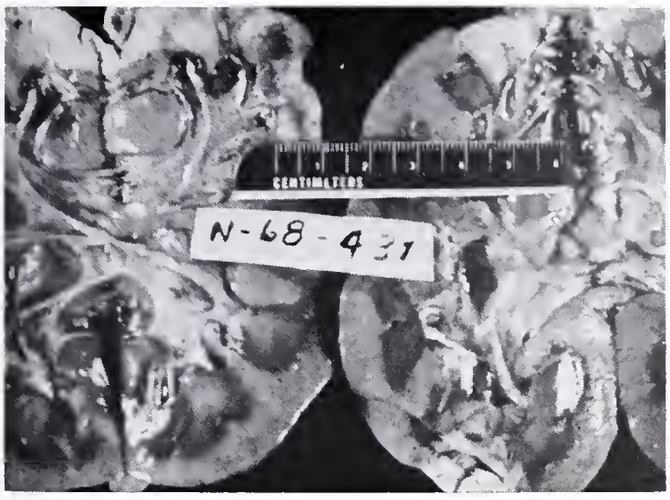


Fig 7. Retracted, wedge-shaped infarcts in kidneys.

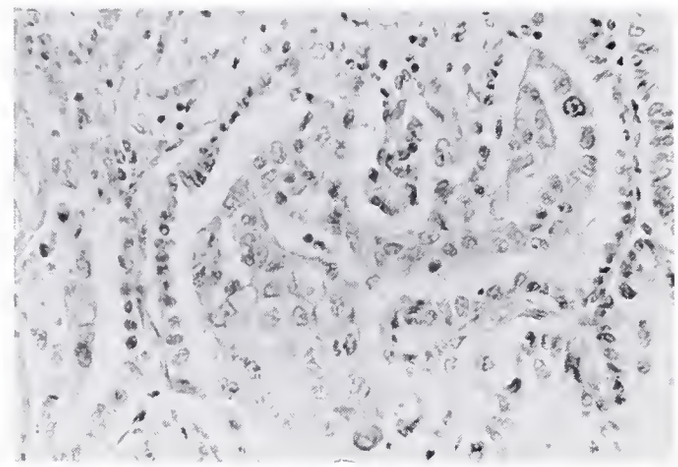


Fig 8. Adenocarcinoma of the lung shows well- and poorly-differentiated areas. Hematoxylin and eosin, x 871.

tively larger arterial vessel occlusions in fungal endocarditis. We struggled for a diagnosis in this patient for months. Finally he died of histoplasmosis endocarditis; this has taught us that whenever we are faced with a patient with endocarditis without obvious bacteria, we consider a nonbacterial type such as fungal endocarditis.

Dr. McIntosh: I do not think this patient had such a process because of the absence of cardiac deterioration. But I intended to emphasize the diagnostic value of a peripheral embolus to a major vessel; that might well have been "where the money was." If one has a peripheral vessel that is occluded in such a patient, remove the clot for diagnostic, if not therapeutic, purposes.

Dr. Suki: I was a junior medical student on the ward at Vanderbilt when a case of fungal endocarditis was diagnosed. The intern noted that a routine positive histoplasma skin test was associated with the positive serological evidence for fixing antibodies in the plasma; the pathology department was then asked to review the slides from an embolectomy and indeed when they looked, thinking about the possibility of the embolus being histoplasma, it was.

Dr. Clarence Alfrey: I disagree with Dr. McIntosh about the patient's anemia, and emphasize that although he had many blood cultures, if his iron level was normal at the onset of his illness and he had iron storage of 1,000 mg in the liver, it would require the removal of 2,000 ml of blood to eliminate his stored iron. He continued to have some iron intake during his illness. We had a serum iron determination of 23 μg/100 ml, a low value which certainly would support iron deficiency, but at the same time his iron binding capacity was 154 μg/100 ml, a very low value which really would suggest that the anemia resulted from a chronic disease. This would go along with any of the diagnoses suggested.

Dr. McIntosh: Your point is well taken. He had mild anemia on admission. The excessive blood letting did not help the problem.

Dr. John Kennedy: As the only surgeon present, Dr. McIntosh, I support your comment that the incidental appendectomy was far from incidental in this man's care; secondly, one would be loathe to suggest to such a patient a pulmonary embolectomy without positive evidence of emboli.

I would like to direct comments now to the diagnosis and compliment you on your entertaining and scholarly discussion. It seems to me that the recurrence of multiple pulmonary emboli and a course otherwise like endocarditis would suggest the possibility of right-sided endocarditis. Perhaps one of today's tragedies, in a patient of this age group, is that one has

to consider the possibility of self-administered drugs, particularly in men returning from Vietnam. I wonder if we can exclude the possibility of granulomatous disease along the major veins, since they were strategically left out of the protocol, and secondly whether you would consider the possibility even in spite of negative blood cultures, of this diagnosis?

Dr. McIntosh: Yes, we did consider such a possibility, but did not discuss it because of the shortage of time. But we dismiss bacterial endocarditis on either the left or the right side for the reason that the man was sick for three and a half months and I thought that the valve would be destroyed and hemodynamic changes result if he had bacterial endocarditis.

Dr. John Sharp: The anemia probably was iatrogenic for a reason other than "blood letting." Penicillin administered in about 15 million units per day is almost universally associated with antibodies which cause hemolytic anemia.

Pathologic Findings: *Dr. Anderson:* At autopsy this man was quite wasted, weighing just more than 100 lb, having had the majority of this profound weight loss during the past three months. Externally, there was evidence of the terminal surgical procedure with a mediastinotomy and some bloody fluid in the pleural spaces. Much of the clinical discussion has revolved around the heart, which weighed 430 gm. A gross photograph of the aortic valve shows, on the ventricular surface of the cusps, several vegetations of different sizes from a few millimeters up to 1 cm in greatest dimension (Fig 5). These vegetations would correspond to the type IV of Rohner, where the vegetations are larger than 3 mm and are multiple. No preexisting deformity to the aortic valve was present, and there were no ulcerations. The other cardiac valves were normal. Microscopically, the vegetations were affixed to a normal valve. The thrombotic material and its base of attachment were devoid of inflammatory cells (Fig 6). As a consequence of these vegetations, several general autopsy findings resulted. A branch of the anterior descending coronary artery was occluded by a recanalized thromboembolus. The consequences of this occlusion were reflected in the myocardium by several areas of gray-white fibrous scarring measuring up to 1.5 cm. Adjacent to the scars, the cardiac muscle was preserved. Some capillaries and fibroblasts were present in the zones of scarring. The scars had not proceeded to entirely dense fibrous connective tissue, but on the other hand there was no recent granulation tissue. The infarcts were mostly confined to the left ventricular myocardium.

The kidneys occupied a position of prominence in the clinical discussion. Both kidneys showed several areas of V-shaped, yellow, slightly retracted cortical scars corresponding to infarcts (Fig 7). No renal cell carcinoma was present. Microscopically there is no evidence of a primary glomerular or of embolic glomerular disease. At the base of one of the infarcts was an artery which showed recanalized embolus. Histologically a diffuse zone of inflammatory cells was present at the border of the infarcts and the adjacent normal kidney. In material from the needle biopsy of the kidney, done about 35 days or so before death, one artery was identified in which there was amorphous material which was similar to the thrombotic material comprising the vegetations at autopsy. Gomori methenamine silver preparations were done at this time on the renal biopsy tissue, and they were negative for fungi.

In the left frontal lobe of the brain, there was an infarct which was of several weeks' duration. I notice in the protocol that on the 27th day some vertigo and dizziness occurred and this is the only suggestive historical data I could find to clinically indicate a cerebral infarct. This lesion was 2.5 cm in greatest dimension and contained numerous gitter cells or compound granular corpuscles in the area of breakdown of myelin. Healing in the brain proceeds at a much slower rate in relation to scar tissue formation, and so gliosis was not yet profound.

The area in the right lower lobe of the lung, which cleared roentgenographically by the time of death, was not clear at autopsy. In the secondary bronchus posteriorly was a 2.5 cm mass. This lesion represented a primary adenocarcinoma of the lung with zones of moderately well-differentiated tumor and other areas in which the pattern was less well-differentiated, with some signet ring cells. Cytoplasmic vacuolization was evident and abundant stainable mucin was demonstrable (Fig 8). Lymphatic permeation within the lung by the tumor was prominent. Metastases were identified in the periaortic lymph nodes, both in the mediasti-

num and in the abdomen, and a 2.5 cm metastatic focus was located in the inferior right lobe of the liver. Several metastatic foci were present in the thyroid. Multiple organized and recanalized thrombo-emboli were seen in small pulmonary arteries. No pulmonary infarcts were identified.

In summary, I believe this patient had the rare, but well-documented association of a primary, mucin-producing adenocarcinoma with nonbacterial thrombotic endocarditis and infarcts. The primary adenocarcinoma was in the lung, although other primary sites, such as stomach, have been reported. The infarcts were observed in the heart, brain, spleen, and kidneys, and undoubtedly resulted from dislodgement of material from the vegetations. Possibly some of the patient's thrombotic episodes and transitory pulmonary findings were related to the venous thromboses seen in a patient with carcinoma. No large, recent pulmonary embolus was identified.

I found a few references that are pertinent to this case. Rohner reported mucinous malignancies and endocarditis with embolism, and in his series of cases the most common primary tumor was in the stomach. Only one tumor was primary in the pancreas and two cases had a primary lesion in the lung. *The Medical Clinics of North America* (1966) contains an excellent chapter on the cardiovascular disturbances associated with cancer. An article which describes a case quite similar to the one presented today is in *Annals of Internal Medicine* (1959); that patient also had adenocarcinoma of the lung with verrucal endocarditis and myocardial infarcts.

Dr. Obenour: Thank you. Dr. McIntosh, do you have any comments?

Dr. McIntosh: Yes, you see this is what I mean by CPCmanship. Dr. Anderson used his library and didn't let me know where it was. This is a fascinating case. I missed it. My scouts told me that there was a tumor in the right side of the chest, but I couldn't make much out of it even knowing that. There was no evidence of bacterial endocarditis, thus, no destruction of the aortic valve. Are we sure that fungus was not the cause? There is the possibility that this man, being sick and having multiple blood cultures, had a saprophytic fungus introduced and this course followed. But Dr. Anderson has said that the nonbacterial involvement of the aortic valve is thought to precede the development of the carcinoma. Is that what you said?

Dr. Anderson: In the *New England Journal of Medicine,* in 1955, a CPC was presented where the verrucous endocarditis clinically preceded the discovery of the carcinoma.

Dr. McIntosh: It's interesting that he did have involvement of the aortic valve but there was no destruction; it didn't make his aortic insufficiency worse during the course of the illness. It did create aortic insufficiency, because of mechanical changes, but we are told that the aortic valve was perfectly normal. I attributed the change in the ascending aorta, which was the only change that I was able to pick up in this man's cardiovascular system, to an increased velocity of ejection of blood through a congenitally deformed valve as a result of the anemia. Had we made the biopsy of the radial artery, we still would have missed the disease in the lung.

Dr. Lane: I think it would be fair to say, knowing what we do about the natural history of the tumor, that while the clinical manifestation of marantic endocarditis may precede the discovery of the neoplasm, the neoplasm precedes marantic endocarditis. Undoubtedly this tumor was present for months or years before the endocarditis developed.

Dr. MacIntyre: I have to assume that the patient's relatively small primary neoplasm was obscured by pleural abnormality at the end, since at no time was a nodular lesion in lung suspected.

REFERENCES

1. Amromin GD, Wang SK: Degenerative verrucal endocardiosis and myocardial infarction: report of two cases associated with mucus-producing bronchogenic carcinoma. Ann Intern Med 50:1519-1529, 1959.

2. Castleman B, Towne VW: Case records of Massachusetts General Hospital, case 41491. New Eng J Med 253:1030-1036, 1955.

3. Freiman AH: Cardiovascular disturbances associated with cancer. Med Clin N Amer 50:733-746, 1966.

4. Rohner RF, Prior JT, Sipple, JH: Mucinous malignancies, venous thrombosis and terminal endocarditis with emboli. A syndrome. Cancer 19:1805-1812, 1966.

Drs. Obenour and McIntosh, Department of Internal Medicine; Drs. Anderson and Spjut, Department of Pathology; Dr. Lane, Departments of Pharmacology and Internal Medicine, Baylor College of Medicine, 1200 Moursund Avenue, Houston, Tex 77025.

Dr. MacIntyre, Department of Radiology, Methodist Hospital, 6518 Bertner, Houston, Tex 77025.

Basic research and the health needs of the nation.

SAUL KIT, PhD

SEVERE CUTBACKS have been made recently in the budgets of major federal granting agencies supporting biomedical research—notably the National Institutes of Health, the National Science Foundation, and the Atomic Energy Commission. These cutbacks have most serious implications for the future health of the nation and the well-being of its universities, medical schools, and teaching hospitals. Funds available for health research, services, and manpower all fall short of needs.

Discussing the crisis in health research with Texas Medical Center scientists, Rep. Bob Casey of Houston (D-Texas) stated, ". . . In view of the great medical achievements that have been publicized in the past few years, the man in the street is not aware of this except when he spends three hours waiting in a doctor's reception room, and then he is inclined to blame the individual doctor rather than the lack of adequate national effort. My advice to you is to get our dilemma . . . before the general public. Tell them that the medical profession, brilliant as it is, does not yet know everything; that we need to continue basic research. Without basic research you cannot have the breakthroughs in specific ailments and diseases. There is no more powerful lobby than the average American citizen when he is informed and knows the need is urgent. It is his money and I think he is willing to spend it for something as important as the nation's health."

Through the combined efforts of professional and nonprofessional groups, the downward trend of basic research support must be reversed. Basic research is the foundation for improved medical care; during the past 25 years it has led to notable advancements and breakthroughs in poliomyelitis, hepatitis, tuberculosis, malaria, venereal disease, typhoid fever, measles, rubella, blindness, dental diseases, cardiovascular diseases, cancer, human growth and development, and inborn errors of metabolism. Reductions in scientific manpower and research will retard and reduce future advances. The tried and tested strategy for achieving breakthroughs is that of increasing effort through scientific mobilization. When more "hunters" are actively engaged, the "hunt" is more likely to be successful.

Basic science is a shorthand name for many scientific specialties: cell biology, genetics, bacteriology, biochemistry, physiology, pathology, virology, neurology, immunology, pharmacology, experimental therapeutics, nutrition, radiobiology, and bioengineering. Any of these subjects taken in depth at once relates to other subjects—hence the evolution of overlapping subdisciplines such as immunochemistry, microbial and viral genetics, biochemical genetics, and tumor virus research, to name but a few.

Scientific advances are discontinuous. They entail hops, skips, and jumps from one subject to another. Some recent developments in cell biology may illustrate how a few scientific discoveries have occurred based on years of research in several of the basic sciences.

The work of Alexis Carrell, beginning about 1912, demonstrated that cells could be grown indefinitely in tissue culture. Lewis, Parker,

Healy, Morgan, White, and Waymouth began studies on the factors in tissue culture medium necessary for growth and survival. The minimum essential nutrients that permit the indefinite growth of most mammalian cell lines were shown by Eagle[1] to comprise 13 amino acids, 8 vitamins, salts, glucose, and 3 to 5% dialyzed serum. The same minimal medium supplemented only with serine permitted the growth of single cells.

A study of certain cancer cells in tissue culture revealed that they required L-asparagine in addition to the usual essential amino acids.[2] This suggested that an experimentally induced asparagine deficiency might be effective in the treatment of some cancers. Support for this concept came from the finding that an inhibitory factor in guinea pig serum suppressed the growth of mouse and rat lymphomas. The inhibitory factor was later identified as L-asparaginase, the enzyme which destroys asparagine. Bacterial asparaginase was then purified and found to be a potent antilymphoma drug.[3] Cells of tumors that responded to L-asparaginase required asparagine for growth, while normal cells and the cells of insensitive tumors were independent of an external source of this amino acid. After treatment with L-asparaginase, significant therapeutic alterations were seen in acute lymphoblastic and acute myeloblastic leukemia in man. There was a positive correlation between response in vivo and a requirement of the leukemia cell for L-asparagine in vitro.

Tissue culture studies have been employed frequently to screen antimetabolites for antitumor activity. These studies have shown the mechanism of action of many useful drugs. Cell mutation to drug resistance was, however, one factor which reduced the therapeutic effectiveness of anticancer drugs. Mutant tissue culture cells resistant to the drugs, aminopterin, 6-mercaptopurine, azaguanine, fluorouracil, iododoxyuridine and bromodeoxyuridine, were isolated. These tissue culture experiments suggested that sequential treatment with more than one kind of drug, or concurrent therapy with several drugs, could be more effective than administration of one drug alone.

Experiments showing that vaccinia and Rous sarcoma virus can multiply in tissue culture were performed by Parker and Nye and Carrel and Rivers in 1925 to 1927. However, it was the observations of Enders and his colleagues in 1948 that gave the subject its greatest impetus. They showed conclusively that poliomyelitis virus could be cultivated in human tissues in vitro.[4] This stimulated studies that led to the demonstration in monkeys, and then in man, of the antigenic activity of formalin-treated virus grown in tissue culture; and the later demonstration of the protective effect of formalinized vaccine prepared from virus propagated in cultures of monkey kidney tissue.[5] Subsequently, vaccines were prepared using attenuated strains of poliomyelitis virus.[6] More recently, vaccines have been made in tissue culture for measles and rubella viruses.

Viral growth studies in eggs and tissue cultures revealed that influenza virus interferes not only with the growth of other myxoviruses, but also with viruses of unrelated groups, including some arboviruses and poxviruses. Isaacs and Lindenmann[7] showed that an "interfering" dose of influenza virus induces cells to produce and release a nonviral protein which attaches to uninfected cells and protects them against viral infection. They named this soluble inhibitor "interferon," and characterized it by its failure to affect viruses in vitro, its broad spectrum of antiviral activity, and its capacity to transfer resistance from one cell to another in the absence of the original interfering virus. Interferon was induced even after influenza and related viruses (eg, Newcastle disease virus and fowl plague virus) were inactivated by ultraviolet (UV) irradiation.

It was recognized at once that interferon may be potentially important in the pathogenesis of viral infections in man and other vertebrates. Tests were undertaken to determine whether interferon could be used prophylactically as well

as therapeutically. It was found that the practical effectiveness of interferon in man was limited by the difficulties of delivering therapeutic doses to target cells. A way to circumvent this difficulty came unexpectedly from studies of the mechanism of viral replication and of interferon action.

The classic studies of Watson and Crick in 1953 demonstrated that the chemical determining heredity in animals, plants, and bacteria, is deoxyribonucleic acid, a polymer consisting of two complementary polynucleotide strands. Watson and Crick suggested that DNA replication occurred when each parental DNA strand was used as a template to copy its complementary strand. Two daughter DNA molecules were thereby produced, each consisting of an original parental DNA strand and a newly synthesized strand complementary to the parental strand. Evidence confirming this mechanism of DNA replication was soon obtained by Meselson, Stahl, and Vinograd.

Single-stranded polynucleotides, or ribonucleic acids, were recognized as the chemicals determining the heredity of many viruses. It seemed logical that the RNA molecules also replicated through a template-copying mechanism analogous to that used for DNA. Montagnier and Sanders (1963), while studying the replication of small viruses related to poliomyelitis virus, soon showed that parental viral RNA (single-strands) were used as templates to construct complementary strands, yielding double-stranded RNA molecules. The double-stranded RNAs were then used as templates for making more complementary copies of single-stranded progeny RNA molecules.

Field and coworkers[8] discovered that double-stranded RNA molecules are efficient inducers of interferon and of resistance to viral infections in tissue culture and in animals. In the course of virus infection, double-stranded RNAs are produced. These are "recognized" by the cell as foreign, and elicit in the cell a defense reaction—namely, the induction of the antiviral protein, interferon. Interferon prevents the translation by the cell of the genetic information of the foreign (viral) RNA, but not of the cell's own RNA. Thus, instead of giving interferon to animals (passive immunization), double-stranded RNAs can be administered to stimulate active cellular production of interferon.

Studies on how RNAs are made by enzymes resulted in the isolation by Ochoa and coworkers of a bacterial enzyme called polynucleotide phosphorylase. Using this enzyme, complex synthetic RNAs were made, eg, polyinosinic:polycytidylic acid (poly I:poly C) and polyadenylic:polyuridylic acid (poly A:poly U). Further interest was stimulated when Nirenberg, in 1961, showed that one of the synthetic polymers, polyuridylic acid, was used by cells to make a synthetic protein, polyphenylalanine. This observation broke the "genetic code," and for this work, Nirenberg was subsequently awarded a Nobel Prize. By the mid-1960s, sizable quantities of synthetic RNAs were available for laboratory use.

Then Field and associates[8] showed that synthetic double-stranded RNAs (eg, poly I:poly C or poly A:poly U) are potent inducers of interferon and of viral resistance. The cell "perceived" the synthetic double-stranded RNA as foreign and reacted against it in the same way as it reacted against natural double-stranded viral RNAs. Poly I:poly C was then shown to induce interferon in herpes keratoconjunctivitis in rabbits as late as three days after virus inoculation, thus supporting the proposed role of the interferon mechanism in the natural recovery of an already established viral infection.

Poly I:poly C is also effective against tumor-producing viruses. Growth and tumor production of mouse leukemia-sarcoma viruses can be blocked by poly I:poly C. Even after tumor nodules have appeared, poly I:poly C can produce regression. Tumors which are not known to have a viral etiology have also been treated with poly I:poly C. This drug decreased the tumor growth rate and increased survival of mice with reticulum cell sarcomas, lymphatic leukemias, and fibrosarcomas.[9,10] Poly I:poly C administered intraperitoneally has also inhib-

continued on page 105

Campbell's Soups... wide variety...for limited appetites

Many people lose interest in food as they grow older. Some of them are fussy eaters—with only a few favorite foods. Others become indifferent to foods—because planning and preparing meals becomes a chore. Here Campbell's Soups can help —for these four very good reasons:

Appeal With a variety of tastes, textures, aromas, and colors, Campbell's Soups can add interest and appetite appeal. And they're easy to eat—ingredients are tender, bite-size. Even patients on special diets will find soups they can enjoy among the more than 50 different varieties available.

Nourishment Campbell's Soups contain selected meats and sea foods, best garden vegetables—carefully processed to help retain their natural flavors and nutritive values.

Convenience Within 4 minutes a bowl of delicious soup is heated and ready to eat.

Economy Campbell's Soups are inexpensive—an important consideration to those whose budgets are limited.

Recommend Campbell's Soups . . . and, of course, enjoy them yourself. Remember, *there's a soup for almost every patient and diet . . . and for every meal.*

digitalis-diuretic regimens can put a "potassium squeeze" on the myocardium...

therefore this is the logical potassium-sparing diuretic for the digitalized patient

Aldactone®
(spironolactone)

for unique physiologic advantages which no other diuretic can provide

• Does not cause potassium depletion (as do the thiazides, furosemide and ethacrynic acid) which may increase[1] the effect of digitalis on the myocardium, giving rise to premature systoles, ventricular tachycardia or ventricular fibrillation.

• Unique "safety-valve" action due to competitive antagonism[2] of aldosterone helps prevent excessive potassium retention, since endogenous aldosterone production is increased[3] and counterbalances Aldactone action if the serum potassium level becomes too high.

• Hyperkalemia may occur, especially in severely ill patients with relatively small urine outputs or in patients receiving supplemental potassium. However, with Aldactone, because of its mechanism of action, hyperkalemia[3] should be less likely than with triamterene or other agents which act independently of aldosterone.

• Gradual onset of action avoids the danger[4] of sudden electrolyte and fluid depletion.

• May be effective as the sole diuretic or may be combined with a thiazide, furosemide[5] or ethacrynic acid[6].

Indications—Essential hypertension; edema or ascites of congestive heart failure, cirrhosis of the liver and the nephrotic syndrome; idiopathic edema. Some patients with malignant effusions may benefit from Aldactone, particularly when given with a thiazide diuretic.

Contraindications—Acute renal insufficiency, rapidly progressing impairment of renal function, anuria and hyperkalemia.

Warnings—Potassium supplementation may cause hyperkalemia and is not indicated unless a glucocorticoid is also given. Discontinue potassium supplementation if hyperkalemia develops.

Usage of any drug in women of childbearing age requires that the potential benefits of the drug be weighed ogoinst its possible hozards to the mother ond fetus.

Precautions—Patients should be checked carefully since electrolyte imbalance may occur. Although usually insignificant, hyperkalemia may be serious when renal impairment exists; deaths have occurred. Hyponatremia, manifested by dryness of the mouth, thirst, lethargy and drowsiness, together with a low serum sodium may be caused or aggravated, especially when Aldactone is combined with other diuretics. Elevation of BUN may occur, especially when pretreatment hyperazotemia exists. Mild acidosis may occur. Reduce the dosage of ather antihypertensive drugs, particularly the ganglionic blocking agents, by at least 50 per cent when adding Aldactone since it may potentiate their action.

Adverse Reactions—Drowsiness, lethargy, headache, diarrhea and ather gastrointestinal symptoms, maculapapular or erythemataus cutaneous eruptions, urticaria, mental canfusian, drug fever, ataxia, gynecomastia, mild andragenic effects, including hirsutism, irregular menses and deepening voice. Adverse reactions are infrequent and usually reversible.

Dosage and Administration—For *essential hypertension* in *adults* the daily dosage is 50 to 100 mg. in divided doses. Aldactone may be combined with a thiazide diuretic if necessary. Continue treatment for two weeks ar langer since an adequate response may not occur sooner. Adjust subsequent dasage according ta respanse of patient.

For *edema, ascites or effusions in adults* initial daily dosage is 100 mg. in divided doses. Continue medication for at least five days ta determine diuretic respanse; add a thiazide or organic mercurial if adequate diuretic response has not occurred. Aldactone dasage should not be changed when other therapy is added. A daily dosage of Aldactone considerably greater than 75 mg. may be given if necessary.

A glucocorticoid, such as 15 to 20 mg. of prednisone daily, may be desirable for patients with extremely resistant edema which daes not respond adequately ta Aldactone and a conventional diuretic. Observe the usual precautions applicable to glucocarticoid therapy; supplemental patassium will usually be necessary. Such patients frequently have an associated hypanatremia—restriction of fluid intake to 1 liter per day or administration af mannitol or urea may be necessary (these measures are contraindicated in patients with uremia or severely impaired renal function). Mannitol is cantraindicated in patients with cangestive heart failure, and urea is cantraindicated with a history ar signs of hepatic coma unless the patient is receiving antibiatics arally to "sterilize" the gastraintestinal tract.

Glucocorticaids should probably be given first ta patients with nephrosis since Aldactone, although useful far diuresis, will not directly affect the basic pathologic pracess.

For *children* the daily dosage should provide 1.5 mg. af Aldactane per pound of bady weight.

References: 1. Dall, J. L. C.: Amer. Heart J. 70:572-574 (Oct.) 1965. **2.** Liddle, G. W.: Ann. New York Acad. Sci. 139:466-470 (Nov.) 1966. **3.** Gantt, C. L.: Diuretic Therapy, DM (Disease-A-Month), Chicaga, Year Book Medical Publishers, Inc., 1967, pp. 1-31. **4.** Alexander, S.: Geriatrics 23:131-139 (Nov.) 1968. **5.** Stason, W. B., and others: Circulation 34:910-920 (Nov.) 1966. **6.** Lieberman, F. L., and Reynolds, T. B.: Gastroenterology 49:531-538 (Nov.) 1965.

012

SEARLE
Research in the Service al Medicine
G. D. Searle & Co., P.O. Bax 5110
Chicaga, Illinois 60680

NO UNPLEASANT SURPRISES In G. U. Therapy

Urised does not present unpleasant surprises; it brings patient comfort with first dose pain relief. Unlike newer antibiotics or sulfonamides, Urised does not create problems. It has a time-tested record of minimal side effects. The patient gets additional psychological reassurance of Uriseds effectiveness by the evidence of the blue urine.

For over 50 years Urised has created physician and patient confidence by providing effective therapy when needed.

Clinically effective for G.U. Therapy[1-5]

FIRST DOSE PAIN RELIEF

For G.U. Frequency—Urgency—Burning

URISED®

- **CYSTITIS**
- **PYELITIS**
- **TRIGONITIS**
- **URETHRITIS**

Each blue-coated tablet contains these active ingredients:

Atropine Sulfate	0.03 mg.	Methylene Blue	5.4 mg.
Hyoscyamine	0.03 mg.	Phenyl Salicylate	18.1 mg.
Methenamine	40.8 mg.	Benzoic Acid	4.5 mg.

Contraindications: Glaucoma, urinary bladder neck or pyloric obstruction, duodenal obstruction and cardiospasm. Hypersensitivity to any of the ingredients.

Warning: Do not exceed recommended dosages.

Precautions: Administer with caution to persons with known idiosyncrasy to atropine and cardiac disease. While under this therapy the urine is blue, patients should be so advised to allay apprehension.

Adverse Reactions: Neither irritation nor untoward reactions have been reported; however, if pronounced dryness of the mouth, flushing, or difficulty in initiating micturition occurs, decrease dosage. If rapid pulse, dizziness or blurring of vision occurs, discontinue use immediately. Acute urinary retention may be precipitated in prostatic hypertrophy.

Dosage and Administration: Adults: Two tablets, orally, four times per day, followed by liberal fluid intake. Older children reduce dosage in proportion to age and weight.

How Supplied: Bottles of 50, 500 and 1,000 tablets.

References: (1) Sand, R.X.: New York St. J. Med. 61:2598-2602, 1961: (2) Renner, M.J., et al.: Hosp. Topics 39:71-73, 1961: (3) Haas, J., and Kay, L.L.: Southwest. Med. 42:30-32, 1961: (4) Marshall, W.: Clin. Med. 7:499-502, 1960: (5) Strauss, B.: Clin. Med. 4:307-310, 1957.

CONAL Manufacturers of Uriceutical® Specialties
Pharmaceuticals, Inc.
Chicago, Illinois 60640

ited induction of skin tumors by dimethylbenzanthracene.[11]

The finding that poly I:poly C inhibited skin carcinogenesis by dimethylbenzanthracene could signify that the chemical carcinogen activated was blocked by poly I:poly C-induced interferon formation. However, this is not the whole story. Poly I:poly C and related double-stranded polymers such as poly A:poly U and poly G:poly C, elevated antibody formation, stimulated phagocytosis, and enhanced cell-mediated immune responses.[12] Double-stranded polynucleotides caused a premature initiation of antibody formation in newborn mice, days prior to the time when such mice normally developed the capacity to respond to antigens. In addition, poly I:poly C restored normal levels of antibody formation in aged animals which, in the absence of the stimulatory polynucleotides, failed to show normal responses to antigen. Double-stranded polynucleotides strongly enhanced graft versus host rejection mechanisms.

In contrast, chemical carcinogens are immunosuppressors. This suggested that chemical carcinogens enhanced malignancy by suppressing the immunological response, while double-stranded nucleotides counteracted this effect. In support of this hypothesis, it was found that tumors induced by chemical carcinogens and by viruses exhibit new antigenic characters. There is now definite evidence in animals, and to a much lesser extent in man, that there is a reaction of the host against its own tumor, and that this reaction is mediated by lymphocytes—similar to the delayed hypersensitivity reaction and homograft rejection.[13]

Let us return now to the discussion of drug-resistant tissue culture cells. One strain of mutant cells was resistant to 8-azaguanine and lacked the enzyme, hypoxanthine-guanine phosphoribosyl transferase. It has now been shown that patients with Lesch-Nyhan syndrome have a hereditary hypoxanthine-guanine phosphoribosyl transferase deficiency similar to the one first produced experimentally in mouse tissue culture cells.[14] Humans with the Lesch-Nyhan syndrome have an X-chromosomal mutant gene that causes severe neurological and developmental abnormalities. The inborn error of metabolism expressed after birth as Lesch-Nyhan syndrome can be detected prenatally by testing cells cultured from the amniotic fluid of 22-week-old fetuses. Therapy with adenine and folic acid begun at the time of birth is being tried to avert development of the disease in mutant males.

A second type of cell mutant is resistant to bromodeoxyuridine and lacks the enzyme, thymidine kinase. Davidson and Ephrussi recognized that drug-resistant tissue culture cells grown in selective medium could be employed for the detection of somatic hybrids. Davidson and Ephrussi succeeded in making somatic hybrids of two types of mouse cells by co-cultivating a subline resistant to 8-azaguanine with a subline resistant to bromodeoxyuridine in selective medium containing aminopterin, hypoxanthine, and thymidine.[15] Only hybrid cells which received the gene for hypoxanthine-guanine phosphoribosyl transferase and the gene for thymidine kinase from each of the parents could survive in this medium. The parent cells which contained only one of the two genes were destroyed.

The methods initiated by Davidson and Ephrussi also have permitted the isolation of interspecific cell hybrids: rat-mouse, monkey-mouse, and human-mouse hybrids. Somatic hybrids have been used for genetic analysis and for studies of gene expression in mammalian cells. The following are examples of observations that have been made with somatic cell hybrids:

1. The human genes for glucose-6-phosphate dehydrogenase, hypoxanthine-guanine phosphoribosyl transferase, and the gene whose loss results in the Hurler-Hunter syndrome (or gargoylism II) are located on the X chromosome, whereas, the gene for thymidine kinase is located on a chromosome of group E.

2. After fusion of human cancer cells (HeLa) which actively synthesize both DNA and RNA, and nucleated chick erythrocytes which synthesize no DNA and very little RNA, the nuclei of the erythrocytes rapidly resume both DNA and RNA synthesis. This suggests that DNA and RNA synthesis are under positive control and can be "turned on" by factors present in HeLa cells.[16] One objective of future research is the isolation and characterization of the stimulatory factors.

3. Malignancy can be suppressed when malignant cells are fused with certain nonmalignant ones. The hybrid cells derived from such fusions give rise to segregants in which a loss of chromosomes is associated with reversion to malignancy. The expression of histocompatibility antigens can also be suppressed when cells bearing these antigens are fused with others that express them poorly.[17] Little is known about the properties of the inhibitory factors.

4. Hybrids between cells of a Syrian hamster

melanoma line and an unpigmented mouse line have been isolated and maintained in active proliferation in vitro for up to 100 cell generations. The hybrids have remained unpigmented under conditions where the melanoma cells become heavily pigmented; also the hybrids exhibit no DOPA oxidase activity. Thus, a step in pigment formation in the hybrid cells is under negative control.

Under normal co-cultivation conditions, few cells undergo fusion. However, observations that measles, varicella, herpes viruses, and some myxoviruses induce polykaryocytosis suggested an interesting method of greatly increasing the incidence of cell fusion. UV irradiation of the paramyxovirus, Sendai, inactivates infectivity, but not the capacity to promote somatic cell fusion. Thus, by treating mixtures of cells with UV-irradiated Sendai virus (UV-Sendai), heterokaryons of hamster-mouse, human-mouse, monkey-mouse, and rabbit-human cells have been obtained.

One of the most interesting uses of the somatic hybridization technique is that of rescuing cancer viruses from tumor cells. For example, simian virus 40 (SV40)-induced tumors do not contain detectable infectious virus. Nevertheless, the entire viral genome persists in the tumor cells in a hidden form. The DNA of SV40 becomes integrated into cellular chromosomes, where it "masquerades" as cellular genes. However, SV40 can be recovered from hamster or mouse tumor cells by fusing them with monkey cells in the presence of UV-Sendai.[18] The monkey cells apparently provide substances which permit the release of the SV40 from integration and the activation of virus replication. Similarly, the chick tumor virus, Rous sarcoma virus, can induce tumors in Chinese hamster cells. The virus is undetectable in the Chinese hamster tumor cells. Yet, it can be rescued by mixing Chinese hamster tumor cells with chick fibroblast cells and treating the cell mixtures with UV-Sendai.[19]

The experiments with tumor viruses of animals are relevant to the question of whether viruses cause cancer in man. Although it has not yet been proven definitely that viruses cause cancer in man, there is a strong suspicion that at least some human cancers have a viral etiology. Cell fusion experiments provide models by which hidden cancer viruses of man may be recognized.

The examples already given illustrate that scientific advances result from observations in many basic science disciplines. Information gained from cell biology or immunology may be crucial for the next advances in biochemistry, genetics, or developmental biology, and vice versa. Research does not always follow a sequence of events like putting a man on the moon. It is therefore important that research in all the basic science disciplines be encouraged and supported.

REFERENCES

1. Eagle H: Amino acid metabolism in mammalian cell cultures. Science 130:432-437, 1959.

2. McCoy TA, Maxwell M, Kruse PF Jr: The amino acid requirements of the Jensen sarcoma in vitro. Cancer Res 19:591-595, 1959.

3. Oettgen HF, Old LJ, Boyse EA, et al: Inhibition of leukemias in man by L-asparaginase. Cancer Res 27:2619-2631 1967.

4. Enders JF, Weller TH, Robbins FC: Cultivation of the Lansing strain of poliomyelitis virus in cultures of various human embryonic tissues. Science 109:85-87, 1949.

5. Salk JE: Poliomyelitis: control, in: Rivers TM, Horsfall FL Jr, Eds: Viral and Rickettsial Infections of Man, ed 3. Philadelphia, JB Lippincott Co, 1959, pp 499-518.

6. Sabin AB: Present position of immunization against poliomyelitis with live virus vaccines. Brit Med J 1:663-680, 1959.

7. Isaacs A, Lindenmann J: Virus interference. I. The interferon, Proc Royal Soc, Series B, Biol Sci 147:258-267, 1957.

8. Field AK, Tytell AA, Lampson GP, et al: Inducers of interferon and host resistance. V. In vitro studies. Proc Nat Acad Sci 61:340-346, 1968.

9. Zeleznick LD, Bhuyan BK: Treatment of leukemic (L-1210) mice with double-stranded polyribonucleotides. Proc Soc Exptl Biol Med 130:126-128, 1969.

10. Gelboin HV, Levy HB: Polyinosinic-polycytidylic acid inhibits chemically induced tumorigenesis in mouse skin. Science 167:205-207, 1970.

11. Levy HB, Law LW, Robson AS: Inhibition of tumor growth by polyinosinic-polycytidylic acid. Proc Nat Acad Sci 62:357-361, 1969.

12. Braun W: In: "Proceedings of the Sixth International Congress of Chemotherapy," Tokyo, 1969.

13. Lewis MG, Ikonopisov RL, Nairn RC: Tumor-specific antibodies in human malignant melanoma and their relationship to the extent of the disease. Brit Med J 3:547-552, 1969.

14. Felix JS, deMars R: Purine requirement of cells cultured from humans affected with Lesch-Nyhan syndrome (hypoxanthine-guanine phosphoribosyltransferase deficiency). Proc Nat Acad Sci 62:536-543, 1969.

15. Davidson RL, Ephrussi B: A selective system for the isolation of hybrids between L cells and normal cells. Nature 205:1170-1171, 1965.

16. Johnson RT, Harris H: DNA synthesis and mitosis in fused cells. J Cell Sci 5:625, 1969.

17. Harris H, Miller OJ, Klein G, et al: Suppression of malignancy by cell fusion. Nature 223:363-368, 1969.

18. Dubbs DR, Kit S: Isolation of defective lysogens from simian virus 40-transformed mouse kidney cultures. J Virol 2:1272-1282, 1968.

19. Svoboda J, Dourmashkin R: Rescue of Rous sarcoma virus from virogenic mammalian cells associated with chicken cells and treated with Sendai virus. J Gen Virol 4:523-529, 1969.

Dr. Kit, Head, Division of Biochemical Virology, Baylor College of Medicine, Texas Medical Center, Houston, Tex 77025.

★

Specialized Service

IN

PROFESSIONAL LIABILITY INSURANCE

is a high mark of distinction

THE

MEDICAL PROTECTIVE COMPANY

FORT WAYNE, INDIANA

Professional Protection Exclusively since 1899

AUSTIN OFFICE: Robert F. Reiman, Representative
3201 Clearview, Austin 78703 Telephone: 512-472-9603
DALLAS OFFICE: Gayle Nelson and Arthur F. Ennis, Jr., Representatives
816 Medical Arts Building, Dallas 75201 Telephone: 214-742-4980
HOUSTON OFFICE: Richard B. Ross and William A. Orsburn, Representatives
1525 Hermann Professional Bldg., Houston 77025 Telephone: 713-523-1127

Turner's Clinical & X-Ray Laboratories

Medical Center

El Paso, Texas

Telephone 532-4689

☆

SURGICAL PATHOLOGY
CLINICAL PATHOLOGY
RADIOLOGY

☆

GEORGE TURNER, M.D.
JEANNE TURNER BOWMAN, M.D.
DAVID LIBMAN, M.D.

The Martin X-Ray and Radium Clinic

3501 Gaston Ave. Dallas, Texas

ADJOINING
GASTON EPISCOPAL HOSPITAL

For X-ray diagnosis and the X-ray and radium treatment of cancer and other conditions suitable for radiation therapy.

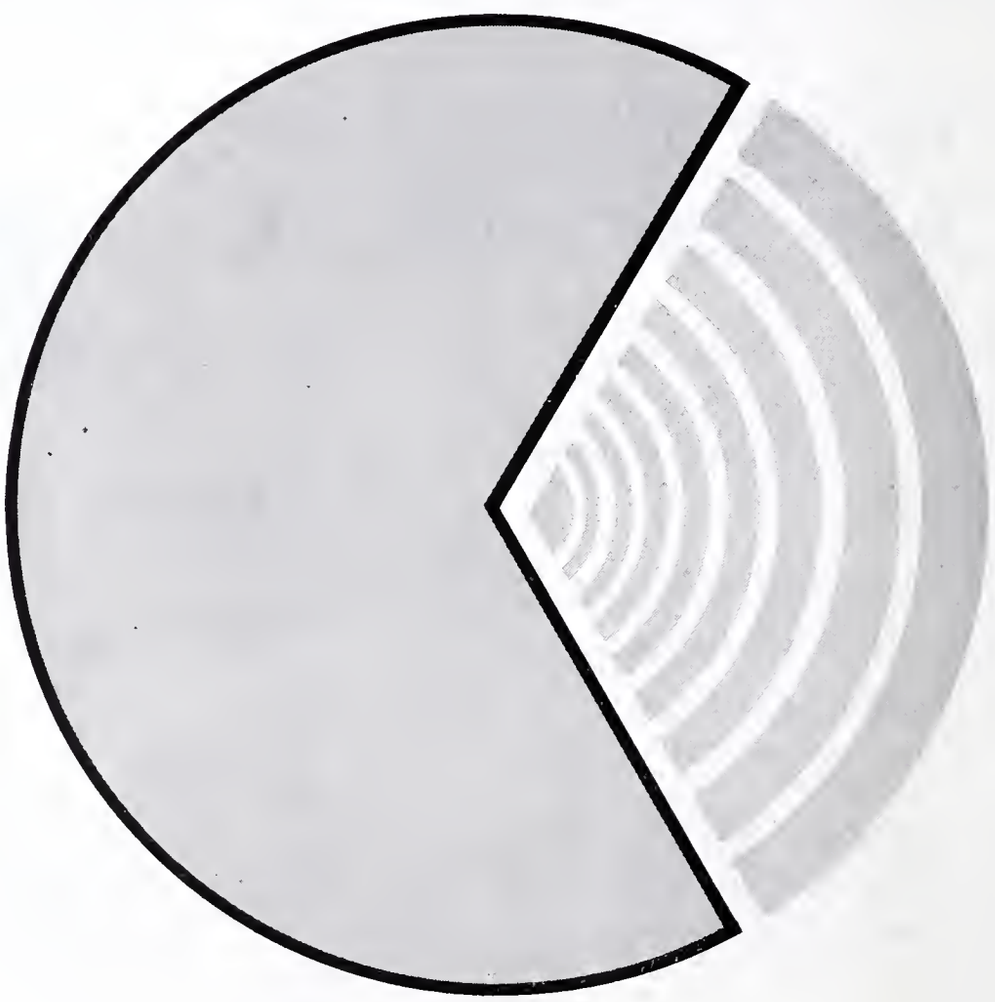
Chas L. Martin, M.D. James A. Martin, M.D.

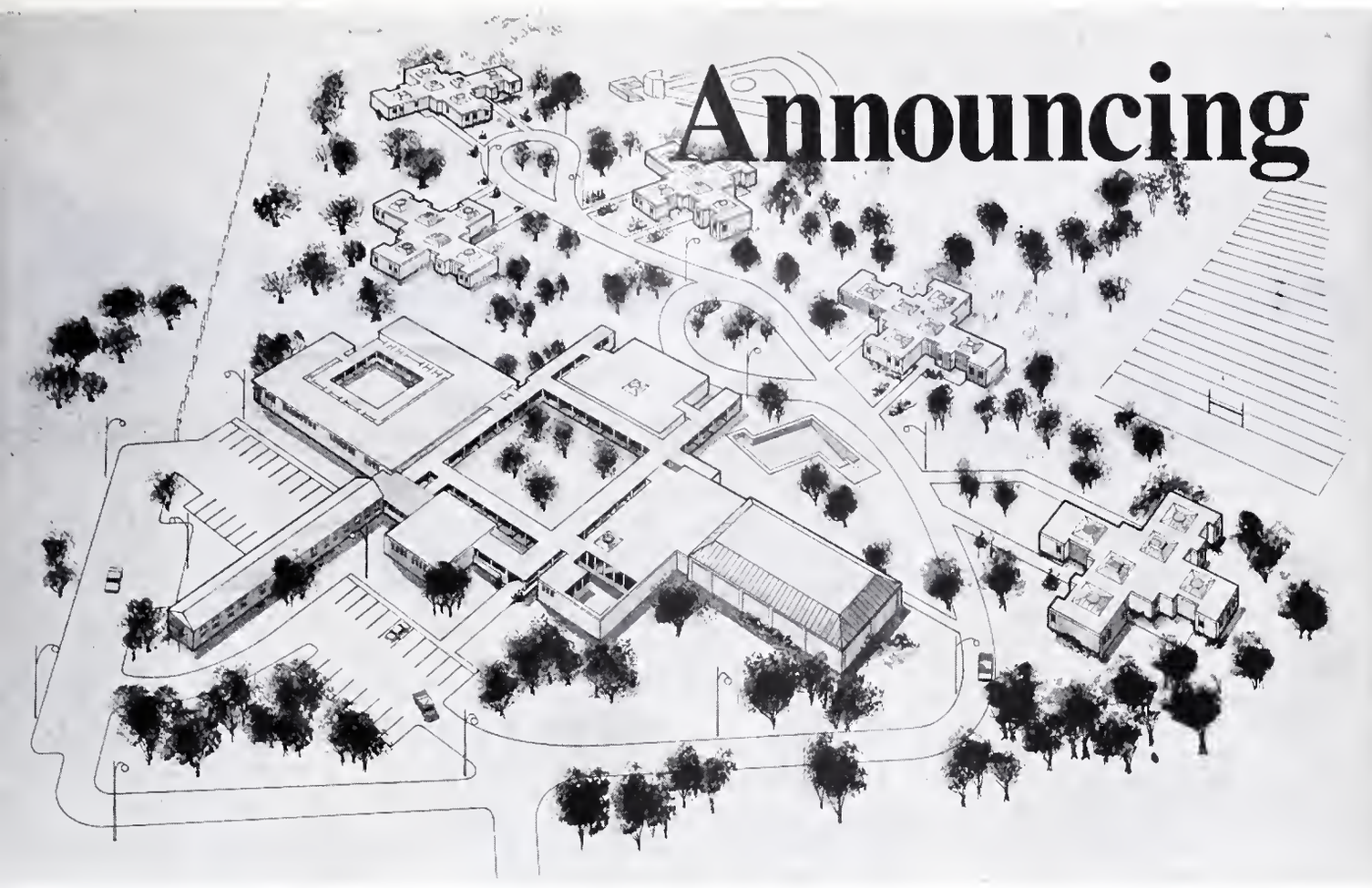
A LOOK AT TEXAS MEDICINE TODAY

ONE OF A SERIES

News

What's News? The throw-away journals and the national specialty journals can provide you with a lot of interesting, useful material, but when it comes to Texas medical news they give you only material of national interest. For carefully checked news on a wide range of subjects—from developments in the Medicare program in Texas to the anticipated status of communicable diseases in the state—TEXAS MEDICINE is your resource material. Do you like sometimes to relax and be human—just like your patients? If so, pick up the current issue of TEXAS MEDICINE and read about the nonmedical interests of your medical colleagues in our continuing series of articles about doctor's hobbies. How even Texas can contain such an abundance of talent will amaze you. So, join our news-gathering staff and write us about yourself and your colleagues. We want to have the best-read medical news publication in the countryside.





Announcing

. . . . a new Residential Treatment Center for Emotionally Disturbed Children and Adolescents

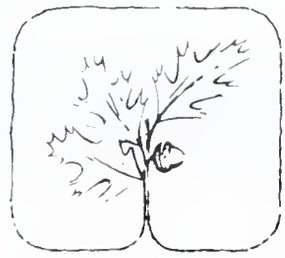
This summer the Oaks unit of The Brown Schools will move into new residential facilities especially designed, in close cooperation with the staff, to provide the physical prerequisites of a therapeutic milieu. During two weeks of 1968, when our team of architects actually lived with the students on the old campus, they got the idea of building living quarters that would provide an overlapping series of natural social groupings: each cottage housing 24 students is divided into separate suites for 12, and these suites are subdivided into basic living units for 6. But the idea doesn't stop there. For example, there are five separate dining areas rather than a single large hall. And a canteen is available for small parties.

Actually, the new facilities reflect what has always been an Oaks policy: **highly individualized therapy and instruction in a continuously supportive environment.** Available to each child, in addition to sound academic instruction are individual and group psychotherapy specifically prescribed and modified in keeping with his readiness to utilize such treatment. And therapeutic influences continue in a setting where everyday life experiences, group activities, and personal relationships all contribute to growth and change. **Coeducational. Ages 6-16.**

For more information, please write or phone:
The Registrar

THE BROWN SCHOOLS
P. O. Box 4008
Austin, Texas 78751
(512) 478-6662

Paul M. White, M.D.
Medical and Psychiatric Director
Jackson R. Day, M.D.
Director, The Oaks
Residential Treatment Center
T. C. McCormick, Jr., M.D.
Staff Psychiatrist



THE OAKS
THE BROWN SCHOOLS

*FIVE SEPARATE CAMPUSES
AUSTIN • SAN MARCOS, TEXAS
ESTABLISHED 1940

*Our four other campuses provide varying programs of treatment for children's developmental disorders.

ANNOUNCING A NEW TMA GROUP LIFE PLAN

THE "LEVEL-50"

PHYSICIANS MAY NOW ENROLL FOR $50,000 OF GROUP LIFE INSURANCE, WHICH AMOUNT IS CONSTANT UNTIL AGE 70, WHEN IT REDUCES TO $5,000.

ONLY 75% OF THE ELIGIBLE EMPLOYEES IN EACH PHYSICIAN'S OFFICE OR CLINIC ARE REQUIRED TO APPLY. EMPLOYEES MAY NOW SHARE IN THE COST OF THIS PLAN.

MEDICAL EVIDENCE IS REQUIRED FOR PHYSICIANS.

FOR DETAILS AND ENROLLMENT MATERIAL, CONTACT THE TEXAS MEDICAL ASSOCIATION SERVICE OFFICE LOCATED AT 1230 WEST 19TH, AUSTIN, TEXAS 78701.

Underwritten By

Prudential

NEWS

Destructive Celia: Our Latest Instructive Disaster

CHARLES R. QUEEN, MD
Chairman, TMA Committee on Disaster Medical Care

In the past year disasters have struck Lubbock, Zapata, Clarendon, and now Corpus Christi. Each disaster had its own distinctive characteristics and concurrent problems. It would be difficult to judge which was the most infamous but probably the Clarendon tornado was worst from the standpoint of severity of injuries. For number of casualties, the Lubbock tornado is out in front. For primitiveness of organization and available help, Zapata takes the ribbon; but for enormity of destruction, Corpus Christi is in the forefront.

Where Lubbock was scarred by its two or three tornadoes over an area half a mile wide and three miles long, Corpus Christi received similar destruction over an area 20 by 30 miles. If it had not been for the fact that Corpus Christi Bay was situated in the disaster area's center, destruction may well have passed the $1 billion dollar level. Flying over the region in a helicopter made one wonder why more casualties had not been incurred.

Medically speaking, possibly three deaths can be definitely attributed to Celia. It may be another month before all the statistics are in but possibly 150 to 300 injuries were sustained, very few of a major degree. Flying glass seemed to be a major problem and in a few cases, falling debris. The low barometer pressure was said to have caused the sudden jump in the number of obstetrical cases but I suspect the real cause may have been the excitement of the occasion.

The unpredictability of hurricanes was demonstrated by the weather bureau's inaccuracy in prognosticating landfall and wind velocities for Celia. Corpus Christi was not looking for a hurricane—especially not one with winds up to 164 mph. Dr. Lawrence Wilk, the district director of disaster medical services, had left on vacation. When the revised forecast predicted the hurricane's eye would pass over Corpus Christi, he returned and set up his operations center at Memorial Hospital. Memorial is accepted locally as the medical center of greater Corpus Christi and thus it was natural that most inquiries for coordination of medical services or medical assistance were directed there.

Community hospitals and physicians close to large population centers have no difficulty identifying their medical centers from which assistance in disasters can be expected. In less populated areas a definite "center" is not as obvious; one must be designated and its location made known to all medical and paramedical persons. Frequently the local civil defense emergency center or police station serve in this capacity.

Unfortunately the most vulnerable hospitals in a disaster are the small community hospitals. They cannot stand the loss of large portions of their physical plant. For example, although shattered windows cost Spohn Hospital the use of its top five floors it continued operation; a small hospital doesn't have the space reserve to rock with such a loss.

Small hospitals rarely have auxiliary power supplies, and they have tenuous telephone service and frequently no radio facilities. In spite of these potential inadequacies, knowledge of exactly how to get help in a disaster is frequently lacking. As a result of experience gained in these four disasters a concerted effort will be made to acquaint these small community hospitals and clinics with area planning.

In disasters today the helicopter plays an indispensable role in the transportation of casualties and supplies. Every hospital should designate a portion of its parking lot as a heliport. Attention to surrounding high lines, etc., are all that is necessary. A few words with proper authorities can easily accomplish this renovation.

These facts are well known to disaster planners. The medical personnel in the greater Corpus Christi area did quite well in spite of their unpreparedness in some fields. A few facts concerning the smaller hospitals may be of value.

After the hospital at Robstown was rendered unusable, the first thought was to move the patients to Corpus Christi. However, Dr. Wilk arranged for the patients to be transferred to the Kingsville Hospital in keeping with prearranged plans to move casualties away from the centers of destruction.

Adequate preplanning for the discharge of all but seriously ill patients frequently can allow for such combinations. Certain portions of the packaged disaster hospital (PDH) can be used to expand existing facilities—a small hospital can even triple its bed capacity. Linens from the PDH stored at Memorial were used; this is an example of availability of specific supplies for augmentation of existing facility function.

Aransas Pass along with Port Aransas caught the fury of the storm. With no hospital at Port Aransas and one of the two hospitals at Aransas Pass destroyed, improvisions by local medical personnel coupled with the lack of mass casualties prevented a major emergency. A Natural Disaster Hospital (NDH) was shipped to the community and set up to augment their existing facilities. The NDH was designed for the natural disaster. It is essen-

—The lowest priced tetracycline–nystatin combination available—

Serving Texas Physicians for Over Forty Years

Precision-engineered, functionally-built equipment

SMR keeps you and your patients' comfort and satisfaction in mind . . . a room that reflects professional good taste.

SMR has manufactured medical and Dental equipment for over forty years on a direct to user basis.

STAINLESS STEEL POLISH

SMR Stainless Steel Polish cleans, and preserves with superior results —ends fingerprints, watermarks and surface stains. 22 oz. economy $2.75 F.O.B. Plant

Factory Direct Sales

NEW CATALOG NOW AVAILABLE

SMR®

SURGICAL MECHANICAL RESEARCH, INC.

Post Office Box 1185 • (714) 646-4405

960 W. 16th St., Newport Beach, Calif. 92663

Established Over 40 Years

Please visit our booths, numbers 1, 2, 3, AAOO, Oct. 5-9, 1970, Las Vegas, Nevada.

tially a battalion aid station with an added 50 cots but without tents. It can be shipped in a small truck and was really designed for the Southwest and its tornado-hurricane problems. At this writing the NDH at Aransas Pass was still in use. As was expected, communications between Aransas Pass and Corpus Christi hospitals was a major problem but eventually the area was supplied by 'copter.' Snake antivenin was in demand.

The hospital at Taft required a generator to maintain refrigeration, etc., but with large amounts of equipment in the form of PDHs and "hospital reserve disaster inventories" stored throughout the state no problem of supply was encountered. Knowledge of need was the only requirement.

The Sinton hospital with auxiliary power supply and a PDH was better prepared. Mathis and Portland had no hospitals and their few casualties that required more than outpatient treatment were transported.

Throughout the hurricane and its aftermath, the Texas Department of Health had its personnel on duty in Corpus Christi 24 hours a day coordinating operations with Dr. Wilk.

Summary: The hurricane was extremely destructive but luckily produced very few casualties. Our deficiencies in disaster medical services were again pointed out to us:

1. Interhospital communications are essential. Key personnel should be included in the net.

2. Auxiliary power supplies are a necessity.

3. Local acquisition of auxiliary water reserves should be planned prior to a disaster.

4. Heliports should be established on the grounds of each hospital. These may well be near realities as a result of current highway safety act expenditures.

5. Local civil defense directors should acquaint themselves with disaster medical services personnel. Over the years it has been difficult to gain good working agreements in certain locales.

6. All medical personnel should know the location of their area disaster medical center and the identity of the local director of disaster medical care. It is through this person that tremendous reserves of personnel and supplies can be brought to bear in a local area overwhelmed by casualties or other medical problems.

On Sept. 14, 1919, a much less intense hurricane killed 284 people in Corpus Christi.

Health, Medical Aid Coordinated by SHD

On Aug. 2, 1970, Dr. J. E. Peavy, Commissioner of Health for the Texas State Department of Health, dispatched two representatives from the Civil Defense and Traffic Safety Division to the area where Hurricane Celia was expected to arrive on Aug. 3. Soon it became apparent that Celia would strike elsewhere, and the team moved down the coast. The day progressed; Celia changed her mind again, and Odell Griffin and Andy Woodward hurried to Corpus Christi. Their arrival almost coincided with Celia's. Stationing themselves in the Emergency Operating Center at police headquarters, they telephoned Dr. Lawrence Wilk, district director for disaster medical care, and stood by until the storm had subsided. Immediately after Celia passed, the team went to the local hospitals to determine their needs for medical personnel and supplies. Although all hospitals were damaged, some extensively, the doctors on duty and the hospital administrators did not anticipate any need for outside help. Later that night it seemed likely that more bed space might be needed; the health department team promptly arranged for the use of cots, blankets, and other supplies from a packaged disaster hospital (PDH) stored in one of the hospitals.

Since the Division of Civil Defense and Traffic Safety, under the direction of Charles E. King, coordinates activities of other state health department divisions in post-storm activities, its field personnel based in the Corpus Christi Emergency Operating Center kept in close contact with those manning the state health department's slot in the State Emergency Operating Center in Austin; radio or telephone communications were kept open around the clock.

Ham radio operators quickly began efforts to check conditions in the outlying areas, and learned that they were hard hit and needed medical supplies and equipment. From Aransas Pass came a request that a PDH be set up there to replace the two severely damaged hospitals. After personal contact with the local medical personnel, it was decided that the smaller natural disaster hospital (NDH) would be best suited to the needs. This information was relayed to the Civil Defense and Traffic Safety Division offices in Austin; the NDH located in Austin was dispatched immediately to Aransas Pass, delivered by field representatives, and was in operation before the day was out. Five babies were delivered in this hospital within the next three days.

The Division sent four more representatives to help in determining medical needs by personal contact with local health officials in the smaller communities. All requests for medical supplies were funneled into Austin through representatives of the Division. All requests were honored and delivered by state vehicles and state and privately owned aircraft. From Aug. 4 through Aug. 10, the state health department dispatched 51,360 units of typhoid vaccine, 20,100 units of tetanus toxoid, 1,200 units of diphtheria toxoid, and 34,500 syringes to the hurricane-ravaged area. From Aug. 3 through Aug. 9, the Civil Defense and Traffic Safety Division maintained communications, by radio or telephone, on a 24-hour basis; its six field representatives stayed through Aug. 10, and racked up more than 2,000 miles of driving to assure proper evaluation and efficient response to all requests for help.

Some requests for aid were fairly routine—emergency medical supplies, generators, ice for hospital use, mosquito control, and emergency water and sewer service. Others were not—gas masks to help dispose of dead animals, hand bells for hospital patients to call nurses, and help in locating two escaped elephants!

Whatever the request, the state health department was prepared to provide the service, or make contact with the agency that could.

Mini-Medical School Planned for Houston

The University of Texas System Board of Regents has approved in principle the immediate construction of a mini-medical school building for the new University of Texas Medical School at Houston.

The initial structure, to be ready by August, 1971, in the Texas Medical Center, will allow the institution to begin teaching medical students in Houston three years ahead of schedule.

The board planned to formally authorize plans for the structure at its September meeting.

The small initial structure, to cost $2,541,869 and contain about 55,500 gross square feet of floor space, will be a miniature version of a much larger building planned for completion at the Houston Medical School in 1974.

Dr. Cheves Smythe, dean of the Houston Medical School, said the initial structure will allow the school to enroll 32 first-year students in Houston in September, 1971.

The school has accepted 19 first-year students this September, with 10 being assigned to the UT Medical Branch at Galveston, five to the UT Medical School at Dallas, and four to the UT Medical School at San Antonio.

The students will be returned to Houston probably in the latter part of their second year, which would be the late spring or early summer of 1972.

The Houston Medical School expects to graduate its first class in the spring of 1974 "which is the shortest time possible—just five years after the Texas Legislature authorized this institution."

In addition to its 1970 entering class of 19 and its second class of 32 in 1971, the Houston Medical School expects to take 48 first-year students in 1972, 56 in 1973, and 64 in 1974. The school will reach its maximum entering enrollment of 200 in 1976.

San Antonio School Awarded Society Funds

A check for $9,400 was presented to The University of Texas Medical School at San Antonio by the Texas Beta Sigma Phi society. The society designated the medical school as the recipient of the proceeds from its state project for two consecutive years.

Dr. Stanley E. Crawford, chairman of the pediatrics department at the school, accepted the check from Mrs. Don Carrell and Mrs. W. W. Behnsch, state project chairmen of Beta Sigma Phi. The money will be used to equip and support a pediatric hematology laboratory.

Board Issues Warnings

The Texas Board of Vocational Nurse Examiners has issued notice of an imposter and a revoked license.

Davee Houston (or Hurston) Lewis, Social Security number 458-24-5650, of 305 South 5th Street, Temple, is noted as posing as an LVN without due registration. This person claims fictitious license numbers or that assigned to another person. The license of Violet Grable, LVN number 3530 and Social Security number 456-24-5239, of 4190 Inez Street, Beaumont, was revoked on July 24, 1970.

Texas Physicians Eager To Continue Learning; Like Variety of Teaching Methods, Media

Physicians do need and want to continue their medical education after they enter professional practice.

Information compiled by the Regional Medical Program of Texas following a survey of 445 Texas physicians has borne out the impressions of many conscientious physicians that they would participate in more continuing education courses if time were available.

The survey was initiated at the request of the Texas Medical Association's Committee on Continuing Education. The chairman, Dr. Richard D. Haines, Temple, and committee members provided guidance in the framing of the questions.

Physicians were personally interviewed for the survey under the direction of Belden Associates of Dallas.

Questionnaires were directed to physicians with practices in one of Texas' 23 Standard Metropolitan Statistical Areas* and to physicians in less populated rural areas to gain a cross-section of opinions. Random selection was made within the geographic areas. There was little variation between the response of physicians in metropolitan and those in rural areas.

A large percentage of all physicians indicated that they wanted diagnostic clinical information (82%) and therapeutic clinical information (79%). Fifty-seven percent also wanted information on current advances. Smaller percentages wanted information on basic science (20%) and current research (29%).

When asked about specific areas in which they needed more information, 65% of the respondents indicated that they needed more information on heart disease and, somewhat surprisingly, 70% noted that they needed more information on respiratory disease.

Eighty-three percent of the physicians noted that they already are attending continuing medical education programs other than hospital staff meetings and local medical society meetings. When queried on the number of continuing medical education programs they had attended in the past 12 months, 19.5% reported that they had attended two programs, 17.8% that they had attended three programs, and 15% noted that they had attended one program.

When asked whether the meetings they attended were in or out of town, 45.9% responded that they had attended meetings out of town. Here, there was a larger variance between the physicians in the Standard Metropolitan Statistical Areas (40.7% attended out of town meetings) and the physicians in the non-Standard Metropolitan Statistical Areas (64.7% attended out of town meetings).

In general, physicians reacted favorably to the courses they had taken; 51% noted that they were usually satisfied with the effectiveness of the courses they had taken and 30% observed that they were sometimes satisfied. Regarding the subject matter and availability of postgraduate programs, 37% said that they were often interested, but that they could not attend the programs.

An overwhelming response was received to the question, "Do you attend as many postgraduate programs as you would like to attend?" Eighty-one percent replied, "no." The major reason was evident in the response to the query on why they did not attend as many programs as they would have liked; 66.9% said that the major factor was lack of time and 23.3% indicated that location of the programs was a factor.

Rating of various types and sources of medical information revealed that 53.5% felt that two or three day symposia were very effective. On this query, it was apparent that many physicians were not familiar with some types of presentations; 52.3% of physicians in the SMSA group were not familiar with three to six month traineeships in teaching institutions; 41.3% with hospital television conferences from medical schools; and 52% with closed circuit television in hospitals and medical schools. Other statistics in this section indicated that 36.7% found bedside postgraduate courses in medical schools were very effective; and 35% demonstrations.

In the non-SMSA group, 55.6% felt

*Abilene, Amarillo, Austin, Beaumont-Port Arthur, Brownsville-Harlingen-San Benito, Corpus Christi, Dallas, El Paso, Fort Worth, Galveston-Texas City, Houston, Laredo, Lubbock, McAllen-Edinburg-Pharr, Midland, Odessa, San Angelo, San Antonio, Sherman-Denison, Texarkana, Tyler, Waco, and Wichita Falls.

that two or three day symposia were very effective, 35.4% that bedside postgraduate courses in medical schools were effective, 19.2% formal lectures, 33.3% demonstrations. Here, 39.3% were not familiar with bedside postgraduate courses in medical schools; 57.6% were not familiar with one to three-week in-service programs; 63.6% were not familiar with three to six month traineeships in teaching institutions; 51.4% with hospital television conferences from medical schools; 46.5% with video tapes and 64.6% with closed circuit television in hospitals and medical schools.

On effectiveness of courses sponsored by various agencies, 50% of the SMSA respondents found courses sponsored by medical societies were very effective; 41.9% that courses sponsored by voluntary health agencies were very effective, and 46.2% that courses by specialty societies were very effective. Here, again, there was an indication that physicians were not familiar with some courses; 27.7% were not familiar with courses sponsored by voluntary health agencies; 73.4% did not know about courses sponsored by junior colleges; and 71.7% did not know about courses sponsored by senior colleges.

Similar statistics were apparent in the answers of the non-SMSA respondents although they indicated a higher percentage of unfamiliarity with more courses.

In evaluating the quality of information in continuing medical education courses, 60% reported that courses they had taken were practical; and 41% that they were stimulating.

More physicians noted preference of group programs (64%) than individual programs (27%).

If the media or programs were available, 48% of the respondents noted that they would make use of textbooks; 66% would use television; and 56% would use video tapes.

Wednesday and Thursday seemed to be the most convenient days for watching educational television with weekends rated second most preferred period. Evenings after 8 p.m. or afternoons between 2 to 6 p.m. seemed to be preferred times for television viewing.

Physicians agreed on several statements submitted to them: the SMSA group noted that they needed postgraduate courses (68.2%); that common medical problems should be emphasized (71.1%); that panel discussions are valuable (52.9%); that successful programs should be repeated (66.2%); that courses covering one or two subjects intensively are good (61.6%).

The survey also revealed that 31% of the physicians spent 60 to 69 hours per week in all phases of medical work; 20.4% spent 50 to 59 hours; 16.4% spent 80 or more hours; and 14.8% spent 70 to 79 hours in medical work. The median period of time spent by all physicians was 60 hours per week.

Respondents ranged in age from 31 to 93 and represented group and individual practice, and salaried positions.

In conclusion, the survey reveals that physicians are participating in postgraduate education, that they would like to take more courses if they had time, that they like many different methods of continuing education, that they would like to know more information about specific subjects, and that there is little variation between the needs of physicians in populated and rural areas.

Hospitals' Expenses Rise, Survey Shows

The nation's 5,853 community hospitals reported a 17.3 percent increase in total expense in 1969, according to the American Hospital Association.

The annual Guide Issue of Hospitals, *Journal of the American Hospital Association*, reports total expenses for community hospitals at a peak of $16.6 billion as compared to $14.2 billion in 1968. Expense per patient day for the same reporting period jumped from $61.38 in 1968 to a high of $70.03 in the report released Aug. 1.

Earlier this year, the AHA reported the results of a panel survey, a community hospital sampling conducted monthly, which showed a 17.2 percent increase in total expenses for community hospitals in 1969.

Payroll expense continues to be the major factor in the hospital's total expense. The nation's community hospitals reported $9.8 billion paid in wages and salaries in 1969, a 16.2 percent increase over the $8.4 billion paid out a year earlier.

Community hospitals reported a total of 1.8 million employees, which amounts to 280 employees per 100 patients. A year earlier, the hospitals averaged 272 employees per 100 patients.

All hospitals registered by the AHA in the report totaled 7,144 and a new high of 2.4 million employees.

Gov. Preston Smith, right, presents proclamation designating Aug. 15-Sept. 15 as "Venereal Disease Awareness Month" in Texas to Dr. J. E. Peavy, left, Commissioner of the State Department of Health, and to Robert R. Robinson, middle, president of the Texas Alliance for the Eradication of Venereal Disease and public health adviser for the Houston Department of Public Health.

The treatment of

impotence

in the American male is complex.
The concept of chemotherapy plus the physician's psychological support is confirmed as effective therapy.

NEW CLINICAL STUDY

The Treatment of Impotence with Methyltestosterone Thyroid (100 patients—Double Blind Study)
T. Jakobovits
Fertility and Sterility, January 1970
Official Journal of the American Fertility Society

Android®

(thyroid-androgen) tablets

Double-Blind Study and Type of Patient: 100 patients suffering from undifferentiated impotence. Examination revealed the patients were within the average range of 17-Ketosteroid excretion and protein bound iodine. Except for fatigue in some patients all were in good health. Study was for one month in duration. Each patient received one tablet 3 times daily.

Results: Of the patients receiving the active medication (Android) a favourable response was seen in 78%. This compares with 40% with those on placebo. 80% of the patients treated with the active ingredients showed relief in fatigue compared with 42% of those receiving the placebo. Although psychotherapy is indicated in patients suffering from functional impotence the concomitant role of chemotherapy (Android) cannot be disputed.

Choice of 4 strengths:

Android

Each yellow tablet contains:
Methyl Testosterone ..2.5 mg.
Thyroid Ext. (1/6 gr.) ..10 mg.
Glutamic Acid .....50 mg.
Thiamine HCL .....10 mg.
Dose: 1 tablet 3 times daily.
Available:
Bottles of 100, 500, 1000.

Android-HP
HIGH POTENCY

Each red tablet contains:
Methyl Testosterone ..5.0 mg.
Thyroid Ext. (½ gr.) ...30 mg.
Glutamic Acid .....50 mg.
Thiamine HCL .....10 mg.
Dose: 1 tablet 3 times daily.
Available:
Bottles of 100, 500, 1000.

Android-X
EXTRA HIGH POTENCY

Each orange tablet contains:
Methyl Testosterone .12.5 mg.
Thyroid Ext. (1 gr.) ....64 mg.
Glutamic Acid .....50 mg.
Thiamine HCL .....10 mg.
Dose: 1 or 2 tablets daily.
Available:
Bottles of 60, 500.

Android-Plus
WITH HIGH POTENCY B-COMPLEX AND VITAMIN C

Each white tablet contains:
Methyl Testosterone ..2.5 mg.
Thyroid Ext. (¼ gr.) ...15 mg.
Ascorbic Acid (Vit. C) .250 mg.
Thiamine HCL .....25 mg.
Glutamic Acid .....100 mg.
Pyridoxine HCL .....5 mg.
Niacinamide .....75 mg.
Calcium Pantothenate .10 mg.
Vitamin B-12 .....2.5 mcg.
Riboflavin .....5 mg.
Dose: 2 tablets daily.
Available: Bottles of 60, 500.

Contraindications—Methyltestosterone is not to be used in malignancy of reproductive organs in male, coronary heart disease. Thyroid is not to be used in heart disease, hypertension unless the metabolic rate is low.

References: 1. **Mantesano, P., and Evangeliste, I.** Methyltestosterone-thyroid treatment of sexual impotence. Clin Med 12:69, 1966. 2. **Dublin, M. F.** Treatment of impotence with methyltestosterone-thyroid compound. West Med 5:67, 1964. 3. **Tiefl, A. S.** Methyltestosterone-thyroid in treating impotence. Gen Prac 25:6, 1962. 4. **Hellman, L., Bradlow, H. L., Zumoff, B., Fukushima, D. K., and Gallagher, T. F.** Thyroid-androgen interrelations and the hypocholesteremic effect of androsterone. J Clin Endocr 19:936, 1959. 5. **Farris, E. J., and Colton, S. W.** Effects of L-thyroxine and liothyronine on spermatogenesis. J Urol 79:863, 1958. 6. **Osol, A., and Farrar, G. E.** United States Dispensatory (ed. 25). Lippincott, Philadelphia, 1955, p. 1432. 7. **Wershub, L. P.** Sexual Impotence in the Male. Thomas, Springfield, Ill., 1959, pp. 79-99.

REFER TO PDR

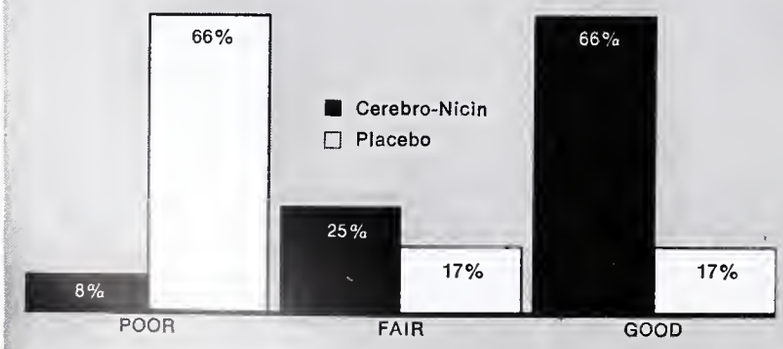
Write for literature and samples: BROWN **THE BROWN PHARMACEUTICAL CO., INC.** 2500 West 6th Street, Los Angeles, California 90057
A SUBSIDIARY OF ASSOCIATED CARE ENTERPRISES, INC.

For the treatment of the aging patient

Cerebro-Nicin®

capsules/elixir

A Gentle Cerebral Stimulant and Vasodilator



CEREBRO-NICIN® New double-blind study* shows how effectively senility can be forestalled. Four times as many aging patients showed striking improvement.

*A Double-Blind Study of Cerebro-Nicin, Therapy for the Geriatric Patient, R. Goldberg Jrnl,. of the Amer. Ger. Soc. June, 1964

Available in a tasty wine base elixir and capsules

Each Cerebro-Nicin capsule contains:

Pentylenetetrazole	100 mg.
Nicotinic Acid	100 mg.
Ascorbic Acid	100 mg.
Thiamine HCl	25 mg.
1-Glutamic Acid	50 mg.
Niacinamide	5 mg.
Riboflavin	2 mg.
Pyridoxine	3 mg.

DOSAGE: One capsule t.i.d. or as prescribed by physician.
AVAILABLE: Bottles of 100, 500, 1000 capsules.
Also elixir 8 oz. bottles.
CONTRAINDICATIONS: There are no known contraindications to Pentylenetetrazole although caution should be exercised when treating patients with a low convulsive threshold.
Most persons experience a flushing or tingling sensation after taking a higher potency niacin-containing compound. As a secondary reaction some will complain of nausea and other sensations of discomfort. This reaction is transient and is rarely a cause of discontinuance of the drug if the patient is forewarned to expect the reaction.

REFER TO PDR

Write for literature and samples...

BROWN **THE BROWN PHARMACEUTICAL CO.**
2500 W. 6th St., Los Angeles, Calif. 90057
Write for Product Catalog

Schering

After only one year:

Administered to more people than live in Galveston, Waco, and Texas City.*

Injectable
Garamycin®
brand of
gentamicin sulfate
injection

*An estimated 208,000 patients have received GARAMYCIN Injectable to date. The combined population of Galveston, Waco, and Texas City is 203,000. (Estimated 1969 figures from The New York Times Encyclopedic Almanac 1970.)

See Clinical Considerations section on last page...

Injectable Garamycin®

brand of gentamicin sulfate injection

Schering

ADULT DOSAGE GUIDELINES

See definitive prescribing information in Package Insert.

Patients with Normal Renal Function

Total Daily Dose (administered in two, three, or four divided doses)			
	Less Severe	Resistant/ Moderately Severe	Serious/Life-Threatening
Urinary Tract Infections (due to susceptible strains of gram-negative bacteria)†	0.8-1.2 mg./kg. for 7-10 days	Larger doses or additional antibacterial therapy should be considered in severe urinary tract infections or in resistant cases involving the renal parenchyma or anatomic anomaly.	up to 5 mg./kg.
Other Infections including bacteremia, infected surgical wounds, severe soft tissue infections, and respiratory tract infections (due to susceptible strains of gram-negative bacteria)	3 mg./kg. for 7-10 days		

†Alkalinization of the urine may be a useful therapeutic adjunct.

Patients with Impaired Renal Function

To minimize the risk of ototoxicity in patients with impaired kidney function, only the first dose should be that normally recommended. Each subsequent dose should be half or less of that recommended for patients with normal renal function, depending upon the degree of renal impairment.

In patients with renal failure who are undergoing 14-hour hemodialysis twice weekly, administration of 1 mg./kg. GARAMYCIN Injectable at the end of each dialysis period has been suggested.

Clinical Considerations

Indications: GARAMYCIN Injectable is clinically effective in infections due to susceptible strains of gram-negative bacteria, including *Pseudomonas aeruginosa,* and species of indole-positive and indole-negative *Proteus, Escherichia coli,* and *Klebsiella-Aerobacter.* Bacteriologic studies should be conducted to identify the causative organism and to determine its sensitivity to gentamicin sulfate. Sensitivity discs of the drug are available for this purpose. If the susceptibility tests indicate that the causative organism is resistant to gentamicin sulfate, other appropriate antibiotic therapy should be instituted.

IN VITRO INHIBITION OF CLINICALLY IMPORTANT BACTERIA BY GENTAMICIN SULFATE (TUBE DILUTION STUDIES)

BACTERIA	No. of Strains Tested	No. of Strains (%) Inhibited by: 4 mcg./cc. or less		8 mcg./cc. or less*		No. of *In Vitro* Studies
Staphylococcus aureus	1,210	1,200	(99%)	1,206	(99%)	11
Pseudomonas aeruginosa	885	771	(87%)	828	(93%)	16
Escherichia coli	836	736	(88%)	779	(93%)	11
Indole-positive and indole-negative *Proteus* species	477	210	(44%)	358	(75%)	12
Klebsiella-Aerobacter species	292	205	(70%)	231	(79%)	10

*Number of strains (%) of gram-negative bacteria inhibited by 10 mcg./cc. or less are as follows: *Pseudomonas aeruginosa,* 828 (93%); *Escherichia coli,* 792 (95%); *Proteus* species, 393 (82%); *Klebsiella-Aerobacter* species, 284 (97%). From same studies as above.
Source: Package Insert

This drug should be limited to the treatment of serious infections caused by gram-negative bacteria, particularly *Pseudomonas aeruginosa, Proteus* and other susceptible organisms, with due regard for relative antibiotic toxicity. Therefore, the drug should be considered for use against gram-negative: 1. Bacteremia; 2. Infected surgical wounds; 3. Severe soft tissue infections, including burns complicated by sepsis; 4. Respiratory tract infections; and 5. Selected cases of urinary tract infection.

Contraindications: GARAMYCIN Injectable is contraindicated in individuals with a history of hypersensitivity or toxic reactions to gentamicin.

Warnings: Patients receiving treatment with GARAMYCIN should be under close clinical observation because of the toxicity associated with the use of this drug. Ototoxicity, vestibular and auditory, can occur in patients, primarily those with pre-existing renal damage, treated with GARAMYCIN Injectable, usually for longer periods or with higher doses than recommended.

GARAMYCIN Injectable is potentially nephrotoxic, and this should be kept in mind when it is used in patients with pre-existing renal impairment. Kidney function diminished by infection of the upper urinary tract may, however, improve during effective treatment with GARAMYCIN Injectable.

Concurrent administration of potentially ototoxic drugs such as streptomycin and kanamycin or of potentially nephrotoxic drugs such as polymyxin, colistin, and kanamycin with gentamicin sulfate has not been shown to afford any clinical advantages and, moreover may result in additive toxicity. Monitoring of vestibular, cochlear, and renal function will provide guidance for therapy in such cases.

Precautions: In patients with impaired renal function in whom serious infection develops, serum concentrations of the drug may rise, with consequently increased risk of ototoxicity. In these patients or in those in whom recommended dosage or duration of therapy must be exceeded as a life-saving measure, routine studies of kidney function should be performed when possible. These may be supplemented by evaluation of the vestibular and auditory function and measurement of serum concentration of the drug when feasible. Serum concentrations of gentamicin should be maintained below the range of 10-12 mcg./ml. to reduce risk of ototoxicity.

Ordinarily, treatment should not be given for more than 7 to 10 days or be repeated unless required for serious infection not responsive to other agents.

As with other antibiotics, treatment with GARAMYCIN Injectable may occasionally result in overgrowth of nonsensitive organisms. If superinfection occurs, appropriate therapy is indicated.

Safety for use in pregnancy or the potential for fetal ototoxicity or nephrotoxicity have not been established. Studies in pregnant animals have not revealed teratogenic or ototoxic effects in the fetus. GARAMYCIN Injectable should not be used in pregnant patients or in women of childbearing age unless its use is deemed advisable by the physician.

Adverse Reactions: The overall incidence of ototoxicity considered related to treatment with GARAMYCIN Injectable was 2.8 per cent (16 of 565 patients). Contributory factors (two or more factors were relevant to most patients) were as follows: 10 had azotemia, 10 received a total of 1 gram or more of the drug, 7 had recently received other potentially ototoxic antibiotics (streptomycin or kanamycin), and 5 were over 60 years of age. Six also had decreased high-tone hearing acuity, which returned to or toward normal in the 4 patients retested.

Analysis of BUN data indicated that 4 (2%) of 172 patients showed increases in BUN that were probably related to treatment with GARAMYCIN Injectable. Of 20 increases probably or possibly related to treatment, 7 were reversible, 9 occurred in terminal patients, and 4 had no follow-up.

Other adverse reactions associated with treatment were one instance each of urticaria, decreased hematocrit, and reversible depression of granulocytes with normal bone marrow. Other rarely reported and possibly treatment-related adverse reactions were anemia, increased reticulocyte count, rash, purpura, drug fever, hypotension, convulsions, twitching, salivation, nausea, vomiting, increased transaminase activity (SGOT or SGPT), increased serum bilirubin, decreased serum calcium, and joint pain.

Packaging: GARAMYCIN Injectable, 40 mg./cc., 2-cc. multiple-dose vials, for intramuscular administration.

For more complete prescribing details, consult package insert or Physicians' Desk Reference. Schering literature is also available from your Schering Representative or Medical Services Department, Schering Corporation, Union, New Jersey 07083.

AHFS CATEGORY 8:12.28 S-029

Medical Examiners List Exam Honor Roll MDs

Dr. Clifton Marlow Patton, Jr., Baylor College of Medicine, heads the list of honor roll examinees for the June, 1970, examination administered by the Texas State Board of Medical Examiners. Dr. Patton topped the list with a general grade average of 93.3.

Other honor roll physicians from Baylor College of Medicine taking the June, 1970, examination include Drs. Walter Alfred Rohlfing, III, 92.7; John Holbrook Chalmers, Jr., 91.8; Richard John Otto Ostman, Jr., 91.6; Robert Philip Witherspoon, 91.3; James Everett Key, II, 91.2; John George Colias, 91.2; Susan Pound Bagby, 91.2; Robert Murdock Ogburn, 91.1; Francis Patrick Hadlock, 90.9; George Daniel Pope, 90.7; Richard John Moore, 90.7; Frederick William Hanson, Jr., 90.7; John Wilhite Caudill, Jr., 90.7; Edwin Eugene Terry, 90.4; Gordon Grant Gehring, 90.3; George Washington Delavan, III, 90.2; John Loder Carpenter, 90.1; Ralph Barkley Clark, 90.0; and Gary Logan Forster, 90.0.

Five physicians from The University of Texas Medical Branch at Galveston made the honor roll: Drs. Kenneth W. Teufel, 92.1; Robert Logan Ward, 91.5; Thomas Charles Wascher, 90.6; Thomas Mason Lunsford, 90.5; and Don Charles Payne, 90.1.

On the honor roll from The University of Texas (Southwestern) Medical School are Drs. David Lynn Luterman, 91.1; Mary Gill Mauldin, 90.7; John F. Lucas, Jr., 90.7; and Zechariah Clifton Damerson, III, 90.7.

PERSONALS

Dr. Raymond Gardea of El Paso was recently elected secretary-treasurer of the Southwest Educational Development Corporation in Austin. Dr. Gardea fills the post vacated by the death of Dr. Felton Clark of Baton Rouge, La.

At the recent 10th Congress of the International Association of Microbiological Studies (IAMS) held in Mexico City, **Dr. Joseph L. Melnick,** professor of virology and epidemiology and associate dean for graduate studies at Baylor College of Medicine, was elected chairman of the newly formed Section on Virology. He was also elected to the Executive Board of the IAMS.

A Dallas internist, **Dr. Bryan Williams,** will become associate dean for student affairs at The University of Texas (Southwestern) Medical School this fall.

Dr. Williams will succeed **Dr. Reuben Adams** who has been named chief of obstetrics and gynecology at Baylor University Medical Center in Dallas.

Dr. David D. Daly, Scottish Rite Professor of Neurology at The University of Texas (Southwestern) Medical School, has been selected to lead an international commission to coordinate studies and evaluations of anticonvulsant drugs.

Dr. John S. Chapman, professor of internal medicine and assistant dean for postgraduate education at The University of Texas (Southwestern) Medical School in Dallas, will succeed Dr. Katharine Boucot Sturgis, emeritus professor of preventive medicine and past chairman of the department of preventive medicine at the Medical College of Pennsylvania, as chief editor of *Archives of Environmental Health.*

Dr. Chapman will assume his duties as chief editor on Jan. 1, 1971.

Dr. M. T. Jenkins, chairman of the Department of Anesthesiology at The University of Texas (Southwestern) Medical School at Dallas, has been named consultant to the Food and Drug Administration's advisory committee on respiratory and anesthetic drugs.

Dr. Jere Mitchell, professor in the departments of internal medicine and physiology and director of the Pauline and Adolph Weinberger Laboratory for Cardiopulmonary Research at The University of Texas (Southwestern) Medical School at Dallas, will spend a year as a visiting scientist at Oxford University in England.

A former Established Investigator for the American Heart Association, Dr. Mitchell will study the relationship of the nervous system to the heart at the University Laboratory of Physiology.

Dr. Winfred L. Sugg, who was on the faculty of The University of Texas (Southwestern) Medical School from 1966 to 1969, has returned as chairman of the Division of Thoracic and Cardiovascular Surgery.

Dr. Thomas P. Haynie, chief of the section of nuclear medicine at The University of Texas M. D. Anderson Hospital and Tumor Institute at Houston, was recently elected president of the Texas Association of Physicians in Nuclear Medicine.

PAMPHLETS

A married woman who is over 25 years old when she enters a practical nursing school is a better bet for remaining in the health labor force than the younger, unmarried woman, a study made recently by the National League for Nursing, New York, reveals. A report of the study, *Five Years After Graduation,* just published, traces the careers of 3,014 students who entered 117 practical nursing schools in 1962. Emerging from the report is this composite picture of the practical nurse likely to be the most stable in the health labor force: over 25 years old when she entered nursing school; married to a semiskilled or unskilled worker; comes from a modest or low-income family; and may or may not be a high school graduate. The report is one of a series in the League's Nurse Career Pattern Study in which material is being gathered on practical and registered nursing students.

The 79-page booklet is available from the Publications Unit, National League for Nursing, 10 Columbus Circle, for $3.00.

For 75 cents, the diabetic geriatric patient or the diabetic with an eyesight problem can obtain an eight-page brochure designed especially for him. The combined efforts of five dietitians, an ophthalmologist, a public relations director, and a typographer went into the publication of *Your Diabetic Food Exchange Plan.*

The brochure, produced by the Diet Therapy Committee of North Suburban Dietetic Association of Illinois, was designed to answer the needs of the older patient, but it can be used by all ages and those who have eyesight problems have found it especially useful.

The contents of the brochure are presented in a simple, easy-to-understand fashion, with a carefully selected type face and type style. The paper is a special type with a plasticized finish that will withstand folding and unfolding thousands of times without cracking and may be cleaned by wiping with a damp cloth.

Copies of the brochure are available from North Suburban Dietetic Association, Box 329, Glenview, Ill. 60025.

Senior Consultants
Perry C. Talkington, M.D.
Charles L. Bloss, M.D.

Psychiatrist-In-Chief
Howard M. Burkett, M.D.

Medical Director
James K. Peden, M.D.

Associate Psychiatrists
Jerry M. Lewis, M.D.
Claude L. Jackson, M.D.
Dode Mae Hanke, M.D.
Thomas H. Allison, M.D.
Maurice S. Green, M.D.
Doyle I. Carson, M.D.
Stanley L. Seaton, M.D.
Keith H. Johansen, M.D.
Charles G. Markward, M.D.
Joe W. King, M.D.
Claude R. Nichols, M.D.
Larry E. Tripp, M.D.
Aretta J. Rathmell, M.D.
Donald N. Offutt, M.D.

Clinical Psychology
David H. Lipsher, Ph.D.
John T. Gossett, Ph.D.
Dale R. Turner, Ph.D.
Robert W. Hagebak, Ph.D.

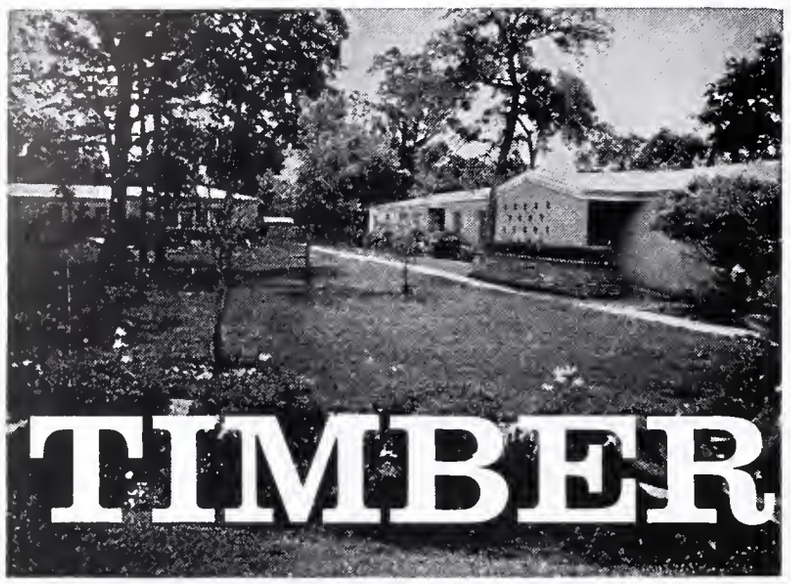
Social Work
Sally Stansfield, M.S.W.
Kathleen Wood, M.S.W.
Robert P. Stewart, M.S.S.W.
Margie W. Buell, M.S.S.W.
Cecilia Coffelt, M.S.S.W.
Lionel C. Landry, M.S.W.

Occupational Therapy
Geraldine Skinner, B.S., O.T.R., Director

Recreational Therapy
Lois Timmins, Ed.D., Director

Director of Nurses
Mae Belle James, R.N.

Administrator
Ralph M. Barnette, B.B.A.



PSYCHIATRIC HOSPITAL

DAY HOSPITAL

DEPARTMENT OF OUT PATIENT PSYCHIATRY

DEPARTMENT OF ADOLESCENT PSYCHIATRY

Narcotic Cases Not Admitted

TIMBERLAWN
PSYCHIATRIC HOSPITAL

381-7181 Dallas, Texas 75223 P. O. Box 11288

KELSEY-SEYBOLD CLINIC

6624 FANNIN STREET HOUSTON, TEXAS 77025

526-2671

INTERNAL MEDICINE

Endocrine and Metabolic Diseases
Mavis P. Kelsey M.D., F.A.C.P.
Alfred E. Leiser, M.D., F.A.C.P.

Pulmonary Diseases
Stanton P. Fischer, M.D., F.A.C.P.

Gastrointestinal Diseases, Gastroscopy
John R. Kelsey, M.D., F.A.C.P.
Philip S. Bentlif, M.D., F.A.C.P.
Ralph D. Eichhorn, M.D., F.A.C.P.
F. Scott O'Neil, M.D., F.A.C.P.
James W. McBee, M.D., F.A.C.P.

Heart Disease and Cardiac Catheterization
Earl F. Beard, M.D., F.A.C.P.
Efrain Garcia, M.D., F.A.C.P.

Arthritis and Rheumatic Diseases
James W. Kemper, M.D., F.A.C.P.
Martin S. Fischer, M.D.

Hypertension and Peripheral Vascular Diseases
Gene E. Burke, M.D.

Cancer Chemotherapy
Carlos F. Tahoada, M.D.

Nephrology
Francis X. Schloeder, M.D., F.A.C.P.

Hematology
Jerome B. Bart, M.D.

Infectious Diseases
Stuart Riggs, M.D., F.A.C.P.

Occupational Health Services
Paul E. Wright, M.D., M.P.H., F.A.C.P.
Maurice B. Johnston, M.D., F.A.C.Pr.M.
Richard M. Fenno, M.D., M.P.H., F.A.C.P.
Cannon A. Owen, M.D., F.A.C.S.
Edward A. Anderson, M.D., F.A.C.Pr.M.
William E. Froemming, M.D., F.A.C.Pr.M.

GENERAL & THORACIC SURGERY
William D. Seybold, M.D., F.A.C.S.
James D. McMurrey, M.D., F.A.C.S.
Jerry L. Doggett, M.D., F.A.C.S.

OBSTETRICS & GYNECOLOGY
Melville L. Cody, M.D., F.A.C.S.
William A. Johnson, III, M.D., F.A.C.O.G.

PSYCHIATRY
Chester G. Cochran, M.D.
*Ricardo Daichman, M.D.
William H. Boylston, M.D.
Manuel C. Ramirez, M.D.

PEDIATRICS

Rheumatology
Earl J. Brewer, Jr., M.D., F.A.A.P.

Allergy
Charles W. Ewing, M.D., F.A.A.P.
George D. Ferry, M.D.

OTO-LARYNGOLOGY
J. Charles Dickson, M.D., F.A.C.S.
James L. Smith, M.D., F.A.C.S.

NEUROLOGY
Robert R. Pierce, M.D.

DERMATOLOGY
Wilson M. Fraser, M.D., F.A.A.P.
Donald W. Owens, M.D.

UROLOGY
Don W. Pranke, M.D., F.A.C.S.
J. David Wright, M.D.

ORTHOPEDIC SURGERY
W. Malcolm Granberry, M.D.
Jesse H. Dickson, M.D.

OPHTHALMOLOGY
Henry E. Wahlen, M.D., D.A.B.O.

RADIOLOGY
David M. Rulfs, M.D.

PATHOLOGY
Robert A. Jordan, M.D.

DENTISTRY
Eugene W. Gray, D.D.S.

PSYCHOLOGY
Mrs. Ruth Blackman, M.A.
Cheryl Greathouse, M.A.

SPEECH PATHOLOGY AND AUDIOLOGY
Donna R. Fox Ph.D.
Carolyn C. Garcia, M.S.

CONSULTANTS

Maxillo Facial Surgery
Edward C. Hinds, M.D., D.D.S., F.A.C.S.

Psychiatry
Albert Owers, M.D.

Pulmonary Diseases
H. Irving Schweppe, Jr., M.D., F.A.C.P.

Nuclear Medicine
John A. Burdine, Jr., M.D.

Gastrointestinal Diseases, Gastroscopy
Theodore Hersh, M.D.

Occupational Medicine
Valliant C. Baird, M.D., F.A.C.Pr.M.

Podiatry
Levitt A. Peters, D.P.M.

SPECIAL FACILITIES
Radioisotope Laboratory
Registered Dietitian
Electroencephalography
Electrocardiography
Vectorcardiography
Registered Physiotherapist
Pulmonary Function Lahoratory
Regional Immunization Center
FAA Examinations
Complete Endoscopy
Audiology Laboratory
Electrolysis

ADMINISTRATOR
James A. Bakken

*Military Service

Textbooks, Handbook Found to Be Useful References

A **Synopsis of Clinical Anatomy,** John E. Healey, Jr., 324 pp., illus., Philadelphia, W. B. Saunders Co., 1969, $18.

AS THE AUTHOR states in the preface of his book, the anatomy of the head and neck is somewhat neglected, although the gross and surgical anatomy of the triangles of the neck are well presented. The bases of the radical neck dissection are nicely revised.

In the thoracic chapter, discussion should have been included regarding the most common variations of the branching of both pulmonary arteries, since these structures are the next most common variants after the veins.

Although modern anatomy has dropped from its nomenclature names such as innominate artery for the brachiocephalic artery, the author uses the old terminology in his book. Also, proper names are used often. For instance, the names Treitz ligament, ligament of Berry, Laimer's area, and so forth are used. I believe that proper names should be dropped from anatomy and that more proper and descriptive names should be attached to anatomical structures.

I did not find a single colored drawing in the entire book. Black and white anatomy is death anatomy. Surgical or clinical anatomy texts should include realistic color illustrations similar to what is seen every day in the operating room.

In the anatomy of the abdomen, the author describes very well the highlights of the normal and abnormal mechanisms of rotation of the gut. This rotation is, I think, the real clue for understanding not only the different relationships of the abdominal viscera but also the reasons behind many of the surgical techniques that the surgeon uses today and the pathogenesis of many abnormalities in the development of the gut.

This book is not just another atlas which has invaded surgical fields in the last ten years. Rather, it is a useful, quick reminder of clinical anatomy for the general practitioner and for the general or specialized practicing surgeon.

MANUEL GUERRA, M.D.,
Pittsburg, Tex.

Orthopaedics for the Undergraduate, W. A. Crabbe, 314 pp., illus., Philadelphia, Lea & Febiger, 1969, $7.50.

THIS BOOK is a well-prepared textbook for the undergraduate in orthopedics. The excellent line drawings, historical comments, and detailed index enhance the value of the book. It should be noted that the book has been written with the British medical student in mind.

MEMORIAL LIBRARY STAFF.

Disaster Handbook, ed. 2, Solomon Garb and Evelyn Eng, 310 pp., illus., New York, Springer Publishing Co., Inc., 1969, $4.50.

THIS HANDBOOK can be used to great advantage by doctors, nurses, and others involved in the handling of disaster victims. It has been proved that responsible people should be trained to assume leadership in the prevention and reduction of casualties during disasters. Many more disaster victims could have been saved during the great Texas City fire and during the sinking of the Titanic if properly trained personnel had been available to rescue the victims and to provide first aid.

The great disasters are listed in the handbook by year and place: examples of disasters in Texas are the 1965 flood at Sanderson; the airplane crash at Dawson on May 3, 1968; and the Texas hurricanes of 1957, 1961, and 1967.

Disaster Handbook is an excellent disaster encyclopedia.

MEMORIAL LIBRARY STAFF.

NEW BOOKS IN TMA LIBRARY

Adair, J., and Deuschle, K.: *The People's Health,* New York, Appleton-Century-Crofts, 1970.

American Academy of Orthopaedic Surgeons: *Instructional Course Lectures,* vol. XIX, St. Louis, The C. V. Mosby Co., 1970.

Bibring, G. L., ed.: *The Teaching of Dynamic Psychiatry,* New York, International Universities Press, Inc., 1968.

Benirschke, K., and Driscoll, S. G.: *The Pathology of the Human Placenta,* New York, Springer-Verlag, 1967.

Bossy, J.: *Atlas of Neuroanatomy and Special Sense Organs,* Philadelphia, W. B. Saunders Co., 1970.

Council on Medical Education, Mississippi State Medical Association: *Profile of Attainment Measure of Need,* Jackson, Miss., Mississippi State Medical Society, 1968.

Cooper, I. S.: *Involuntary Movement Disorders,* New York, Hoeber Medical Division, Harper & Row, 1969.

Dalton, W., ed.: *Forward By Plan,* Washington, D.C., Chamber of Commerce of the United States, 1969.

Gillingham, F. J., ed.: *Clinical Surgery; Neurosurgery,* Philadelphia, J. B. Lippincott Co., 1970.

Greenfield, M.: *Medicare and Medicaid: The 1965 and 1967 Social Security Amendments,* Berkeley, University of California Press, 1968.
Gustafson, S. R., and Coursin, D. B., eds.: *The Pediatric Patient 1968,* Philadelphia, J. B. Lippincott Co., 1968.
Harris, R. T., et al.: *Drug Dependence,* Austin, University of Texas Press, 1970.
Hahn, F. E., ed.: *Progress in Molecular and Subcellular Biology,* vol. 1, New York, Springer-Verlag, 1969.
Krevans, J. R., and Condliffe, P. G.: *Reform of Medical Education; The Effect of Student Unrest,* Washington, D.C., National Academy of Sciences, 1970.
Lamb, L.: *Your Heart and How to Live With It,* New York, The Viking Press, Inc., 1969.
Mechanic, D.: *Medical Sociology; A Selective Review,* New York, The Free Press, 1968.
Rosen, E. S., et al.: *Fluorescence Photography of the Eye; A Manual of Dynamic Clinical Ocular Fundus Pathology,* New York, Appleton-Century-Crofts, 1969.
Smillie, I. S.: *Injuries of the Knee Joint,* ed. 4, Baltimore, Williams & Wilkins Co., 1970.
Solbrig, O. T.: *Principles and Methods of Plant Biosystematics,* Toronto, The Macmillan Company, 1970.

Recent Deaths

Dr. W. Carter

Retired Sherman ear, nose, and throat specialist Dr. Wilbur Carter died July 16, 1970. He was 79.

Dr. Carter, born June 11, 1891, in Whitewright, Tex., was the son of James Malone and Laura Montgomery Carter. In 1910, he received a BS degree from Grayson College at Whitewright and in 1915 received his MD degree from UT Medical Branch at Galveston. He interned from 1914-1915 at John Sealy Hospital at Galveston and was a resident from 1915-1916 at New York Eye and Ear Infirmary at New York City. Dr. Carter moved to Sherman in 1916. From 1916-1918, he served as a first lieutenant in the US Army Medical Corps at Fort Riley, Kan., then returned to Sherman where he was in practice until his retirement in 1957.

A member of Grayson County Medical Society, Dr. Carter was elected to

DR. CARTER

honorary memberships in Texas Medical Association and American Medical Association in 1965. He had served on the board of trustees of the Presbyterian Home at Waxahachie for 44 years and was an elder at Trinity United Presbyterian Church in Sherman. He also belonged to the Veterans of Foreign Wars.

Surviving Dr. Carter are his wife, the former Hazel Hollinsworth of Sherman; and a sister, Mrs. E. O. Thomas of Tom Bean, Tex.

Dr. J. E. Green

Dr. John Edward Green, Sr., 85, of Marlin, Tex., died June 24, 1970, in Marlin.

Dr. Green was born Nov. 5, 1884, in Kosse, Tex., and was the son of G. W. and Mary Agnes Harper Green. He attended North Texas State Normal at Denton, Tex., now North Texas State University, and graduated from The University of Texas Medical Department at Galveston with an MD degree in 1911. Dr. Green served an internship at Southern Pacific Hospital in Houston from 1911-1912. He began practicing medicine in Kosse in 1915 where he remained until 1940. He practiced in San Antonio and Waco before moving to Marlin in 1953, where he practiced until his retirement in 1958.

Elected to honorary membership in Texas Medical Association in 1962, Dr. Green was also a member of Falls County Medical Society and American Medical Association. He had served as city health officer and as local surgeon for Southern Pacific Railroad in Kosse for many years, and was secretary of Limestone County Medical Society from 1936-1938.

DR. GREEN

Surviving Dr. Green are his wife, the former I. D. Pevey; a son, Dr. John E. Green, Jr., of Ballinger, Tex.; two daughters, Mrs. Mary Louise Hilley of Fort Worth and Linda Kay Green of Marlin; a half-brother, Robert Moore of Salina, Kan.; and seven grandchildren.

Dr. J. W. Collier

Fort Worth general practitioner Dr. Julius William Collier, 45, died July 17, 1970, in a Fort Worth hospital.

Born Oct. 29, 1924, in Waco, Tex., Dr. Collier was the son of Julius Weaver and Helen Raywil Smith Collier. He was graduated from Baylor University in Waco in 1947 with a BA degree and received his MD degree in 1951 from Baylor College of Medicine. He interned from 1951-1952 and served a residency from 1952-1953 at City-County Hospital, now John Peter Smith Hospital, in Fort Worth. Dr. Collier served in the Pacific from 1943-1946 as a lieutenant junior grade in the US Navy and began practicing medicine in Fort Worth in 1953.

DR. COLLIER

A member of Tarrant County Medical Society, Texas Academy of General Practice, American Academy of General Practice, and American Medical Association, Dr. Collier was elected to inactive membership in Texas Medical Association in 1970. He was a deacon at Broadway Baptist Church in Fort Worth.

Surviving Dr. Collier are his wife, the former Mary Oden; two sons, James Louis and John David Collier; two daughters, Elizabeth and Mary Jane Collier; and his mother, all of Fort Worth.

Dr. H. D. Hatfield

Dr. Haskell D. Hatfield, 61, El Paso, died July 1, 1970, in El Paso. Cause of death was hepatoma and portal hypertension.

The son of Andrew J. and Emma Lee Henrickson Hatfield, Dr. Hatfield was born Nov. 8, 1908, at Perry County, Ind. He attended Texas College of Mines, now The University of Texas at El Paso, and received an MD

DR. HATFIELD

degree in 1934 from The University of Texas Medical School at Galveston. He served an internship at El Paso City-County Hospital in El Paso from 1934-1935; did postgraduate work at Washington University School of Medicine in St. Louis, Mo., from 1946-1947; and served a residency at Jefferson Davis Hospital in Houston from 1947-1948. He served as a flight surgeon in the US Air Force from 1941-1946 and attained the rank of lieutenant colonel.

Dr. Hatfield was a member of El Paso County Medical Society, Texas and American Medical Associations, Texas Society of Ophthalmology and Otolaryngology, American Academy of Ophthalmology and Otolaryngology, American College of Surgeons, and American Broncho-Esophagological Association. A member of Phi Delta Theta, he also was a Mason.

Surviving Dr. Hatfield are his wife, the former Frances Lee Harrs; and two sons, H. Harris Hatfield of El Paso and Dr. Dolph Hatfield of Bethesda, Md.

DR. BOEHLER

Dr. C. C. Boehler

El Paso obstetrician and gynecologist Dr. Clement Conrad Boehler, 59, died June 19, 1970, of an apparent heart attack.

The son of Frank and Mattie Colgon Boehler, Dr. Boehler was born Nov. 5, 1910, in Alma, Neb. He attended Creighton University College of Arts and Sciences at Alma, Neb., and was graduated from Creighton University School of Medicine at Omaha, Neb., in 1934 with an MD degree. He interned at Mercy Hospital in Chicago from 1934-1935 and served a residency at Lewis Memorial Maternity Hospital in Chicago from 1935-1936.

A World War II veteran, Dr. Boehler had served in the Pacific as lieutenant commander in the US Navy and received the Navy Commendation for Professional Work.

Dr. Boehler was a member of El Paso County Medical Society, Texas Medical Association, American Medical Association, Central Association of Obstetricians and Gynecologists, and was a past president of Southwestern Medical Association. He was a diplomate of the American Board of Obstetrics and Gynecology and a fellow of American College of Surgeons and American College of Obstetricians and Gynecologists.

Survivors include Dr. Boehler's wife, the former Helen Armstrong; three sons, David Boehler of Las Cruces, N.M., Robert Boehler and Richard Boehler of El Paso; five daughters, Mrs. Tom Owens of Honolulu, Hawaii, Mrs. Richard Lonneker of San Diego, Calif., Barbara Boehler of Washington, D.C., Christi Boehler and Katherine Boehler of El Paso; and five grandchildren.

Dr. W. E. Flood

Dr. William Edward Flood, 59, Fort Worth dermatologist, died in Fort Worth July 11, 1970, of a heart attack.

The son of William Edward and Lillian Sanders Flood, Dr. Flood was born Oct. 10, 1910, in Fort Worth. He attended Texas Christian University in Fort Worth and was graduated from Baylor University College of Medicine at Dallas in 1939 with an MD degree. He interned at City-County Hospital, now John Peter Smith Hospital, in Fort Worth from 1939-1940; served a residency at Massachusetts General Hospital in Boston from 1940-1942; and did postgraduate work at Harvard Medical School in Boston. An Air Force veteran of World War II, he was discharged as a captain in 1946 and began practicing in Fort Worth.

A past president of Tarrant County Medical Society and Texas Dermatological Society, Dr. Flood was also a member of Texas Medical Association, American Medical Association, Southern Medical Association, American Academy of Dermatology, Inc., and Fort Worth Academy of Medicine. He was a member of Hemphill Heights Masonic Lodge No. 1164 and First Congregational Church in Fort Worth.

Surviving Dr. Flood are his wife, the former Dell Vinnedge; a son, Terrell David Flood of Fort Worth; and a brother, Thomas H. Flood of Odessa.

DR. FLOOD

DR. McCLURE

Dr. W. H. McClure

Kermit general practitioner and surgeon Dr. Wayne Hammer McClure, 63, died in Kermit July 12, 1970, of an apparent heart attack.

Dr. McClure was born Sept. 20, 1906, in Fort Worth and was the son of Walter Martin and Ethel Elizabeth Hammer McClure. He attended Texas Christian University at Fort Worth and was graduated from Baylor College of Medicine, then located at Dallas, in 1935 with an MD degree. He interned at Methodist Hospital of Dallas where he also served a residency in pathology. Dr. McClure had served as an instructor in chemistry at Texas Christian University and as chief of staff at Memorial Hospital in Kermit. During World War II, he served as a captain in the US Army Medical Corps.

A past president of Reeves-Ward-Winkler - Loving - Culberson - Hudspeth Counties Medical Society, Dr. McClure also belonged to Texas Medical Association, Southwestern Medical Association, American Medical Association, American Academy of General Practice, and American Society of Abdominal Surgeons. At the time of his death, he was serving as president of District I of Texas Medical Association.

Dr. McClure was a Mason and belonged to El Maida Temple and Scottish Rite Temple in El Paso. He was also a member of Kermit Chamber of Commerce, the board of directors of Kermit State Bank, and was president of the board of trustees of Community Church in Kermit. He was also a trustee of the Girl Scouts of America of Winkler County.

Survivors include Dr. McClure's wife, the former Louise Ellett; a son, W. H. McClure, II, and a brother, Walter McClure, both of Fort Worth.

DR. SIMMONS

Dr. R. L. Stout Simmons

Dr. Ruth Louise Stout Simmons, 43, Lubbock physician specializing in obstetrics and gynecology, died June 1, 1970, in Lubbock. Cause of death was aspiration pneumonia and acute myocarditis.

Born March 19, 1927, at Badin, N. C., Dr. Simmons was the daughter of Carl R. and Ruth Woolley Stout. She attended the University of Washington in St. Louis, Mo. and received an MD degree in 1949 from the University of Arkansas School of Medicine in Little Rock. She served an internship at Baltimore Hospitals in Baltimore and served a preceptorship and residency as a lieutenant in the US Navy. Dr. Simmons practiced in Jonesboro, Ark., from 1953-1956, and began practicing in Lubbock in 1956.

A member of Lubbock-Crosby-Garza Counties Medical Society, Texas Medical Association, and American Medical Association, Dr. Simmons was also a member of Alpha Omega Alpha medical honor society.

Survivors include Dr. Simmons' husband, Dr. H. O. Simmons, Jr. (DDS); her parents of Little Rock; and a sister, Mrs. Dorothy Smith of Rock Hill, Mo.

Dr. L. P. Good

Dr. Louis Porter Good, 74, Texarkana surgeon, died July 19, 1970, in Texarkana of myocardial infarction.

Born May 27, 1896, in York, S. C., Dr. Good was the son of James Holbrook and Mary Jane Good. He attended Davidson College in Davidson, N. C., where he received BS and MA degrees, and was graduated from Johns Hopkins University, Baltimore, Md., in 1924 with an MD degree. Internships were served in Baltimore at Church Home Infirmary in 1924 and at Johns Hopkins Hospital from 1924-1925. Dr. Good served a surgery residency at St. Mary's Hospital in Pierre, S. D., from 1925-1926 and was a fellow in surgery at Mayo Clinic, Rochester, Minn., from 1926-1929. After receiving an MS in surgery from the University of Minnesota in 1929, Dr. Good began practicing surgery at Southern Clinic in Texarkana, of which he was a founder.

A member of Bowie County Medical Society and Texas, Southern, and American medical associations, Dr. Good also held memberships in American College of Surgeons, Southwestern Surgical Congress as a past president, and Western Surgical Association as a past vice-president. He was also a member of Texas Surgical Society and in 1965 had served as a director of the American Cancer Society, Texas Division. Dr. Good also served as secretary on the board of directors of Wadley Hospital in Texarkana.

DR. GOOD

Surviving Dr. Good are his wife, the former Dorothy Dean; a son, Louis Dean Good of Dallas; a daughter, Mrs. John Griffin of Texarkana; and six grandchildren.

Dr. S. Kennedy

Dr. Sam Kennedy, 86, died in a Crockett, Tex., hospital July 23, 1970, of congestive heart failure. He had practiced in Grapeland, Tex., since 1912.

Born Aug. 21, 1883, in Augusta, Tex., he was the son of John and Josephine Wall Kennedy. Before receiving his MD degree in 1912 from UT Medical Branch at Galveston, Dr. Kennedy attended Sam Houston State College in Huntsville and The University of Texas at Austin. He interned in Galveston at St. Mary's Hospital. From Sept.-Nov., 1918, Dr. Kennedy served in the US Army as first lieutenant at Fort Riley, Kan.

Dr. Kennedy, elected to inactive Texas Medical Association membership in 1961, was a member of Houston County Medical Society and had served as president of the Anderson-Houston-Leon Counties Medical Society. He was a past president of the Grapeland Lions Club, a past worshipful master of Masonic Lodge No. 473, and member of Woodmen of the World and the Chamber of Commerce. He also belonged to the First Christian Church.

Surviving Dr. Kennedy are his wife, the former Eula Riall Hollingsworth; and a sister, Blanch Kennedy, both of Grapeland.

Dr. J. E. Lattimore

John Edens Lattimore, 80, died July 30, 1970, in a Waco hospital. He had been in general practice there since 1918.

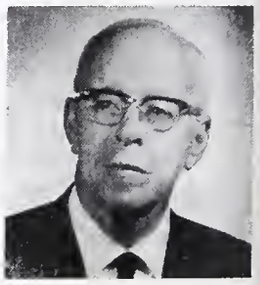
Dr. Lattimore was graduated from Baylor University in Waco with a BA degree in 1912. .In 1916 he received his MD degree from UT Medical Branch at Galveston. Internship was served at Providence Hospital in Waco from 1916-1918; postgraduate study was done in 1929 at Children's Memorial Hospital in Chicago. During World War I he served as a first lieutenant in the Army Medical Corps, and was cited for his defense work during World War II by President Franklin D. Roosevelt.

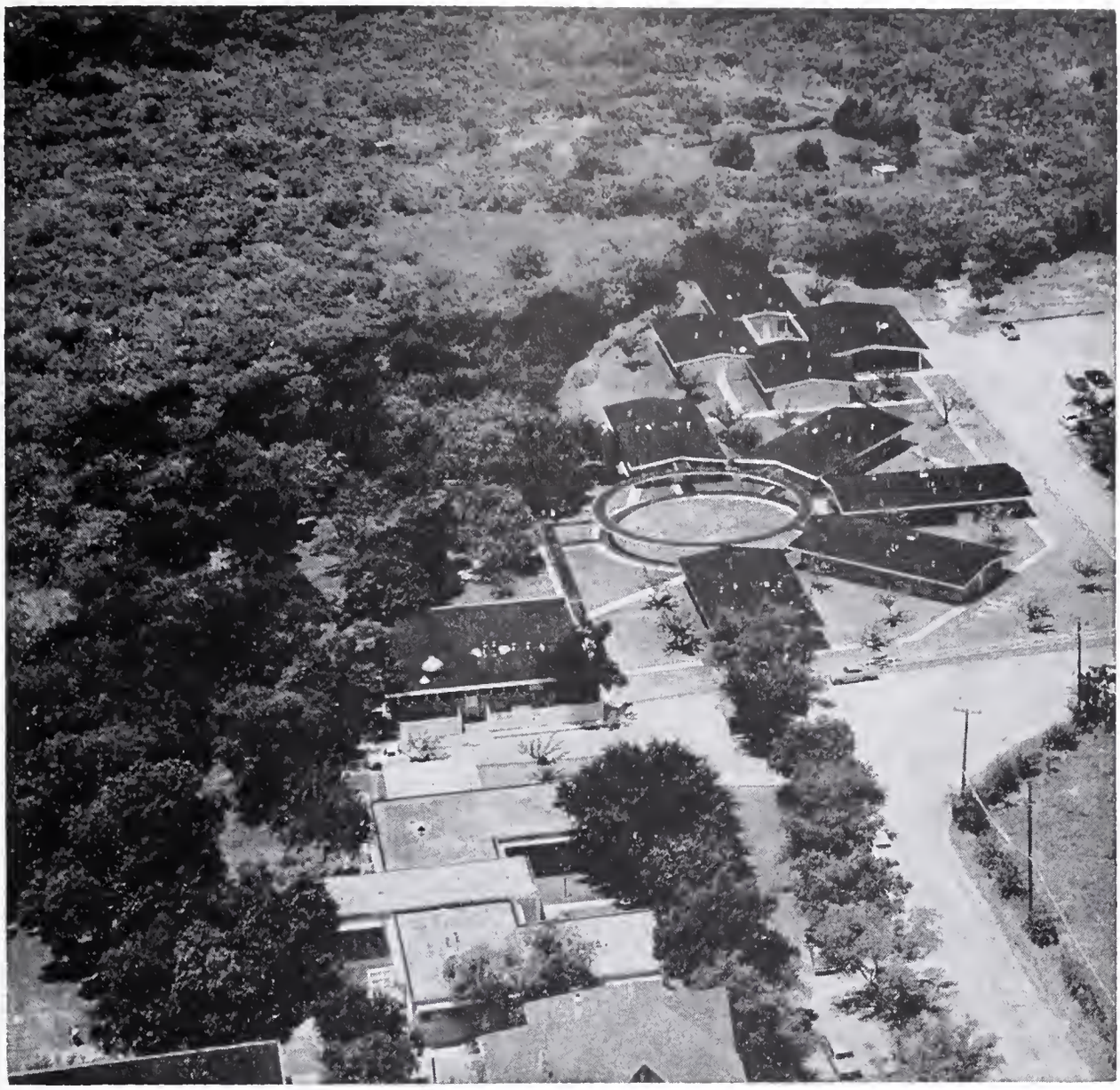
A past president of McLennan County Medical Society, he was elected to honorary membership in Texas Medical Association in 1965. He also belonged to American Medical Association and was a past president of the Central Texas Tuberculosis and Respiratory Disease Association. For 30 years he served as Baylor University physician and for 29 years was physician for the Waco independent school district. He was also physician and surgeon for Katy, Southern Pacific, and Cotton Belt railroads. He was a deacon of First Baptist Church in Waco and a 32nd degree Mason.

Dr. Lattimore was born March 17, 1890, in Dublin, Tex., and was the son of John Compere and Lucy Catherine Edens Lattimore.

Survivors include his wife, the former Alice Schoolfield Bissell; two daughters, Mrs. Earl C. Vanderford and Mrs. Morris H. Mebane, both of Waco; two sons, John C. Lattimore of Waco and Dr. Joseph S. Lattimore of Houston; a sister, Mrs. Arnold C. Hoffman of Waco; a brother, Felix S. Lattimore of Marlow, Okla., and ten grandchildren.

DR. LATTIMORE





BEVERLY HILLS HOSPITAL
BEVERLY HILLS CLINIC

PSYCHIATRY
INPATIENT – OUTPATIENT

Multiple-approach treatment of thinking disorders. Established diagnostic procedures available. Secluded in-town location convenient to the medical community.

Psychiatry

Joseph L. Knapp, M.D.
Jackson H. Speegle, M.D.
Fred H. Jordan, M.D.
Joseph H. Lindsay, M.D.
Jack R. Tomlinson, M.D.

Psychology

Traudl E. Jordan-Diener, Ph.D.
R. A. Mitchell, M.S.
David K. Fooshee, M.S.

1353 North Westmoreland Avenue
Dallas, Texas 75211
214 331-8331

Starlite Village Clinic

Center Point, Texas

Ph.: ME 4-2426

- - - A specialized clinic dedicated to the physical, mental, and spiritual treatment of men and women suffering from alcoholic and similar disturbances.

F. E. Seale, M.D.
Medical Director

Bland Seale
Administrator

RADIOLOGY ASSOCIATES OF FORT WORTH

John S. Alexander, M.D., M.A.C.R.
Robert J. Atcheson, M.D., M.A.C.R.
Douglas E. Bibby, M.D., F.A.C.R.
James W. Buice, M.D., F.A.C.R.
Richard C. Gasser, M.D., M.A.C.R.
James A. Holland, M.D., M.A.C.R.
Paul W. Mathews, Jr., M.D., M.A.C.R.
Preston W. Nash, M.D., M.A.C.R.
Rolland F. Oakes, M.D., M.A.C.R.
Norman L. Presley, M.D., M.A.C.R.
Sanford Reitman, M.D., M.A.C.R.
Gomer W. Roberts, M.D., M.A.C.R.
Herman C. Sehested, M.D., F.A.C.R.
Glenn A. Stokdyk, M.D., M.A.C.R.
C. H. Tseng, M.D., M.A.C.R.
Claude Williams, M.D., M.A.C.R.
J. Thomas Telle, M.D., D.A.B.R.

DIPLOMATES OF THE AMERICAN BOARD OF RADIOLOGY

Offices:

100 Medical Tower Bldg. — 336-8681
1217 West Cannon — 336-8627
900 W. Randol Mill Rd., Arlington, Texas 76010 — 277-7681

TRAVIS CLINIC ASSOCIATION AND THE NAN TRAVIS MEMORIAL HOSPITAL

JACKSONVILLE, TEXAS

STAFF

General Surgery:
L. L. Travis, M.D.
J. S. O'Hare, M.D.
R. K. Willms, M.D.

Orthopedic Surgery:
E. L. Mahon, Jr., M.D.

Urology:
H. F. Rives, M.D.

Pathology:
Harbert Davenport, Jr., M.D.

Internal Medicine:
J. T. Boyd, M.D.
F. H. Verheyden, M.D.
J. T. Scogin, M.D.
J. H. Pesnell, M.D.
Mary A. Bone, M.D.

Obstetrics and Gynecology:
J. C. Rucker, M.D.
J. D. Crawford, M.D.

Ophthalmology:
Fred Haberle, M.D.

Pediatrics:
M. L. Gray, M.D.

Radiology and Radioactive Isotopes:
L. W. Ralston, M.D.

William J. Fowler
Administrator of Nan Travis Memorial Hospital

J. G. Casey
Business Manager of Travis Clinic

MEDICAL ARTS CLINIC

Box 841
Corsicana, Texas

PEDIATRICS
JOHN W. GRIFFIN, M.D., F.A.A.P.*
JAMES E. SPEIER, M.D.

INTERNAL MEDICINE
ROBERT D. BONE, M.D., F.A.C.P.*
JAMES F. WITTEN, M.D., F.A.C.P.*
CHARLES I. BILTZ., M.D.*

OBSTETRICS & GYNECOLOGY
KELLY PAUL BURKHART, M.D., F.A.C.O.G.*

DERMATOLOGY
JOSEPH M. GLICKSMAN, M.D.

BUSINESS MANAGER
OWEN G. ELLIOTT, M.G.M.A.

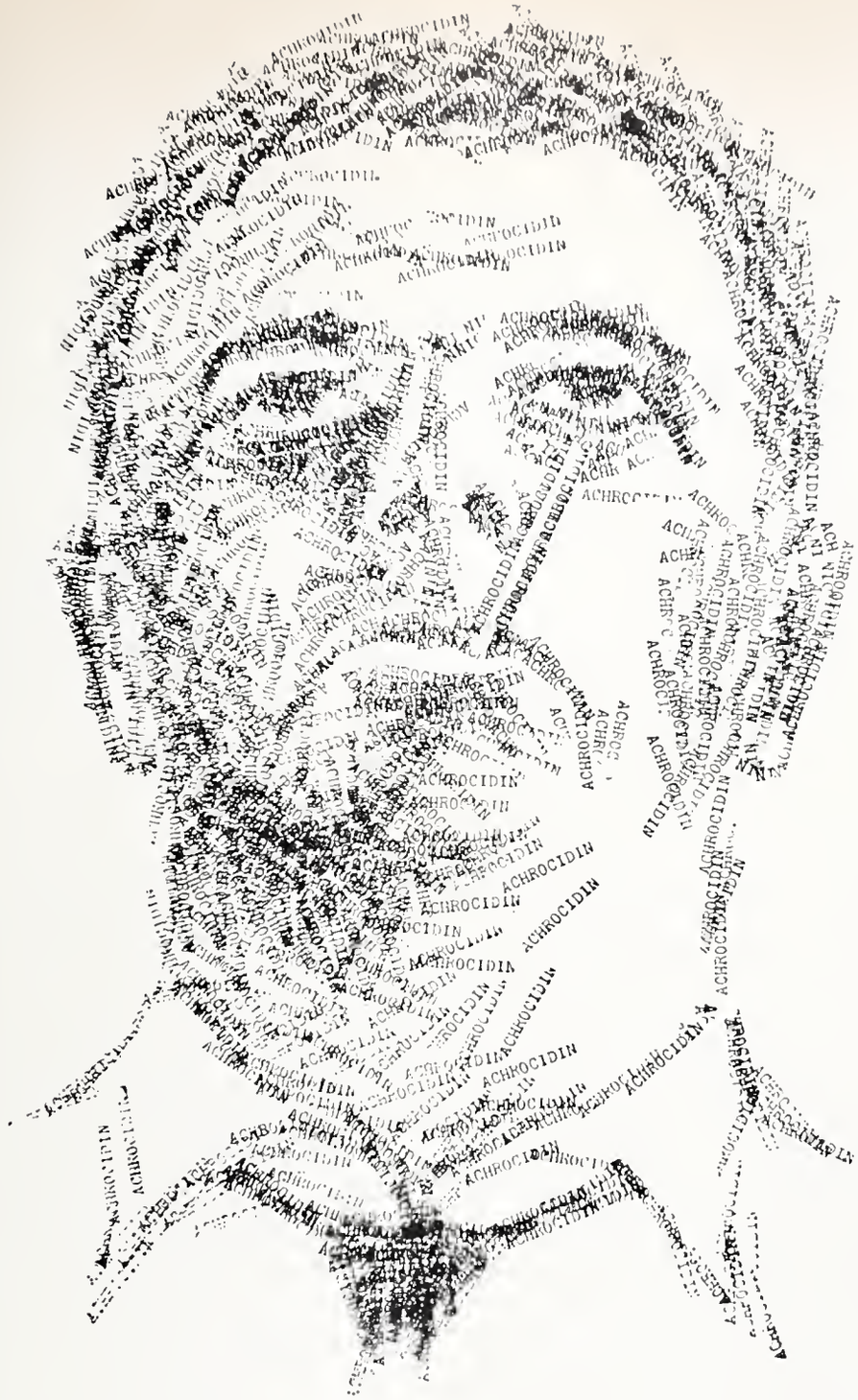
SURGERY
LOUIS E. GIBSON, M.D., F.A.C.S.*
E. SCOTT MIDDLETON, M.D.

OPHTHALMOLOGY
ROBERT D. MERTZ, M.D., F.A.A.O.O.*
WILLIAM E. LAGOMARSINO, M.D.

EAR, NOSE, THROAT
PHILLIP M. AWTREY, M.D.,* F.A.A.O.O.

DENTISTRY
ROBERT A. LANG, D.D.S.

*Diplomate of the American Board



Achrocidin® Tablets and Syrup

Tetracycline HCl—Antihistamine—Analgesic Compound

Each tablet contains: ACHROMYCIN® Tetracycline HCl 125 mg.; Phenacetin 120 mg.; Caffeine 30 mg.; Salicylamide 150 mg.; Chlorothen Citrate 25 mg.

ACHROCIDIN Tetracycline HCl—Antihistamine—Analgesic Compound Tablets and Syrup are recommended for the treatment of tetracycline-sensitive bacterial infection which may complicate vasomotor rhinitis, sinusitis and other allergic diseases of the upper respiratory tract, and for the concomitant symptomatic relief of headache and nasal congestion. For children and elderly patients you may prefer caffeine-free ACHROCIDIN Syrup. Each 5 cc contains: ACHROMYCIN Tetracycline equivalent to Tetracycline HCl 125 mg.; Phenacetin 120 mg.; Salicylamide 150 mg.; Ascorbic Acid (C) 25 mg.; Pyrilamine Maleate 15 mg.

Contraindications: Hypersensitivity to any component.

Warning: In renal impairment, since liver toxicity is possible, lower doses are indicated; during prolonged therapy consider serum level determinations. Photodynamic reaction to sunlight may occur in hypersensitive persons. Photosensitive individuals should avoid exposure; discontinue treatment if skin discomfort occurs.

Precautions: Drowsiness, anorexia, slight gastric distress can occur. In excessive drowsiness, consider longer dosage intervals. Persons on full dosage should not operate vehicles. Nonsusceptible organisms may overgrow; treat superinfection appropriately. Treat beta-hemolytic streptococcal infections at least 10 days to help prevent rheumatic fever or acute glomerulonephritis. Tetracycline may form a stable calcium complex in bone-forming tissue and may cause dental staining during tooth development (last half of pregnancy, neonatal period, infancy, early childhood).

Adverse Reactions: *Gastrointestinal*—anorexia, nausea, vomiting, diarrhea, stomatitis, glossitis, enterocolitis, pruritus ani. *Skin*—maculopapular and erythematous rashes; exfoliative dermatitis; photosensitivity; onycholysis, nail discoloration. *Kidney*—dose-related rise in BUN. *Hypersensitivity reactions*—urticaria, angioneurotic edema, anaphylaxis. *Intracranial*—bulging fontanels in young infants. *Teeth*—yellow-brown staining; enamel hypoplasia. *Blood*—anemia, thrombocytopenic purpura, neutropenia, eosinophilia. *Liver*—cholestasis at high dosage.

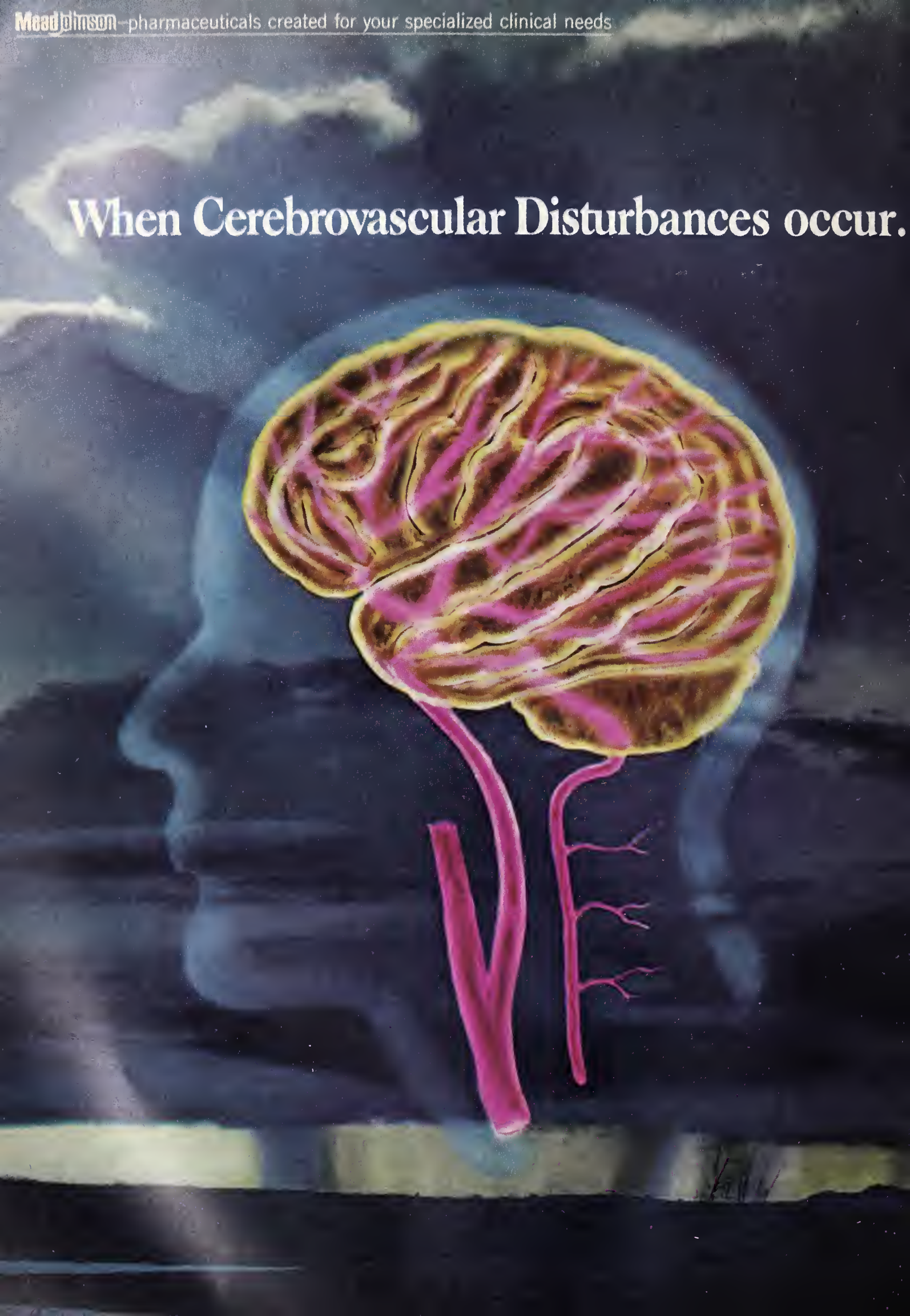
Upon adverse reaction, stop medication and treat appropriately.

Lederle LEDERLE LABORATORIES, A Division of American Cyanamid Company, Pearl River, New York 10965

535-9

Mead Johnson—pharmaceuticals created for your specialized clinical needs

When Cerebrovascular Disturbances occur.



...with episodes of vertigo, headache, confusion, sensory loss, slurred speech, consider

VASODILAN®
(ISOXSUPRINE HCl)

to help relieve symptoms by preventing vasospasm and increasing cerebral blood flow

New 20 mg. strength now available: Vasodilan 20 mg. tablets for greater dosage simplicity and convenience. Recommended *initial* dose: one 20 mg. tablet q.i.d.

Although not all clinicians agree on the value of vasodilators in vascular disease,[1] several investigators[2-5] have reported favorably on the effects of isoxsuprine on cerebral blood flow. Effects have been demonstrated both by objective measurement[2,5] and observation of clinical improvement.[2-4]

Indications: Cerebrovascular insufficiency, arteriosclerosis obliterans, diabetic vascular diseases, thromboangiitis obliterans (Buerger's disease), Raynaud's disease, postphlebitic conditions, acroparesthesia, frostbite syndrome and ulcers of the extremities (arteriosclerotic, diabetic, thrombotic). **Composition:** VASODILAN tablets, isoxsuprine hydrochloride 10 mg. and 20 mg. **Dosage:** Oral—10 to 20 mg. t.i.d. or q.i.d. **Contraindications and Cautions:** There are no known contraindications to recommended oral dosage. Do not give immediately postpartum or in the presence of arterial bleeding. **Side Effects:** Occasional palpitation and dizziness can usually be controlled by dosage reduction. As intramuscular administration of 10 mg. or more may cause brief hypotension and tachycardia, single intramuscular doses exceeding this amount are not recommended. Complete details available in product brochure from Mead Johnson Laboratories. **References:** (1) Fazekas, J. F.; Alman, R. W.; Ticktin, H. E.; Ehrmantraut, W. R., and Savarese, C. J.: Angiology *15*:No. 2 (Feb.) 1964. (2) Horton, G. E., and Johnson, P. C., Jr.: Angiology *15*:70-74 (Feb.) 1964. (3) Clarkson, I. S., and LePere, D. M.: Angiology *11*:190-192 (June) 1960. (4) Dhrymiotis, A. D., and Whittier, J. R.: Curr. Ther. Res. *4*:124-128 (April) 1962. (5) Whittier, J. R.: Angiology *15*:82-87 (Feb.) 1964.

Mead Johnson LABORATORIES

© 1970 MEAD JOHNSON & COMPANY • EVANSVILLE, INDIANA 47721 75970

Smiles speak louder than words

for the good taste of Soyalac

Milk-free, hypo-allergenic Soyalac has a pleasing taste that is eagerly accepted by most infants. It's similar to mother's milk in composition and assimilation, much like cow's milk in consistency and completely free of fibre. Extensive clinical data support Soyalac's value in promoting growth and development. Soyalac is also excellent for growing children and adults.

Available in
Concentrated Liquid or Powdered

Free Booklet and Samples

A request on your professional letterhead or prescription form will bring to you complete information and a supply of samples.

Soyalac

a product of

LOMA LINDA FOODS

MEDICAL PRODUCTS DIVISION

RIVERSIDE, CALIFORNIA

Mount Vernon, Ohio, U.S.A.

The girth control pill

Tepanil® Ten-tab®

(continuous release form)

(diethylpropion hydrochloride)

works on the appetite not on the 'nerves'

When girth gets out of control, TEPANIL can provide sound support for the weight control program you recommend. TEPANIL reduces the appetite—patients enjoy food but eat less. Weight loss is significant—gradual—yet there is a relatively low incidence of CNS stimulation.

Controindications: Concurrently with MAO inhibitors, in patients hypersensitive to this drug; in emotionally unstable patients susceptible to drug abuse.

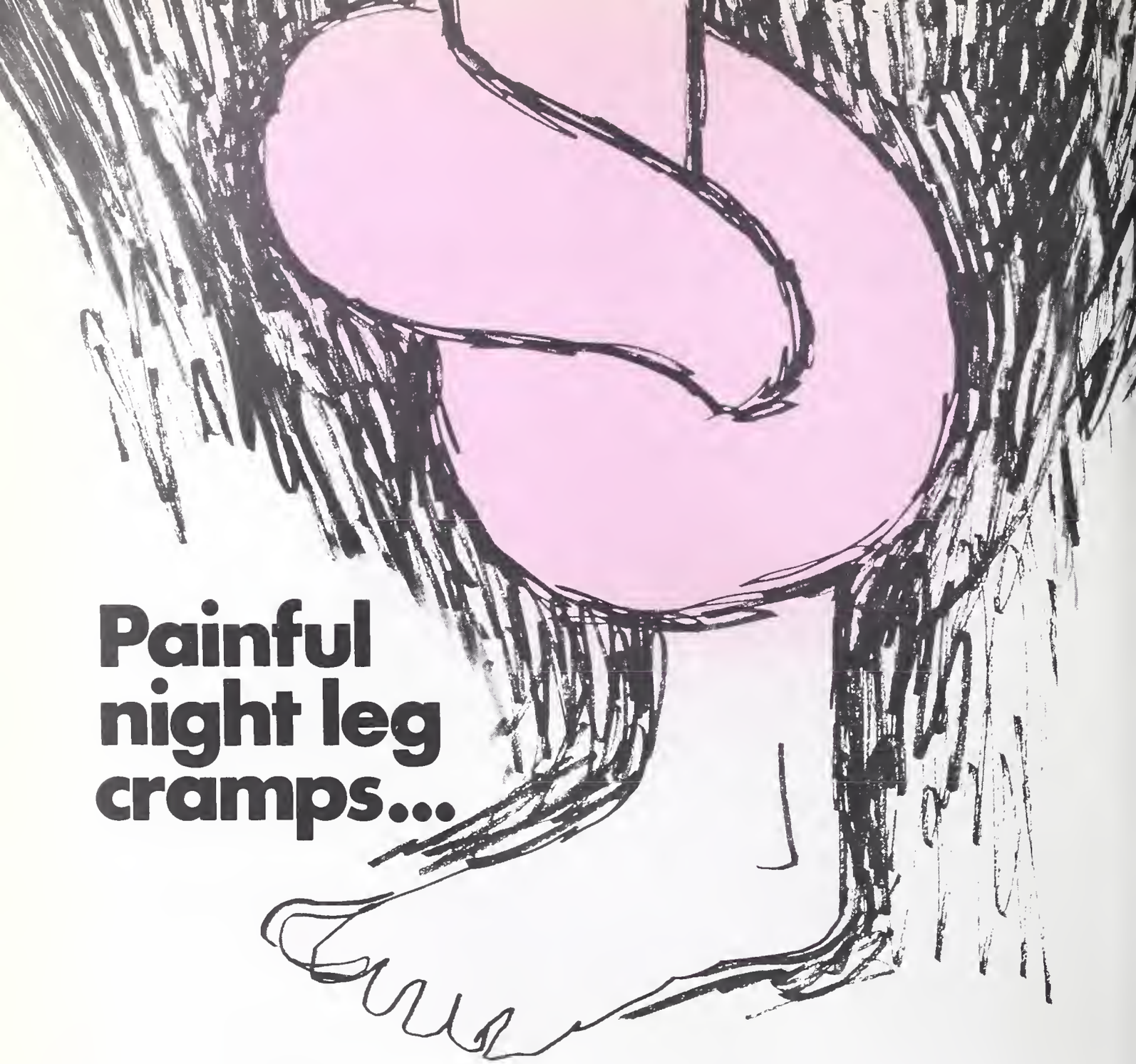
Worning: Although generally safer than the amphetamines, use with great caution in patients with severe hypertension or severe cardiovascular disease. Do not use during first trimester of pregnancy unless potential benefits outweigh potential risks.

Adverse Reoctions: Rarely severe enough to require discontinuation of therapy, unpleasant symptoms with diethylpropion hydrochloride have been reported to occur in relatively low incidence. As is characteristic of sympathomimetic agents, it may occasionally cause *CNS effects* such as insomnia, nervousness, dizziness, anxiety, and jitteriness. In contrast, CNS depression has been reported. In o few epileptics an increose in convulsive episodes has been reported. Sympathomimetic *cardiovascular effects* reported include ones such as tochycardia, precordial pain, arrhythmia, palpitation, and increased blood pressure. One published report described T-wave changes in the ECG of a healthy young male after ingestion of diethylpropion hydrochloride; this was an isolated experience, which has not been reported by others. *Allergic* phenomena reported include such conditions as rash, urticario, ecchymosis, and erythema. *Gastraintestinal effects* such as diarrhea, constipation, nausea, vomiting, and abdominal discomfort have been reported. Specific reports on the hematopoietic system include two each of bone marrow depression, agranulocytosis, and leukopenia. A variety of miscellaneous adverse reactions hove been reported by physicians. These include complaints such as dry mouth, headache, dyspneo, menstrual upset, hair loss, muscle pain, decreased libido, dysuria, and polyuria.

Convenience of two dosage forms: TEPANIL Ten-tab tablets: One 75 mg. tablet daily, swallowed whole, in midmorning (10 a.m.); TEPANIL: One 25 mg. tablet three times daily, one hour before meals. If desired, an additional tablet may be given in midevening to overcome night hunger. Use in children under 12 years of age is not recommended.

T-006A / 1/70 / U S. PATENT NO. 3,001,910

THE NATIONAL DRUG COMPANY
DIVISION OF RICHARDSON-MERRELL INC.
PHILADELPHIA, PENNSYLVANIA 19144



Painful night leg cramps...

unwelcome bedfellow for any patient– including those with arthritis, diabetes or PVD

One thing patients can sleep without, particularly patients with chronic disease conditions such as arthritis, diabetes or PVD, is painful night leg cramps. Although seldom the presenting complaint, night leg cramps can tie your patients up in painful knots. Now, just one tablet of QUINAMM at bedtime can usually bring an end to shattered sleep and needless suffering. Your patients will sleep restfully—gratefully—with QUINAMM, specific therapy to prevent painful night leg cramps.

Prescribing Information—Composition: Each white, beveled, compressed tablet contains: Quinine sulfate, 260 mg., Aminaphylline, 195 mg. **Indications:** For the prevention and treatment of nocturnal and recumbency leg muscle cramps, including those associated with arthritis, diabetes, varicose veins, thrombophlebitis, arteriosclerosis and static foot deformities. **Contraindications:** QUINAMM is contraindicated in pregnancy because of its quinine content. **Precautions/Adverse Reactions:** Aminophylline may produce intestinal cramps in some instances, and quinine may produce symptoms of cinchonism, such as tinnitus, dizziness, and gastrointestinal disturbance. Discontinue use if ringing in the ears, deafness, skin rash, or visual disturbances occur. **Dosage:** One tablet upon retiring. Where necessary, dosage may be increased to one tablet following the evening meal and one tablet upon retiring. **Supplied:** Bottles of 100 and 500 tablets.

THE NATIONAL DRUG COMPANY
DIVISION OF RICHARDSON-MERRELL INC.
PHILADELPHIA, PENNSYLVANIA 19144

Quinamm™

(quinine sulfate 260 mg., aminophylline 195 mg.)

Specific therapy for night leg cramps

I love my family.
I adore this house.
My in-laws are great.
The neighbors are wonderful.

Indications: For use in management of anxiety and tension occurring alone or as accompanying symptom complex to medical and surgical disorders and procedures. Though not a hypnotic, fosters normal sleep through antianxiety and related muscle-relaxant properties.

Contraindications: History of sensitivity to meprobamate.

Important Precautions: Carefully supervise dose and amounts prescribed, especially for patients prone to overdose themselves. Excessive prolonged use has been reported to result in dependence or habituation in susceptible persons, as alcoholics, ex-addicts, and other severe psychoneurotics. After prolonged excessive dosage, reduce dosage gradually to avoid possibly severe withdrawal reactions. Abrupt discontinuance of excessive doses has sometimes resulted in epileptiform seizures.

Warn patients of possible reduced alcohol tolerance, with resultant slowing of reaction time and impairment of judgment and coordination.

Reduce dose if drowsiness, ataxia or visual disturbance occurs; if persistent, patients should not operate vehicles or dangerous machinery.

Side Effects include drowsiness, usually transient, if persistent and associated with ataxia, usually responds to dose reduction; occasionally concomitant CNS stimulants (amphetamine, mephentermine sulfate) are desirable. Allergic or idiosyncratic reactions are rare, but such reactions, sometimes severe, can develop in patients receiving only 1 to 4 doses who have had no previous contact with meprobamate. Previous history of allergy may or may not be related to incidence of reactions. Mild reactions are characterized by itchy urticarial or erythematous maculopapular rash, generalized or confined to groin. Acute nonthrombocytopenic purpura with cutaneous petechiae, ecchymoses, peripheral edema and fever have been reported. One fatal case of bullous dermatitis following intermittent use of meprobamate with prednisolone has been reported. If allergic reaction occurs, meprobamate should be stopped and not reinstituted. Severe reactions, observed very rarely, include angioneurotic edema, bronchial spasms, fever, fainting spells, hypotensive crises (1 fatal case), anaphylaxis, stomatitis and proctitis (1 case) and hyperthermia. Treat symptomatically as with epinephrine, antihistamine and possibly hydrocortisone. Aplastic anemia (1 fatal case), thrombocytopenic purpura, agranulocytosis and hemolytic anemia have occurred rarely, almost always in presence of known toxic agents. A few cases of leukopenia, usually transient, have been reported on continuous administration.

Meprobamate may sometimes precipitate grand mal attacks in patients susceptible to both grand and petit mal. Extremely large doses can produce rhythmic fast activity in the cortical pattern. Impairment of accommodation and visual acuity has been reported rarely. After excessive dosage for weeks or months, withdraw gradually (1 or 2 weeks) to avoid recurrence of pretreatment symptoms (insomnia, severe anxiety, anorexia). Abrupt discontinuance of excessive doses has sometimes resulted in vomiting, ataxia, tremors, muscle twitching and epileptiform seizures. Prescribe very cautiously and in small amounts for patients with suicidal tendencies. Suicidal attempts have resulted in coma, shock, vasomotor and respiratory collapse and anuria. Excessive doses have resulted in prompt sleep, reduction of blood pressure, pulse and respiratory rates to basal levels; and occasionally hyperventilation. Treat with immediate gastric lavage and appropriate symptomatic therapy. (CNS stimulants and pressor amines as indicated). Doses above 2400 mg./day are not recommended.

Composition. Tablets, 200 mg. and 400 mg. meprobamate. Coated Tablets, WYSEALS® EQUANIL (meprobamate) 400 mg. (All tablets also available in REDIPAK® (strip pack), Wyeth.) Continuous-Release Capsules, EQUANIL L·A (meprobamate) 400 mg.

The young homemaker: her underlying anxiety and tension can surface and intensify under the continuous stress of rearing a growing family. Especially when she's confined to the home and its environs so much.

You can help her over the rough spots with reassurance and counsel. Equanil can help relieve tension, ease anxiety—with little risk of serious side effects. Time and experience will probably do the rest.

Equanil®
(meprobamate)
Wyeth Laboratories
Philadelphia, Pa.

Photo professionally posed.

DIRECTORY RATES & DATA: Space is available to TMA members at $8.00 per column inch and listings must run for a minimum of six months. New listings are limited to those specialties recognized by the American Medical Association. A discount of 5% is allowed for six months' advance payment. Mail copy to Advertising Assistant, TEXAS MEDICINE, 1801 North Lamar Blvd., Austin, Texas 78701. Deadline is 20th of the month preceding publication month.

Texas Physicians' Directory

ALLERGY

DRS. FEIN AND KAMIN
Allergy and Immunology

Bernard T. Fein, M.D., F.A.C.A., Fellow, American Academy of Allergy
Peter B. Kamin, M.D., F.A.A.P., Diplomate, Sub-Board Pediatric Allergy
216 Medical Prof. Bldg., San Antonio, Texas, 226-7671, 227-6331

HOUSTON ALLERGY CLINIC
Clinical Allergy and Immunology

Richard L. Etter, M.D., F.A.C.A., F.A.A.A.
Richard H. Jackson, M.D., F.A.C.A.
Warren J. Raymer, M.D., F.A.C.A.
Ramon Garrido, M.D. (Certified American Board of Pediatrics)
Suite 156, Hermann Professional Building
6410 Fannin St., Houston, Texas 77025, 526-3281

V. E. FRIEDWALD, M.D., F.A.C.P.
Allergy

Diplomate American Boards of Internal Medicine and Allergy
2203 West Tennessee, Midland, Texas 79701, 682-5385

McGOVERN ALLERGY CLINIC
Diagnosis and Treatment of Allergic Diseases

John P. McGovern, M.D.
Orville C. Thomas, M.D.
Charles D. Haunschild, M.D.
Hermann Gregory, M.D. (Military Leave of Absence)
Theodore J. Haywood, M.D.
Joseph T. Queng, M.D.
James A. Murray, M.D.
Certified American Boards of Pediatrics and Allergy
6655 Travis Street, Houston, Texas 77025, 528-5591

HARRIS HOSEN, M.D., F.A.A.Pd.
Clinical Allergy and Immunology

2649 Procter Street, Port Arthur, Texas

ALLERGY CLINIC

Saul Grossman, M.D., F.A.C.A., Allergy-Dermatology
W. A. Crozier, M.D., F.A.C.A., Allergy-Immunology
2530 Morgan, Corpus Christi, Texas, 882-3487

STUART A. MASON, M.D.
Allergic Diseases

921 Eighth Avenue, Fort Worth, Texas 76104
Phone: 336-1574 If no answer: 924-4231

PHYLLIS HUFFMAN, M.D.
Fellow American Academy of Pediatrics
Certified by Sub-Board of Pediatric Allergy
Pediatric Allergy And Immunology

606 North Kent Street, Midland, Texas 79701
Telephone 915 682-9479

CLINICS

THE CLINIC-HOSPITAL OF SAN ANGELO
224-234 West Beauregard Avenue, San Angelo, Texas

R. M. Finks, M.D., Pediatrics
M. D. Knight, M.D., Surgery
W. H. Brauns, M.D., Internal Medicine
Roy E. Moon, M.D., Obstetrics and Gynecology
Chas. F. Engelking, M.D., Ear, Nose and Throat
R. A. Morse, M.D., Internal Medicine
Ralph R. Chase, M.D., Pediatrics
Tom R. Hunter, M.D., Surgery
Robert P. Gordon, C.P.A., Administrator
Dale W. Hayter, M.D., Ophthalmology
O. Sterling Gillis, III, M.D., Obstetrics and Gynecology
Consultant in Pathology—Lloyd R. Hershberger, M.D.
Consultant in Radiology—John E. Ballard, M.D.
John G. Bolen, M.D.
William T. Gordon, M.D.

THE FORT WORTH CLINIC
1221 West Lancaster Avenue, Fort Worth, Texas

John M. Church, M.D.
T. J. Coleman, M.D.
O. M. Phillips, M.D.
Wm. L. Asper, Bus. Mgr.
Robert L. Sewell, M.D.
John H. Sewell, M.D.
C. K. Holsapple, M.D.

FIFTH AVENUE CLINIC
650 Fifth Avenue, Fort Worth, Texas

MEDICINE
Sidney E. Stout, M.D.
Frank L. Bynum, M.D.
Ed Etier, Jr., M.D.

GENERAL PRACTICE
Donald S. Gibbs, M.D.

RADIOLOGY
Otto H. Grunow, M.D.

THOMAS-SPANN CLINIC AND HOSPITAL
1546 South Brownlee, Corpus Christi, Texas 78404
Telephone 884-3861

SURGERY
R. Gayle Spann, M.D., F.A.C.S. (Deceased)
S. T. Coleman, M.D., F.A.C.S. (Consultant)
Donald E. Jackson, M.D., F.A.C.S. (Consultant)

OPHTHALMOLOGY
L. David Wright, M.D., F.A.C.S.

GENERAL PRACTICE
Travis B. Phelps, M.D.
T. D. Harvey, M.D.
H. R. Rose, M.D.
C. L. Vernor, M.D.

ORTHOPEDICS
Carlos M. Yanez, M.D., F.A.C.S.

GYNECOLOGY
J. H. Thomas, M.D.

INTERNAL MEDICINE
William E. Morris, M.D
Gerald A. Reeves, M.D.
Pruett Moore, Jr., M.D.

RADIOLOGY
Crysup Sory, M.D.

ADMINISTRATOR
B. J. Clark

DIRECTOR OF NURSES
Clinic - Pat Parker
Hospital - Mrs. Joyce Petit

THE JOHN BUIST CHESTER HOSPITAL & THE CHESTER CLINICS

3330 S. Lancaster Road, Dallas, Texas
Telephone 376-5411

John B. Chester, M.D., F.A.C.S., Orthopedic Surgery
Gene W. Rogers, M.D., General Surgery
Douglas M. Hardy, M.D., Obstetrics & Gynecology
Ervin R. Miller, M.D., Cardiovascular Diseases
Ralph C. Disch, M.D., D.A.B.S., F.A.C.S., Surgery
Catherine P. Chester, M.D., Pediatrics & Allergy
Doyle L. Sharp, M.D., General Surgery
Arlan P. Larson, M.D., D.A.B.O.S., F.A.C.S., Orthopedic Surgery
Robert B. Curry, M.D., General Practice
Amado E. Dominguez, M.D., Diagnosis & Internal Medicine
Jose Newman, M.D., Internal Medicine
Alfredo Zevallos, M.D., Obstetrics & Gynecology
Souren Chakmakjian, M.D., D.A.B.P., Pediatric Cardiology
Emmett R. Hamby, D.D.S., General Dentistry
H. A. Mueller, M.D., Consultant in Radiology
Gerard Noteboom, M.D., Consultant in Pathology
Charles B. Glover, M.D., Consultant in Nuclear Medicine
Elizabeth Garnett, R.N., Superintendent of Nurses
E. B. Morgan, F.A.A.M.A., Administrator

LANCASTER OFFICE
525 W. Pleasant Run Rd., Lancaster, Texas; Telephone 227-2151
David E. Krebs, M.D., Pediatrics & Medicine
Charles W. Waldrop, M.D., General Practice
Miles W. Davis, M.D., General Practice
Garrett W. Maxwell, M.D., Internal Medicine

COUNTRY CLUB CORNERS OFFICE
7140 Baytree Drive, Dallas, Texas; Telephone 224-1181
Rudolf M. Flasdick, M.D., Diagnosis & Diseases of the Heart
J. A. Harris, M.D., General Practice

DeSOTO OFFICE
804 N. Hampton Rd., DeSoto, Texas; Telephone 223-7701
Herbert M. Hinckley, M.D., General Practice
D. Owen Coons, M.D., Aerospace Medicine & General Practice

BEELER-MANSKE CLINIC

9th Avenue N. at 5th Street N., Texas City, Texas 77590
Telephone 713 948-8521

Obstetrics & Gynecology
G. W. Beeler, M.D.

Internal Medicine
W. T. Matlage, M.D.
C. M. Maruri, M.D.

General Surgery
B. W. Hink, M.D., F.A.C.S.

General Practice
J. H. Cochrane, M.D.
J. W. O'Bryant, M.D.
O. O. Smith, M.D.

Clinic Manager
Stan M. Sheppard

Complete X-Ray, Physical Therapy and Laboratory Facilities

MALONE AND HOGAN CLINIC

901 Main Street, Big Spring, Texas 79720
Telephone 267-6361

OPHTHALMOLOGY AND OTOLARYNGOLOGY
P. W. Malone, M.D., F.A.C.S.
J. W. Tipton, M.D.

GENERAL SURGERY
J. E. Hogan, M.D., F.A.C.S.
C. B. Marcum, Jr., M.D., F.A.C.S.

ORTHOPEDIC SURGERY
P. H. Rhymes, M.D.

INTERNAL MEDICINE
J. H. Burnett, Jr., M.D.
W. A. Riley, M.D.
R. S. Griffin, M.D.
R. T. Torp, M.D.

OBSTETRICS AND GYNECOLOGY
M. A. Porter, M.D.

PEDIATRICS
J. M. Woodall, M.D.
M. W. Talbot, Jr., M.D., F.A.A.P.

RADIOLOGY
W. R. Cashion, M.D.

UROLOGY
G. F. Dillon, M.D.

CONSULTANTS IN PATHOLOGY
Jarrett E. Williams, M.D.
B. B. Trotter, M.D.

BUSINESS MANAGER
R. L. Heith

THE LORIMER CLINIC

901 West Leuda Street, Fort Worth, Texas 76104
Telephone 335-4333

SURGERY
W. S. Lorimer, Jr., M.D., F.A.C.S.
R. J. Turner, III, M.D., F.A.C.S.

INTERNAL MEDICINE
W. W. Moorman, M.D., F.A.C.P.
D. W. Johnston, M.D., F.A.C.P.
Stephen Eppstein, M.D.
A. R. Daniell, M.D.

Mrs. Evelyn Farr, Business Manager

RUGELEY AND BLASINGAME CLINIC

2100 North Fulton Street, Wharton, Texas
Telephone 713 532-1700

ADMINISTRATION
C. H. "Ham" Rugeley
Malcolm D. Rugeley

INTERNAL MEDICINE
R. D. Little, M.D.
D. W. Samuelson, M.D.

GENERAL PRACTICE
C. E. Woodson, M.D.

PEDIATRICS
F. W. Kolle, M.D.

NEUROPSYCHIATRY
R. R. Gleason, Jr., M.D.

DERMATOLOGY & SKIN CANCER
J. S. Stell, M.D.

GENERAL & THORACIC SURGERY
R. E. Goelzer, M.D.

GENERAL SURGERY
R. B. Caraway, Jr., M.D.

UROLOGY
H. Z. Fretz, M.D.
C. M. Collins, M.D.

OBSTETRICS & GYNECOLOGY
D. M. Voulgaris, M.D.
H. E. Secor, M.D.

OPHTHALMOLOGY
V. A. Black, M.D.

OTOLARYNGOLOGY
J. L. Holcomb, M.D.

DENTISTRY
C. J. Shumbera, D.D.S.
J. R. Kieler, Jr., D.D.S.

PATHOLOGY—CONSULTANT
H. M. Perches, M.D.

ANESTHESIOLOGY—CONSULTANT
C. G. Spears, M.D.

RADIOLOGY—CONSULTANT
L. D. O'Gorman, M.D.

DIAGNOSTIC CLINIC OF HOUSTON

6448 Fannin, Houston, Texas 77025
Telephone 713 526-2051

Internal Medicine and Diagnosis

CARDIOVASCULAR DISEASE
Thomas J. Fatheree, M.D.
Hugh F. Arnold, M.D.
Hugh H. Hanson, M.D.
Michael B. Raine, M.D.
Michael A. Modelski, M.D.
Sigmund W. Friedland, M.D.

ENDOCRINOLOGY AND METABOLIC DISEASES
H. Leland Kaplan, M.D.
Thomas G. Vandivier, M.D.
Charles H. Gregory, M.D.
R. Frederick Gregory, M.D.

ENDOCRINOLOGY, METABOLIC DISEASES AND DIRECTOR OF CLINICAL RESEARCH
Raymond L. Gregory, M.D.

GERIATRICS
Frederick G. Dorsey, M.D.

GASTROENTEROLOGY
Dolph L. Curb, M.D.
W. Tom Arnold, M.D.
Belton G. Griffin, M.D.
Frederick R. Lummis, Jr., M.D.
Dean C. Solcher, M.D.

HEMATOLOGY
Edmund N. Gouldin, M.D.
George W. Conrad, Jr., M.D.

HYPERTENSION AND RENAL DISEASES
K. Ronald Bingman, M.D.
R. Robert Durrett, M.D.

INFECTIOUS DISEASES
Lewie L. Travis, Jr., M.D.
Jack L. Reddin, M.D.

INTERNAL MEDICINE
Jeffrey Zatorski, M.D.

NEUROLOGY
Donald J. Russell, M.D.

ONCOLOGY
Lester L. Hoaglin, Jr., M.D.
Peter Sullivan, M.D.

PATHOLOGY
Jack P. Abbott, M.D.
Paul B. Radelat, M.D.

PULMONARY DISEASE
William M. Donohue, M.D.
Joel E. Reed, M.D.
Gene R. Lindley, M.D.

RADIOLOGY AND NUCLEAR MEDICINE
William L. Hinds, M.D.
Charles P. Eldridge, Jr., M.D.
David D. Lawrence, M.D.
Charles A. Spain, M.D.

RHEUMATOLOGY
John E. Norris, M.D.

ADMINISTRATION
C. G. Mercy, Administrator
Robert B. Hall, Assistant Administrator

LABORATORY
Clinical Pathology
Cytology

NUCLEAR MEDICINE
Isotope uptake, Gammagram and Therapy

ROENTGENOLOGY

PROCEDURES:
Bronchoscopy
Pulmonary Functions
Cardiac Catheterization
Electrocardiography-Phonocardiography
Esophagoscopy
Gastroscopy
Proctosigmoidoscopy

Consultation By Appointment

CLINIC OF THE SOUTHWEST

6437 High Star at Hillcroft, Houston, Texas 77036
Telephone 774-7671

INTERNAL MEDICINE
William C. Franklin, M.D.
Arthur B. Conde, M.D.

OBSTETRICS & GYNECOLOGY
Joy L. Deere, M.D.
Loren B. Goss, M.D.

PEDIATRICS
John R. Dunn, Jr., M.D.
Blanca S. Azios, M.D.

PHYSICAL THERAPY
Richard D. Tinsley, R.P.T.

GENERAL SURGERY
Harvey B. Koch, M.D.

UROLOGY
Glen E. Lewis, M.D.

DENTISTRY
Burley G. Ingram, D.D.S.

RADIOLOGY
Neil B. Longley, M.D.
Richard E. Schuette, M.D.

BUSINESS MANAGER
C. C. Walker

COLON AND RECTAL SURGERY

ALVIN BALDWIN, JR., M.D., F.A.C.S.
Practice Limited to Diseases and Surgery of the Colon and Rectum

714 Doctors Building, 3707 Gaston Avenue, Dallas, Texas
Office Telephone 824-2573; Residence Telephone 361-4500

HUGH C. WELSH, M.D.
Proctology and Abdominal Surgery

2715 Fannin Street, Houston, Texas

J. WADE HARRIS, M.D., F.A.C.S.
JOHN E. COGAN, M.D., F.A.C.S.
Surgery of the Rectum and Colon

406 Hermann Professional Bldg., Houston, Texas

C. D. L. CROMAR, M.D.
Surgery of the Rectum and Colon

617 South Tatar Street, Pasadena, Texas 77502

DERMATOLOGY

ROGER W. MANAR, M.D.
Dermatology and Superficial X-Ray Therapy

1400 Eighth Street, Wichita Falls, Texas

BEDFORD SHELMIRE, M.D.
BEDFORD SHELMIRE, JR., M.D.
DAVID S. SHELMIRE, M.D.
Dermatology

1410 Medical Arts Bldg., Dallas, Texas

DRS. PIPKIN, RESSMANN & RICHARDSON
J. Lewis Pipkin, M.D.
Arthur C. Ressmann, M.D.
A. W. Richardson, M.D.
Dermatology
X-Ray and Radium in the Treatment of Skin Malignancies
714 Medical Arts Bldg., San Antonio, Texas

EVERETT R. SEALE, M.D.
Dermatology and Treatment of Skin Malignancies

1217 Hermann Professional Bldg., Houston, Texas

J. GILMORE BRAU, M.D.
Dermatology and Syphilology
X-Ray and Radium Therapy
Hours 9 to 1—3 to 5
3817 Brown Street, Dallas, Texas

J. FRANKLIN CAMPBELL, M.D.
EDMUND N. WALSH, M.D.
Dermatology and Syphilology, and Treatment of Skin Cancer, Radium and X-Ray Therapy

1410 Pruitt Street, Fort Worth, Texas

Leslie M. Smith, M.D.
H. D. Garrett, M.D.
John C. Wilkinson, M.D.

DRS. SMITH, GARRETT & WILKINSON
Dermatology and Syphilology X-Ray and Radium in the Treatment of Skin Malignancies
Medical Center, 1501 Arizona, El Paso, Texas

WALTER B. MANTOOTH, JR., M.D.
JOE M. LEHMAN, M.D.
ROBERT LEHMAN, M.D.
Dermatology, Syphilology, and Cancer of the Skin

3801 19th St., Suite 500, Lubbock, Texas

MARVIN E. CHERNOSKY, M.D.
Dermatology and Syphilology

703 Hermann Professional Bldg., Houston, Texas; Phone 526-3733

THOMAS L. SHIELDS, M.D.
Dermatology and Syphilology
X-Ray Therapy in the Treatment of Skin Malignancies
Hours 9 to 1—3 to 5
800 Fifth Ave., Fort Worth, Texas

DAVID R. WEAKLEY, M.D., F.A.C.P.
Dermatology
Treatment of Skin Malignancies
8548 Northwest Plaza Drive, Dallas, Texas
315 North Shiloh Road, Garland, Texas

M. A. (Mac) HAIRSTON, JR., M.D.
Dermatology, Hair Transplantation & Dermoplaning

Memorial City Professional Bldg., 902 Frostwood, Suite 184
(Between Memorial & Katy Fwy.)
Houston, Texas 77024, Phone 464-6369

JOHN B. McMASTER, JR., M.D.
Dermatology
Dermabrasion & Chemosurgery
416 M & S Tower, San Antonio, Texas 78205; Phone 222-2147

TEXAS MEDICAL ASSOCIATION
MEMORIAL LIBRARY

A clinical library designed to assist the practicing physician

45,000 BOUND VOLUMES — 1100 CURRENT JOURNALS
EXTENSIVE REPRINT COLLECTION — 400 FILMS
AUDIO-DIGEST TAPES & AMA NEWS — JOURNAL

1801 North Lamar Blvd., Austin, Texas 78701
Telephone 512 477-6704

EYE, EAR, NOSE, THROAT

DRS. CANON, WATKINS, ANDERSON, NALLE AND ELLSASSER
Eye, Ear, Nose and Throat, Broncho-Esophagology and Allergy
R. T. Canon, M.D., F.A.C.S.
Wm. F. Anderson, M.D., DAB Oph., F.A.C.S.
M. G. Ellsasser, M.D., DAB Oph.
M. D. Watkins, M.D., F.A.C.S., A.I.C.S.
Ernest Nalle, Jr., M.D. DAB Oto., F.A.C.S., F.I.C.S.
West Texas Clinic, 1312 Main, Lubbock, Texas

W. HUBERT SEALE, M.D.
Eye, Ear, Nose & Throat

HUBERT JAMES SEALE, M.D.
Disease & Surgery of the Eye
1321 Hickory St., Abilene, Texas, Phone 673-3751

GASTROENTEROLOGY

JAMES J. GORMAN, M.D., F.A.C.P.
Gastroenterology
Diagnosis, Gastroscopy
1111 El Paso National Bank Bldg., El Paso, Texas 79901

MILFORD O. ROUSE, M.D.
announces limitation of practice to consultation in hospitals.
Records of his patients are with Cecil O. Patterson, M.D., and Daniel Polter, M.D.,
1414 Medical Arts Building, Dallas, 742-6144

CECIL O. PATTERSON, M.D.
Gastroenterology, Gastroscopy, Esophagoscopy
1414 Medical Arts Building, Dallas, Texas, 742-6141

DRS. BAILEY, DOUGLAS AND FISHER ASSOCIATION
3434 Swiss Avenue, Suite 303, Dallas, Texas
Diseases of the Digestive System
Herbert A. Bailey, M.D.
F. Clark Douglas, M.D.
John W. Fisher, M.D.

W. CROCKETT CHEARS, JR., M.D.
Gastroenterology, Gastroscopy & Esophagoscopy
1027 Medical Arts Building, Dallas, Texas, 748-4975

GENERAL SURGERY

J. PEYTON BARNES, M.D., F.A.C.S.
Surgery
1000 St. Joseph Professional Bldg., Houston, Texas 77002

★ BE SURE TO VOTE NOV. 3 ★
or vote absentee from October 14-30

L. GONZALEZ CIGARROA, M.D., F.A.C.S.
Diplomate American Board of Surgery
Practice Limited to Surgery
1502 Logan Ave., Laredo, Texas

BURT B. SMITH, M.D.
Surgery
Emphasizing Breast, Thyroid and Gastro-Intestinal Surgery
728 Hermann Professional Bldg., Houston, Texas 77025, 523-8323

ADOLPH F. KAUFFMANN, M.D., F.A.C.S.
Diplomate American Board of Surgery
General Surgery
707 Fifth Ave., Fort Worth, Texas, Phone 332-7597

BRYAN V. WILLIAMS, M.D., F.A.C.S.
Diplomate American Board of Surgery
General Surgery
1506 St. Joseph Professional Bldg., Houston, Texas 77002, 227-5505

PAUL CARRILLO-RIVERA, M.D., F.A.C.S.
General, Pulmonary, Cardiovascular Surgery
105 University Towers, 1900 N. Oregon St., El Paso, Texas 79902
Telephone 915 533-2508

INTERNAL MEDICINE

JOHN A. WIGGINS, JR., M.D.
Diseases of the Chest
Bronchoscopy
1105 Pennsylvania Ave., Fort Worth, Texas

HENRY N. GEMOETS, M.D., F.A.C.P., F.C.C.P.
Internal Medicine and Diseases of the Chest and Heart

THOMAS H. GEMOETS, M.D.
Internal Medicine and Diagnosis
1003 Memorial Professional Building
1010 Louisiana, Houston, Texas 77002, 222-7224

NEUROLOGY AND PSYCHIATRY

STEPHEN WEISZ, M.D.
Practice Limited to
Neurology and Psychiatry
1637 Medical Arts Bldg., Dallas, Texas, 747-5183

ALEX K. MUNSON, M.D.
Child Psychiatry
KERBEY LANE EVALUATION AND TREATMENT CENTER
Office Hours By Appointment
3400 Kerbey Lane, Austin, Texas 78703, 512 454-8718

HAUSER CLINIC
Psychiatry, Neurology and Electroencephalography

Section of Psychiatry
*Abe Hauser, M.D.
*Robert I. Hauser, M.D.
Barry M. Brown, M.D.
*Harris M. Hauser, M.D.

Section of Neurology
*Harris M. Hauser, M.D.
*Gerald Ratinov, M.D.
Robert M. Gordon, M.D.
*Abe Hauser, M.D.

Section of Social Work
Ethel Feinsilver, M.S.

Section of Psychology
Robert Langston, Ph.D.
Consultant
Joanne Borba, M.A.

Administrator
Gordon D. Keller

808 Memorial Professional Building, Houston, Texas 77002
Telephone 224-5041

*Diplomate, American Board of Psychiatry and Neurology

Perry C. Talkington, M.D.
Charles L. Bloss, M.D.
Howard M. Burkett, M.D.
Jerry M. Lewis, M.D.
James K. Peden, M.D.
Claude L. Jackson, M.D.
Dode M. Hanke, M.D.
Doyle I. Carson, M.D.
Thomas H. Allison, M.D.
Stanley L. Seaton, M.D.
Maurice S. Green, M.D.
Joe W. King, M.D.
Keith H. Johansen, M.D.
Charles G. Markward, M.D.
Aretta J. Rathmell, M.D.
Donald N. Offutt, M.D.

practice limited to
PSYCHIATRY

4645 Samuell Blvd., Dallas, Texas
Timberlawn Psychiatric Hospital
4600 Samuell Blvd., Dallas, Texas
Telephone 381-7181

CHAPMAN ISHAM, M.D.
Diplomate American Board of Psychiatry
Child Psychiatry and Marriage Counseling
Hypnotherapy for Smoking and Obesity

3701 21st Street, Lubbock, Texas 79410, 795-4023

MEDICAL NEUROLOGY AND ELECTROENCEPHALOGRAPHY

205 Swiss Avenue Medical Building
3434 Swiss
Dallas, Texas 75204, 827-3610

Sheff D. Olinger, M.D.
Joseph S. Jenike, M.D.
Charles W. Barrier, M.D.

Hours By Appointment Only

THE FORT WORTH NEUROPSYCHIATRIC CENTER

*Bernard J. Dolenz, M.D.
*Herbert G. Rush, M.D.

1066 W. Magnolia Avenue, Fort Worth, Texas 76104, 336-5469

*Diplomates American Board of Psychiatry and Neurology

HOUSTON ASSOCIATES IN PSYCHIATRY AND NEUROLOGY

Houston, Texas

C. A. Iannucci, M.D.

Joe C. A. Eckhardt, Jr., M.D.

Alfred H. Vogt, M.D.

George M. Stevens, M.D.

Jules Bohnn, M.D.

Leroy Androes, M.D.

A. R. Martinez, Ph.D.

Ruth Searls, M.S.W.

Diana Sheer, M.S.W.

Dan DeShazo, M.S.W.

Beth Bowman, M.A.

Comprehensive Neuropsychiatric Evaluation and Treatment
Electroencephalography

1021 Hermann Prof. Bldg., 529-5721
6812 Staffordshire, 748-3780

PASADENA NEUROPSYCHIATRIC CLINIC ASSN.
Robert E. Hazlewood, M.D., Richard M. Orr, M.D.

Department of Psychology
T. E. Morosko, Ph.D., Allen Goss, Ph.D.

Practice Limited to Neurology and Psychiatry
Office Hours By Appointment

First Pasadena State Bank Building
1001 E. Southmore, Suite 1103, Pasadena, Texas 77502, 473-7646

NEUROLOGICAL SURGERY

JAMES GREENWOOD, JR., M.D.
Neurosurgery

718 Hermann Professional Bldg., Houston, Texas 77025

Office: 528-5373; Residence: 528-4038

Morris Sanders, M.D.
Jack I. Woolf, M.D.

DRS. WOOLF AND SANDERS
Diplomate American Board of Neurological Surgery

Locke Medical Bldg., 6011 Harry Hines Blvd., Dallas, Texas, 631-1500

Watch out for the other guy!
DRIVE DEFENSIVELY

JACK STERN, M.D.
GARY C. HUTCHISON, M.D.
CLARK WATTS, M.D.
Neurological Surgery

8226 Douglas, Suite 609, Dallas, Texas 75225, 363-8524

Casey E. Patterson, M.D.
Charles W. Simpson, M.D.
Tom M. Nash, M.D.
James E. Bland, M.D.
DRS. NASH, PATTERSON & SIMPSON, ASSN.
Neurological Surgery

Suite 557, Locke Medical Building
6011 Harry Hines Blvd., Dallas, Texas 75235, 637-0420

ALBERT D'ERRICO, M.D.
Neurological Surgery

3707 Gaston Avenue, Dallas, Texas 75246, 824-2543

RONALD SMITH, M.D.
Neurological Surgery

901 South Lake, Fort Worth, Texas, 336-0551

GLENN R. CHERRY, M.D., F.A.C.S.
R. GORDON LONG, M.D.
Diplomate American Board of Neurological Surgery

712 North Washington, Dallas, Texas, 826-7060

ROBT. C. L. ROBERTSON, M.D., F.A.C.S.
JOSEPH W. ROBERTSON, M.D.
Neurological Surgery

2210 Maroneal, Houston, Texas 77025, 523-3684

WILLIAM J. NELSON, M.D.
Certified by the American Board of Neurological Surgery

Suite 300, University Towers
1900 N. Oregon St., El Paso, Texas 79902, 915 542-0643

CHARLES A. BORNE, JR., M.D.
Neurological Surgery

Suite 834, Sealy-Smith Professional Building
200 University Blvd., Galveston, Texas 77550, 713 763-1688

NUCLEAR MEDICINE

HERBERT C. ALLEN, JR., M.D.
Practice Limited to Nuclear Medicine

100 Hermann Professional Bldg., Houston, Texas 77025, 526-1501

ADDRESS CHANGE? Avoid missing or delayed mail from TMA. Send old and new address to 1801 North Lamar Blvd., Austin, Texas 78701.

OPHTHALMOLOGY

HOUSTON EYE ASSOCIATES
1121 Hermann Prof. Bldg., Houston, Texas 77025, 713 526-7261

Richard S. Ruiz, M.D., F.A.C.S.
Charles E. Russo, M.D.
Malcolm L. Mazow, M.D.
Robert H. Stewart, M.D.
Robert B. Wilkins, M.D.

DRS. MURPHY, ALPAR, TAYLOR & HOWELL
Ophthalmology

Weldon O. Murphy, M.D.
John J. Alpar, M.D.
Coleman Taylor, M.D.
J. Franklin Howell, Jr., M.D.
Diplomates of the American Board of Ophthalmology
2300 West 7th Avenue, Amarillo, Texas

ALBERT VAISER, M.D.
WILLIAM B. SNYDER, M.D.
Diseases and Surgery of the Retina

318 Medical Arts Building, Dallas, Texas, 748-0958

LIEVEN J. VAN RIET, M.D.
Ophthalmology
Medical—Surgical

Saint Joseph Professional Bldg., Houston, Texas 77002, 224-0654

W. REX HAWKINS, M.D.
Detachment of the Retina
Diabetic Retinopathy

250 Hermann Professional Bldg., Houston, Texas, 529-6727

DAVID R. STAGER, M.D.
Pediatric Ophthalmology

8226 Douglas Ave., Dallas, Texas 75225

ARTHUR M. CLEMENTS, M.D.
Surgery and Diseases of the Eye

Northlake Professional Bldg., 8535 Ferndale Road, Dallas, Texas 75238

Telephone 214 341-3407

BRYSON AND STRUVE ASSOCIATES
General Ophthalmology

J. Gordon Bryson, M.D.
C. A. Struve, M.D.
Disease and Surgery of the Retina
John A. Bryant, M.D.
3166 Reid Drive, P. O. Box 6374, Corpus Christi, Texas 78411
Telephone 512 853-7319

Do your patients understand your fees?

Displaying an AMA Fee Plaque serves as an invitation for patients to discuss medical costs with you. It shows you care and helps prevent doctor-patient misunderstanding. Send $1.25 to: Order Department, American Medical Association, 535 North Dearborn Street, Chicago, Illinois 60610.

ORTHOPEDIC SURGERY

H. H. Beckering, M.D.
L. Ray Lawson, M.D.
George Truett James, M.D.
Robert D. Vandermeer, M.D.

W. B. CARRELL MEMORIAL CLINIC

2828 Lemmon Ave., Dallas, Texas

FORT WORTH BONE & JOINT CLINIC

918 8th Avenue, Fort Worth, Texas

Louis J. Levy, M.D.
Henry C. McDonald, Jr., M.D.
Cuvier P. Lipscomb, M.D.
Fred W. Sanders, M.D.

Ralph E. Donnell, M.D.
F. Carlton Hodges, M.D.

ORTHOPEDIC ASSOCIATES

Diplomates American Board of Orthopaedic Surgery

1133 N. 19th St., Abilene, Texas 79601

HOUSTON ORTHOPEDIC CLINIC

Joseph Barnhart, M.D.

Donald T. Lazarz, M.D.

1817 Dryden Road, Houston, Texas, 529-4389

LUBBOCK ORTHOPEDIC SURGERY CLINIC

Surgery of the Hand

Royce C. Lewis, Jr., M.D.
Kenneth C. Scholz, D.D.S., M.D.
Ray E. Santos, M.D.
Robert O. Bateman, M.D.

3702 21st St., Suite 9, Lubbock, Texas 79410, 806 795-8261

THE EL PASO ORTHOPEDIC SURGERY GROUP

Diplomates American Board of Orthopaedic Surgery

Louis W. Breck, M.D.
W. Compere Basom, M.D.
Morton H. Leonard, M.D.*
Oren H. Ellis, M.D.
Wellington J. Pindar, M.D.
Donald A. Shearer, Administrator

*Special Attention to Surgery of the Hand

1220 N. Stanton St., El Paso, Texas 79902
Telephone 533-7465

B. C. HALLEY, JR., M.D.
DAVID R. WEBB, JR., M.D.

Orthopaedic Surgery

3909 Worth at Washington, Dallas, Texas 75246, 821-1417

RUSS B. GRAHAM, M.D., F.A.C.S.

Orthopedic Surgery

306 Presbyterian Professional Building,
8210 Walnut Hill Lane, Dallas, Texas 75231, 824-7883

THE ORTHOPEDIC GROUP OF RICHARDSON

Charles E. Graham, M.D.
M. Gayle Glidewell, M.D.

812 S. Central Expressway, Richardson, Texas 75080, 231-6396

Orthopedic Surgery

L. LEE LANKFORD, M.D.

Diplomate American Board of Orthopaedic Surgery
Hand Surgery and Upper Extremity
Reconstructive Surgery

3707 Gaston Ave., Dallas, Texas 75246, 214 823-5351

THE ARLINGTON ORTHOPEDIC GROUP

H. W. Bendel, Jr., M.D.
E. E. Rising, Jr., M.D.
C. Poindexter, M.D.

Diplomate American Board of Orthopaedic Surgery

801 West Randol Mill Road, Arlington, Texas 76010, 817 261-8284

THE BOSWELL-EVANS ORTHOPAEDIC CLINIC

George M. Boswell, Jr., M.D., F.A.C.S.
Gerald W. Schofield, M.D.

James P. Evans, M.D.
Lewis R. Thompson, M.D.

4849 W. Lawther Dr., Dallas, Texas 75218, 348-8300

OTOLARYNGOLOGY

TOM BARR, M.D.

Ear, Nose, and Throat
Diseases of Larynx, and Laryngeal Surgery

Medical Arts Building, Dallas, Texas

HERBERT H. HARRIS, M.D., F.A.C.S., F.I.C.S.

Oto-Laryngology Broncho-Esophagology and
Laryngeal Surgery

907 Hermann Professional Bldg., Houston, Texas

MARVIN G. SHEPARD, M.D., F.A.C.S.

Practice Limited to Otology and Otological Surgery

Medical Tower Bldg., Suite 514, 712 N. Washington, Dallas, Texas

Hours By Appointment

W. P. ANTHONY, M.D.

Otology

662 South Henderson, Fort Worth, Texas 76104

DONALD N. MATHESON, M.D., F.A.C.S.

Diplomate American Board of Otolaryngology

800 Fifth Avenue, Fort Worth, Texas, 336-7133

TEXAS MEDICAL ASSOCIATION MEMBERS' RETIREMENT TRUST

This fully trusteed retirement program qualifies under the Keogh Act and is approved by IRS. For full information, write: TMA Members' Retirement Trust, 1801 North Lamar Blvd., Austin, Texas 78701.

JACK BLUM, M.D.
LLOYD F. RITCHEY, M.D.
Otolaryngology

8215 Westchester, Suite 135, Dallas, Texas

PATHOLOGY

MARVIN D. BELL, A.B., M.D.
Clinical Pathology

1109 Medical Arts Bldg., Dallas, Texas

A. B. CAIRNS, M.D.
GERARD NOTEBOOM, M.D.
MARC GARZA, M.D.
RONALD E. BUCHANAN, M.D.
WADE M. BRANNAN, M.D.

Diplomates American Board of Pathology
1105 N. Bishop, Methodist Hospital, Dallas, Texas

FORT WORTH MEDICAL LABORATORIES

John J. Andujar, M.D.
Dorothy Patras, M.D.

1404 Pennsylvania Ave., P. O. Box 1118, Fort Worth, Texas 76104

Telephone 817 336-7137

BROWN & ASSOCIATES MEDICAL LABORATORY
Tissue Pathology, Exfoliative Cytology, Hematology, Serology, Clinical Chemistry, Bacteriology, Parasitology, Serum Protein Electrophoresis and Hemoglobin Electrophoresis

Wilson G. Brown, M.D.
Walter G. Olin, M.D.
S. J. Skinner, M.D.
George V. Miller, M.D.
John R. Thomas, M.D.
Joe B. Haden, M.D.

Diplomates American Board of Pathology

165 Hermann Prof. Bldg., Houston, Texas
Telephone 526-4031

Mailing Containers on Request—Office Pickup Service in Houston

DR. PREUSS PATHOLOGY LABORATORY
Exfoliative Cytology and Surgical Pathology

FRED S. PREUSS, M.D., F.C.A.P.

3607 Gaston Ave., Room 305, Dallas, Texas 75226, 823-6912

Specimen Containers on Request

NUCLEAR MEDICINE LABORATORIES OF TEXAS

Texas Medical Center

6411 South Main Street, Houston, Texas 77025

Completely Equipped Radioisotope Laboratory for Diagnostic Radioactive Tests in: Hematology, Thyroidology, Endocrinology, Gastroenterology, Cardiology, Neurology, Neurosurgery, Urology, Ophthalmology and Obstetrics-Gynecology

Herbert C. Allen, Jr., M.D., Director, 526-1501

SEAT BELTS SAVE LIVES—
BUT ONLY IF YOU USE THEM

John H. Childers, M.D.
R. R. Rember, M.D.
E. H. Valentine, M.D.
W. L. Crofford, M.D.
E. P. Jenevein, M.D.

MEDICAL LABORATORY SERVICE OF DALLAS

Clinical Pathology
Diagnostic Radioisotopes
Surgical Pathology
Exfoliative Cytology

6011 Harry Hines Blvd., Dallas, Texas 75235, 637-0210
(Mailing Containers Available Upon Request)

PRUITT MEDICAL LABORATORIES
Jack Pruitt, M.D.
Diplomate, American Board of Pathology

Tissue Pathology, Exfoliative Cytology, Clinical Pathology, Medicolegal Consultation

P. O. Box 160, Lufkin, Texas 75901, 634-4453

WACO CLINICAL PATHOLOGY LABORATORY

K. P. Wittstruck, M.D., F.C.A.P., Walter Krohn, M.D., F.C.A.P.
Clinical Pathology
Surgical Pathology
Exfoliative Cytology
Medicolegal Consultation
Mailing Containers on Request
2112 Washington Ave., P. O. Box 3160, Waco, Texas 76707; 756-7226

GEORGE J. RACE, M.D. AND ASSOCIATES
Pathologists

421 Medical Tower Building,
712 North Washington, Dallas, Texas 75246, 214 824-1258

DELTA PATHOLOGY LABORATORIES
James W. G. Carman, M.D.
Clinical Pathology and Anatomic Pathology
Cytology

6209 Stuebner Airline, Houston, Texas 77018, 713 697-7875

PHYSICAL MEDICINE AND REHABILITATION

TEXAS REHABILITATION HOSPITAL OF GONZALES
WARM SPRINGS FOUNDATION, INC.

P.O. BOX 58, GONZALES, TEXAS 78629
Facilities for Physical Restoration
Physical Therapy, Occupational Therapy, Speech Therapy, Recreational Therapy, School from first grade through twelfth grade
ROBERT M. IZARD, JR., M.D., Medical Director
LYNN SMITH, SR., Administrator

PLASTIC SURGERY

THOMAS D. CRONIN, M.D., F.A.C.S.
RAYMOND O. BRAUER, M.D.
THOMAS M. BIGGS, M.D.
JAMES H. PENOFF, M.D.

Diplomates American Board of Plastic Surgery

PLASTIC SURGERY
5419 Caroline St., Houston, Texas 77004, 523-8131

WILLARD C. SELLMAN, JR., M.D.
Plastic, Maxillo-Facial and Hand Surgery

530 Locke Medical Building,
6011 Harry Hines Blvd., Dallas, Texas 75235, 637-4770

BROMLEY SMITH FREEMAN, M.D., F.A.C.S.
Diplomate American Boards of Surgery and Plastic Surgery

PLASTIC AND RECONSTRUCTIVE SURGERY
Tumors of the Head and Neck

1810 The Medical Towers, Houston, Texas 77025
Telephone 529-3579; Residence 782-1628

JOHN B. PATTERSON, M.D., F.A.C.S.
Diplomate American Board
Plastic Surgery

612 Doctors Bldg., Fort Worth, Texas, 336-0356

SIMON FREDRICKS, M.D., F.A.C.S.
Diplomate American Board of Plastic Surgery

Houston Office
1103 Medical Towers, Houston, Texas 77025, 523-5575

Pasadena Office
904½ E. Southmore, Pasadena, Texas 77502, 473-5488

DAVID A. GRANT, M.D., F.A.C.S.
Diplomate American Boards of Surgery and Plastic Surgery
Plastic & Reconstructive Surgery
Cosmetic Surgery

800 Fifth Avenue, Fort Worth, Texas 76104, 335-4751

CARL R. COERS, III, M.D.
Diplomate American Board of Plastic Surgery
Plastic, Reconstructive & Hand Surgery

800 Fifth Avenue, Fort Worth, Texas 76104, 335-4751

MARCUS L. FINLEY, M.D., F.A.C.S.
Diplomate American Board of Plastic Surgery
Plastic, Reconstructive and Hand Surgery

1115A Pennsylvania Avenue, Fort Worth, Texas 76104, 335-6439

VALENTIN GRACIA, M.D., F.A.C.S., F.I.C.S., D.A.B.
Aesthetic Surgery—Burns

1001 W. Rosedale, Fort Worth, Texas 76104, 336-0446

FRANCIS A. MORRIS, JR., M.D.
WILLIAM E. BARNES, M.D.
Diplomates American Board of Plastic Surgery
Plastic, Reconstructive and Hand Surgery

3100 Red River, Austin, Texas, 476-9149

Plastic Surgery
JOHN R. HILL, M.D., F.A.C.S.
Diplomate American Board of Plastic Surgery
Practice Limited to Plastic, Reconstructive and Hand Surgery
Medical Center Office:
272 Hermann Prof. Bldg., Houston, Texas 77025, 528-2481
Spring Branch Office:
9320 Westview, Houston, Texas 77055, 528-2481

E. FRANK DUNTON, M.D., F.A.C.S.
Plastic & Reconstructive Surgery and
Surgery of the Hand

Suite 104, 3434 Swiss Avenue, Dallas, Texas, 824-7290

W. W. SCHUESSLER, M.D., F.A.C.S.
Diplomate of American Board of Plastic Surgery
Plastic, Reconstructive & Maxillo-Facial Surgery

Suite 4-C Medical Center,
1501 Arizona Avenue, El Paso, Texas 79902, 533-6362

RADIOLOGY

AMARILLO RADIOLOGICAL GROUP
Practice Limited to Radiology
Royal Wertz, M.D., F.A.C.R.
Wilbur Q. Budd, M.D., D.A.B.R.

800 Rusk Street, Amarillo, Texas 79106, 373-8324

J. R. MAXFIELD, JR., M.D., M.A.C.R.
JACK G. S. MAXFIELD, M.D., M.A.C.R.
Radiological Center, Including Radioisotopes

2711 Oak Lawn, Dallas, Texas, 526-6661

MAURICE C. ARCHER, M.D., M.A.C.R.
MARY L. KILLINGSWORTH, M.D., M.A.C.R.

Diplomates of the American Board of Radiology

Doctors Bldg., 800 Fifth Avenue, Fort Worth, Texas, 332-3401

DRS. CARLSON AND BAREKMAN
Glenn D. Carlson, M.D., F.A.C.R.
William H. Barekman, M.D., D.A.B.R.
Agnes M. Guthrie, M.D., D.A.B.R.

X-Ray Diagnosis, X-Ray and Radium Therapy,
Radioisotopes

1221 Medical Arts Bldg., 741-3621
6011 Harry Hines Blvd., 631-7070
3607 Gaston Ave., 823-9961
Dallas, Texas

Harvey M. Lowry, M.D., F.A.C.R.
James R. Gish, M.D., D.A.B.R.
Edward A. Sheldon, M.D., D.A.B.R.
James P. Wills, M.D.

RADIOLOGY
109 Doctors Bldg., 838-4543
502 Goodhue Bldg., 838-2224
Baptist Hospital, 833-6421
Beaumont, Texas

JAMES L. CLIFFORD, M.D., D.A.B.R.
Cobalt 60 Rotational Therapy, X-Ray and
Radium Therapy
X-Ray Diagnosis, Radioisotopes

845 Clarksville St., Paris, Texas, 784-4624

71
TMA
ANNUAL
SESSION
MAY 6-9
HOUSTON

THORACIC SURGERY

Donald L. Paulson, M.D.
Harold C. Urschel, Jr., M.D.

DRS. PAULSON AND URSCHEL
Thoracic and Cardiovascular Surgery

3810 Swiss Ave., Dallas, Texas, 824-2503

Thoracic and Cardiovascular Surgery
JAMES O. McBRIDE, M.D., F.A.C.S.

662 S. Henderson, Suite A, P. O. Box 1407, Fort Worth, Texas 76102
Telephones 332-7454, 738-4594

CHARLES T. MEADOWS, M.D.
Diplomate American Board of Thoracic Surgery
Thoracic and Cardiovascular Surgery
Broncho-esophagology

1101 North 19th, The Professional Bldg., Abilene, Texas, 673-8184

LeROY J. KLEINSASSER, M.D., F.A.C.S.
Diplomate American Board of Surgery &
The Board of Thoracic Surgery
Cardiovascular and Peripheral Vascular Surgery

The Doctors Bldg., 3707 Gaston Ave., Dallas, Texas 75246

Robert R. Shaw, M.D.
John L. Kee, Jr., M.D.

DRS. SHAW AND KEE
Thoracic Surgery

The Doctors Bldg., 3707 Gaston Ave., Dallas, Texas 75246, 826-5184

WILLIAM W. TAYLOR, M.D.
Diplomate Board of Thoracic Surgery
Thoracic, Cardiac, and Vascular Surgery

804 Locke Med. Bldg., 6011 Harry Hines Blvd., Dallas, Texas 75235
Telephone 637-4833

ALLAN L. GRAHAM, M.D.
Diplomate American Board of Surgery and
Board of Thoracic Surgery
Cardiovascular and Peripheral Vascular Surgery

502 Docotrs Bldg., 800 Fifth Ave., Fort Worth, Texas, 332-7879

ALTON C. LAWTON, M.D., F.A.C.S.
Diplomate American Board of Thoracic Surgery
Thoracic and Cardiovascular Surgery
Endoscopy

626 Doctors Bldg., 800 Fifth Ave., Fort Worth, Texas, 332-5791

TEXAS MEDICINE

For details on submitting manuscripts, send for a copy of "Information for Authors."

Mrs. Marilyn Baker
Managing Editor
TEXAS MEDICINE
1801 North Lamar Blvd., Austin, Texas 78701

UROLOGY

CECIL M. CRIGLER, M.D., F.A.C.S.
Practice Limited to Urology

1519 Hermann Professional Bldg., Houston, Texas

JO C. ALEXANDER, M.D., KARL B. KING, M.D., FOSTER FUQUA, M.D., ELGIN W. WARE, JR., M.D., GEORGE E. HURT, JR., M.D., EUGENE R. TODD, M.D., DONALD E. JOHNSON, M.D. & ASSOCIATES
Urology

3707 Gaston Avenue, Dallas, Texas 75246

THE UROLOGY CLINIC
1415 Pennsylvania Ave., Fort Worth, Texas 76104

Dolphus E. Compere, M.D., M.S., F.A.C.S.
Diplomate of American Board of Urology
Grant F. Begley, A.B., M.D.
Diplomate of American Board of Urology
Hugh Lamensdorf, M.D.

H. M. GIBSON, JR., M.D., F.A.C.S.
Certified by American Board of Urology
Practice Limited to Urology

512 University Towers Bldg., 1900 N. Oregon St., El Paso, Texas
Telephones 532-8130 & 533-4765

MARVIN GREER RAPE, M.D.
Diplomate of American Board of Urology
NEWTON F. McDONALD, M.D.
Diplomate of American Board of Urology
Practice Limited to Urology

1703 St. Joseph Prof. Bldg., 2000 Crawford, Houston, Texas 77002

JOHN B. TRIBLE, M.D.
Practice Limited to Urology

1209-10 Medical Arts Bldg., Houston, Texas 77002, 222-7521

ERWIN C. WINKEL, M.D.
Practice Limited to Urology

Northwest Professional Center,
2925 West T.C. Jester Blvd., Houston, Texas, 681-0343

THE UROLOGY CLINIC
1010 Louisiana, Houston, Texas 77002, 227-1414
James S. Boren, M.D.
Robert I. Cox, M.D.

Diplomates American Board of Urology

JOHN F. COLLINS, JR., M.D.
Urology

Doctor's Park, 1400 Crescent, Denton, Texas 76201, 817 387-3828

Remember your less fortunate colleagues.
Give to the TMA Physicians Benevolent Fund.

Classified Advertising

Physicians Wanted

ORTHOPEDIC SURGEON AND TWO GP's needed by 19 doctor group. 100-bed fully accredited hospital. Salary open. Full partnership in one year. For additional details, write John B. Chester, M.D., 3330 South Lancaster Road, Dallas, Texas 75216.

GENERAL PRACTITIONER NEEDED to assume well-established practice in Milford, Texas. The community's only doctor recently suffered a heart attack and has moved. An eight room small clinic owned by the City is available rent free. Income limited only by interest and ability. Good school and churches. Twelve and 17 miles from two first-class hospitals, 48 miles south of Dallas, 48 miles north of Waco. Contact C. O. Miller, P.O. Box 546, Milford, Texas 76670, area code 214, 493-2511.

DERMATOLOGIST, EENT AND GENERAL PRACTITIONER WANTED to associate with clinic with five physicians, two dentists, one orthodontist. Also complete laboratory and x-ray facilities. Write John G. Compton, Jr., M.D., Medical Center Clinic, Waxahachie, Texas 75165.

STAFF PHYSICIAN: Board certified or immediate eligibility in internal or aviation medicine. Contract operation of Occupational Medicine Services for the NASA Manned Spacecraft Center, Houston, Texas. Salary commensurate with experience. Good fringe benefits. Send resume, qualifications, and salary required to Paul E. Wright, M.D., NASA Manned Spacecraft Center, Dispensary, DC5, Houston, Texas 77058. An equal opportunity employer.

EXCELLENT OPPORTUNITY FOR PHYSICIANS in Carrizo Springs, Texas. Office space available in new professional building adjacent to hospital and nursing home. Excellent schools and housing in city. One general practitioner needed. For information write or call C. W. Vandervoort, 500 North 1st Street, Carrizo Springs, Texas 78834. Phone 876-2550.

UROLOGIST, board certified or eligible, to associate with a progressive and expanding multispecialty group in West Texas. Many fringe benefits including retirement program. No investment required. Adjoining accredited hospital. City population 35,000. Contact Ad-236, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

PEDIATRICIAN, board certified or eligible, to associate with a progressive and expanding multispecialty group in West Texas. Many fringe benefits including retirement program. No investment required. Adjoining accredited hospital. City population 35,000. Contact Ad-236, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

ORTHOPEDIC SURGEON, PEDIATRICIAN, OBSTETRICIAN AND TWO GENERAL PRACTITIONERS needed by 19 doctor-group. Salary open. Full partnership in one year. 100-bed fully accredited hospital. Many fringe benefits including tax-sheltered retirement plan. For additional details write Chester Clinic and Hospital Association, 3330 South Lancaster Road, Dallas, Texas 75216, Attn: John B. Chester, M.D.

WANTED: GENERAL PRACTITIONER, PEDIATRICIAN, INTERNIST on staff of Denton State School. Base annual salary $20,000, extra $1,000 to $3,500 if board certified. 40-hour work week with ample vacation time, other fringe benefits. Excellent community to live. Near Dallas, Fort Worth. Contact Medical Director, Denton State School, Box 368, Denton, Texas.

GENERAL PRACTITIONER OR GP-SURGEON WANTED in East Texas community of Crockett (Houston County). Office space available for solo practice or association with other physicians in area—106-bed new hospital. Center for industry, farming, livestock, and forestry operations. Excellent schools, churches, and recreational facilities available. For additional information contact Houston County Development Foundation, P.O. Box 807, Crockett, Texas 75835, area code 713, 544-2359.

PATHOLOGY RESIDENCIES AND INTERNSHIPS available in 600-bed general hospital. Fully approved four year program in anatomical and clinical pathology. Average annual specimens and tests—348,587. Interns—$6300; residents—$8100 up. Board and laundry. Charles B. Mitchell, M.D., Director of Laboratories, Harris Hospital, 1300 West Cannon, Fort Worth, Texas 76104.

GENERAL PRACTITIONER WANTED to join five man clinic in growing town of Clifton, 30 miles northwest of Waco near Lake Whitney. 41-bed fully accredited hospital with plans to expand by 30 beds. Salary to start, commensurate with present requirements; partnership later. Good schools, churches and hunting and fishing facilities. Contact V. D. Goodall, M.D., Goodall & Witcher Clinic, Clifton, Texas 76634.

RETIRED PHYSICIAN interested in Ob-Gyn and family planning clinics on part-time basis. $300 and up plus travel. Central Texas. Excellent fishing and hunting nearby. Easy access to metropolitan areas. Contact John B. Bryson, M.D., Bell County Health Department, Box 3745, Temple, Texas 76501.

PHYSICIAN NEEDED: Clinic located in the downtown and industrial areas of Dallas needs a physician. The first year salary is guaranteed with the possibility of a future percentage partnership. For additional information contact Harry Carter, Business Manager, Suite 350, 6011 Harry Hines Blvd., Dallas, Texas or call 638-2730.

M.D.'S TO DO GENERAL PRACTICE WITH SURGERY, Houston area, new offices in an expanding general hospital. Liberal guarantee first six months. Average monthly income of present doctors $8,000 plus. Pasadena Memorial Hospital, 4040 Red Bluff Road, Pasadena, Texas 77503. Area code, 713, 473-3311.

GENERAL PRACTITIONER WANTED—Modern office space and hospital available in town of 2,500; trade area of 5,000. Made up of stable economy and permanent residents. Located in the heart of the Hill Country, where excellent hunting and fishing are always available. Good schools and numerous churches. Contact immediately. Administrator, Mason Memorial Hospital, Mason, Texas 76856.

PHYSICIAN WANTED: Need emergency specialist to help cover hospital in San Antonio. Work for the patient on a fee-for-service basis. Excellent economic opportunity. Hospital privileges available. Call AC 512, 684-3525 collect.

NEWLY CONSTRUCTED AND EXPANDED multi-specialty clinic and 120-bed general hospital has openings for physicians in fields of general practice, radiology, urology, pathology, anesthesiology, and orthopedic surgery. Construction to be completed in March, 1971. Located in growing West Texas city of 180,000. Renumeration open depending on board certification and experience. Partnership in two years. Interested applicants send medical curriculum vitae to Ad-287, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

WANTED BOARD CERTIFIED OR ELIGIBLE ANESTHESIOLOGIST in San Angelo, Texas. This is a private practice with fee for service. Direct all correspondence to O. G. Zacharias, M.D., 224 East Harris Avenue, San Angelo, Texas 76901.

BOARD ELIGIBLE INTERNIST WANTED for 7-man medical department with well established multispecialty group in Dallas, Texas. $25,000 beginning annual salary, early partnership; liberal vacation and meeting time; life insurance, group hospitalization, retirement benefits and teaching opportunities. New facilities. Interviewing expenses paid. Please reply to Arthur L. Cook, Business Manager, Dallas Medical & Surgical Clinic, P. O. Box 28, Dallas, Texas 75221.

OPPORTUNITIES IN YOAKUM COUNTY, TEXAS. DENVER CITY, TEXAS. Actual need for four general practitioners. Three overworked general practitioners for the past six years until January 15, 1970. One man left at that time to enter industrial medicine, leaving two. His modern well equipped clinic available, rent free for six months, low rent for following six months, with option to buy, records available. This clinic on same block with hospital. Hospital is 50 beds, well equipped, has radiology, clinical and tissue pathology consultation on regular basis. Present two physicians will welcome one or two other physicians, will help introduce. Amicable working arrangement for time off, patient coverage and consultation. PLAINS, TEXAS. County seat of Yoakum County, 15 miles north of Denver City, excellent highway. Completely equipped modern clinic available for one dollar ($1.00) a month. Utilities furnished by city. Large enough for two physicians. Physicians in Denver will make same arrangements for coverage, etc. as outlined above. Yoakum County has excellent schools, good churches, Yoakum County Park between the two towns with very good grass, green nine hole golf course. Lubbock with Texas Tech University, one hour, twenty minutes away. Midland-Odessa area one hour, thirty minutes away. Contact administrator Yoakum County Hospital, Denver City, Texas, area code 806, 592-2121 or County Judge Gene Bennett, Plains, Texas, area code 806, 456-8606.

PRIVATE INDIVIDUAL AND GROUP PRACTICE. $30,000 guaranteed first year with little or no practice expense. Maximum leisure time with family. Both small town and city locations. Not an employment agency. Sanford Smith, P. O. Box 9836, Houston, Texas 77015. 713-453-5454.

ESTABLISHED GENERAL PRACTICE, office, all equipment rent free for two years while I take leave of absence with Peace Corps. Associates for alternating calls. Available in four to eight months. If you want to stay, full partnership of all facilities would be offered at my return. Good area in North Texas with full hospital facilities. Furnished home included for cost of payments. Write P. O. Box 4109, Wichita Falls, Texas 76308.

WANTED: MD TO DO GENERAL PRACTICE in a fully equipped modern two man clinic. Guarantee and association after interval. No investment needed. Rotate weekends and off days with busy general practitioner who is clinic owner. 36-bed hospital available, located in Central Texas area, with recreational facilities and large cities accessible. Contact 647-1182, or send resume to L. R. Gohlke, M.D., Box 37, Ranger, Texas 76470.

PEDIATRICIAN: BOARD CERTIFIED OR ELIGIBLE, to associate with one other pediatrician in 13-man multispecialty group. Liberal fringe benefits and retirement program. Modern, newly redecorated building within one block of two hospitals. City size over 100,000. Beginning salary $25,000 per year plus percentage. Please reply to Administrator, The Medical and Surgical Clinic, 1518 Tenth Street, Wichita Falls, Texas 76301 or phone AC 817, 723-1411.

PSYCHIATRIC RESIDENCY in approved three year program. Effective connections with universities, medical schools, private clinics, and community centers. Outstanding faculty, and programs. Stipends with Texas license are $13,000, $14,000 and $15,000 per year. NIMH grants available. For full information write Anthony P. Rousos, M.D., Director of Training and Research, Austin State Hospital, 4110 Guadalupe, Austin, Texas 78751.

WANTED: PHYSICIANS WITH INTEREST IN SURGERY AND/OR OBSTETRICS to locate in progressive East Texas area with complete support of local medical staff. Contact Paul R. Bennett, 300 West Upshur, Gladewater, Texas, or phone AC 214, 845-2281.

GENERAL PRACTITIONER, GENERAL SURGEON, OR INTERNIST WANTED, Cisco, Texas—45 miles east of Abilene, 100 miles west of Fort Worth on Interstate 20. Association, partnership or solo practice. New 30-bed hospital opening October 1970. Only one active practicing physician. Community of 5,000 population, farming and ranching, some industry. Excellent recreational facilities—lake, golf course. Progressive junior college. For additional information contact E. E. Addy, Jr., M.D., 1106 West Sixth Street, Cisco, Texas. Telephone AC 817, 442-1001.

CLASSIFIED AD RATES & DATA: Classified Advertising sells for $6.00 per issue for 50 words or less, payable in advance. Ad numbers can be substituted for formal addresses upon request at no extra cost. Name and address of ad number listings can not be given out unless specific permission to do so has been given. The advertising office will not contact ad number holders except by mail. Copy deadline is the 20th of the month preceding publication. Send copy to Advertising Assistant, TEXAS MEDICINE, 1801 North Lamar Blvd., Austin, Texas 78701.

INTERNIST, board certified or eligible to join four internists in 15-doctor, multi-specialty clinic in West Texas city of 35,000. Life and malpractice insurance, disability and retirement programs provided. Modern clinic building adjacent to accredited hospital. Starting salary $25,000. Contact Jack H. Burnett, Jr., M.D., Malone and Hogan Clinic, 901 Main Street, Big Spring, Texas 79720.

GENERAL PRACTITIONER, OPHTHALMOLOGIST, INTERNIST: To affiliate with five other G.P.'s and three specialists in general and multi-specialty group near Houston, Texas. Liberal salary and extensive fringe benefits including retirement program and life and health insurance programs. Open staff hospital appointments in 125 bed general hospital. Rapidly growing industrial complex. Herbert H. Duke, Jr., M.D., The Medical and Surgical Group, Baytown, Texas 77520.

EENT NEEDED in city of 60,000 in Dallas-Fort Worth area where there are no such specialists. Advantages of continued education at Southwestern Medical. Space available in attractive dental building January, 1971. Please reply to Ad-284, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

ANESTHESIOLOGISTS. Wanted one or more board certified or eligible anesthesiologists. Salary first year, corporate benefits thereafter. To join group of two board certified anesthesiologists. Expanding 180 to 360-bed community hospital in excellent medical community. 50,000 population, good recreational area with moderate climate. Army reserve affiliation available. Write JRoyston Brown, M.D., c/o Wadley Hospital, 1000 Pine, Texarkana, Texas 75501.

GENERAL PHYSICIANS WANTED in mental health/mental retardation facilities throughout Texas; urban and rural facilities. Liberal retirement, vacation, and sick leave benefits. Progressive programs with professional staff and 40-hour workweek. Competitive salaries; many other benefits available. Include complete curriculum vitae with initial letter; indicate preference as to location and/or type of community. For further information, write Mr. John R. Croxson, Recruiting Specialist, Texas Department of Mental Health and Mental Retardation, P. O. Box 12668, Capitol Station, Austin, Texas 78711. An equal opportunity employer.

ATTENTION: GENERAL PRACTITIONERS-SURGEONS. If you would like the advantages of small city living together with a wide open field for practicing your profession, contact the Board of Directors, Taft Hospital District, 1220 Gregory Street, Taft, Texas 78390. A modern hospital and convalescent home is at your disposal. Added attraction: only 15 minutes by car from the Sparkling City by the Sea, Corpus Christi, Texas. Ideal climate, plus swimming, fishing, sailing, golfing, hunting, and social activities available. Write us for more details, or better still, come and see for yourself. You will be pleasantly surprised.

Situations Wanted

RADIOLOGIST, board certified, wants to relocate to Central Texas. Willing to do general radiology with hospital or private group. Please reply to Ad-289, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

SITUATION WANTED: Available for up to 30 hours weekly, Austin or vicinity. MD with broad background and interests, FACS. Will consider practice coverage, help at surgery or office or hospital or industrial. Mid-40s, local references. Please reply at Ad-290, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

HOMESTEAD

CHILD PLACEMENT AGENCY

and

HOMESTEAD MATERNITY HOME

1250 W. Rosedale

335-5942 **336-7905**

Fort Worth, Texas

Licensed Adoption Service and Private, Confidential maternity care provided unwed expectant mothers. Obstetrical services by a Diplomate of THE AMERICAN BOARD. Also pediatric care furnished by a licentiate of THE AMERICAN BOARD.

For Sale or For Rent

FOR SALE OR LEASE. Fort Worth, Texas, 4104 East Lancaster. Modern brick, 2,300 square feet. Large private parking area. This clinical installation has large waiting room, private offices, business office, seven treatment rooms, x-ray room, and two nurse stations. Available after July 15, 1970. Call Fort Worth 536-8086 for appointment or write to 1804 Provine Street, Fort Worth, Texas 76103.

PHYSICIANS—Beautiful new medical office complex located adjacent nursing home and hospital in rapidly expanding North Dallas. Quick freeway access other major hospitals. Landscaped interior mall; custom designed offices. Stock ownership optional. Contact J. Bailey, P. O. Box 34236, Dallas, Texas 75234 or call AC 214, 247-6192.

Seeking an associate or looking for a good practice location?

Contact: Physicians Placement Service
Texas Medical Association
1801 North Lamar Blvd.
Austin, Texas 78701

WICHITA FALLS CLINIC-HOSPITAL

GENERAL SURGERY
W. E. Crump, M.D., F.A.C.S.
James T. Lee, M.D.
Charles H. Wilson, M.D., F.A.C.S.

ORTHOPEDIC SURGERY
Jack E. Maxfield, M.D., F.A.C.S.
Clyde W. Parsons, M.D.
Mark E. Huff, Jr., M.D.
David G. Borman, M.D.

ORAL SURGERY
R. A. Mitchell, D.D.S.
Larry J. Cason, D.D.S.

RADIOACTIVE ISOTOPES
Claude D. Wilson, M.D., F.A.C.R.
Joe D. Steed, M.D., D.A.B.R.
Julian H. Acker, M.D.
David D. Salmon, M.D., D.A.B.R.

PEDIATRICS
George W. Slaughter, III, M.D., F.A.A.P.
Joseph Bilder, Jr., M.D.

LABORATORIES
Claude D. Wilson, F.A.C.R., Radiology
Joe D. Steed, M.D., D.A.B.R., Radiology
David D. Salmon, M.D., D.A.B.R., Radiology

MEDICINE
W. B. Whiting, M.D., Cardiology
R. F. Knox, M.D., Endocrinology
P. K. Smith, M.D., F.A.C.P., Diagnosis & Internal Medicine
I. L. Humphrey, Jr., M.D., Diagnosis & Internal Medicine
Julian H. Acker, M.D., Diagnosis & Internal Medicine
Preston McCall, M.D., Diagnosis & Internal Medicine
Julian C. Sleeper, M.D., Cardiology
Eugene Jackson, M.D., Diagnosis & Internal Medicine

GENERAL PRACTICE
J. B. Hathorn, Jr., M.D.
Melvin Horany, M.D.
John E. Worthen, Jr., M.D.

UROLOGY
Owen C. Berg, M.D., F.A.C.S.

OBSTETRICS AND GYNECOLOGY
W. L. Parker, M.D., F.A.C.S.
Warren T. Kable, M.D.
Frank J. Lee, M.D.

ADMINISTRATIVE OFFICER
Bertha McNeill, Administrator
Jesse E. Dobbs, Jr., Asst. Administrator

ONCOLOGY

Oscar L. Morphis, M.D., F.A.C.R.
Radiation Therapy
Radium Therapy

R. P. O'Bannon, M.D., F.A.C.R.
Radiation Therapy

Norris Gilfillan, M.D., F.A.C.S.
Chemotherapy

Tom B. Bond, M.D., F.A.C.R.
Consultant

Jack M. Morgan, M.S., F.A.C.R.
Consultant-Physicist

1550 West Rosedale, Suite 620 Fort Worth 336-2028

Advertising Directory

American College of Cardiology
Vectorcardiology—A Workshop 42

Arch Laboratories
Dicarbosil 8

Beverly Hills Hospital and Clinic 125

Bio-Dynamics, Inc.
Unitest System 35-36

Blue Cross-Blue Shield of Texas 7

The Brown Pharmaceutical Company
Android 116
Cerebro-Nicin 116

The Brown Schools
The Oaks 109

Bristol Laboratories
Salutensin 42-43
Tetrex APC 62

Burroughs Wellcome & Company, Inc.
Neosporin 11

Campbell Soup Company 101

The Carlton Corporation
Calphosan 41

Casualty Indemnity Exchange
Malpractice Insurance 33

Conal Pharmaceuticals, Inc.
Urised 104

Custom Home Elevator Co.
Welcolator 42

Dallas Medical & Surgical Clinic and Hospital 2nd Cover

The Dow Chemical Company
Novahistine LP 10

First Texas Pharmaceuticals, Inc.
Secran 27

Flint Laboratories
Synthroid 22

Float 'N' Fold Boats
Klepper Boats 8

Francis Hospitels Incorporated
Convalescent Care 148

Geigy Pharmaceuticals
Dulcolax 9

Highland Hospital 34

Homestead Child Placement 146

Humco Laboratory
Vasomist 34

Hynson, Westcott and Dunning, Inc.
Bromsulphalein 67

Ives Laboratories, Inc.
Cyclospasmol 40-41

Mead Johnson Laboratories
Vasodilan 128-129

Kelsey-Seybold Clinic 120

King's Daughters Clinic Back Cover

Lederle Laboratories
Achrocidin 127
Achromycin-V 20-21
Achrostatin V 112
Declostatin 85

Eli Lilly and Company
Ilosone 28

Loma Linda Foods
Soyalac 130

The Martin X-Ray and Radium Clinic 107

Medical Arts Clinic, Corsicana 126

The Medical Protective Company
Professional Liability Insurance 107

The Wm. S. Merrell Company
Kolantyl 3rd Cover

The National Drug Company
AVC 26
Orenzyme Bitabs 25
Quinamm 132
Tepanil Ten-tab 131

Oklahoma City Clinical Society
40th Annual Fall Conference 18

Oncology—Fort Worth 146

William P. Poythress & Company, Inc.
Trocinate 12

T. Rowe Price Growth Stock Fund, Inc. 8

The Prudential Insurance Company of America
TMA Group Insurance Plan 110

Radiology Associates of Fort Worth 126

A. H. Robins Company
Allbee with C 24
Dimetapp Extentabs 83
Donnatal 23

Roche Laboratories
Librium 37
Menrium 74-75

St. Jude's Hospital
Adolescent Unit 18

Sandoz Pharmaceuticals
Serentil 63-66

Schering Corporation
Garamycin 117-118

Scott and White Clinic Back Cover

G. D. Searle & Company
Aldactone 102-103

Starlite Village Clinic 126

Stuart Pharmaceuticals
Mylanta 84

Surgical Mechanical Research, Inc.
Medical and Dental Equipment 112

Terrell's Laboratories and Medical Group 1

Texas Instruments Incorporated
Occupational Physician Opening 82

Texas Medical Association
Memorial Library 38
Texas Medicine 108

Timberlawn Psychiatric Hospital 120

Torbett, Hutchings, Smith Memorial Hospital 2nd Cover

Travis Clinic and Nan Travis Memorial Hospital 126

Turner's Clinical & X-Ray Laboratories 107

Wichita Falls Clinic-Hospital 146

Wyeth Laboratories
Equanil 133-134

Physicians' Directory 135-144

Classified Advertisements 145-146

ADVERTISING RATES & DATA: Available on request from the Advertising Director, Texas Medicine. Advertising plates should be sent directly to the printer. Space reservations, copy and proofs should be sent to the Advertising Director. Represented nationally by the State Medical Journal Advertising Bureau, Inc., 1010 Lake Street, Oak Park, Ill. 60301.

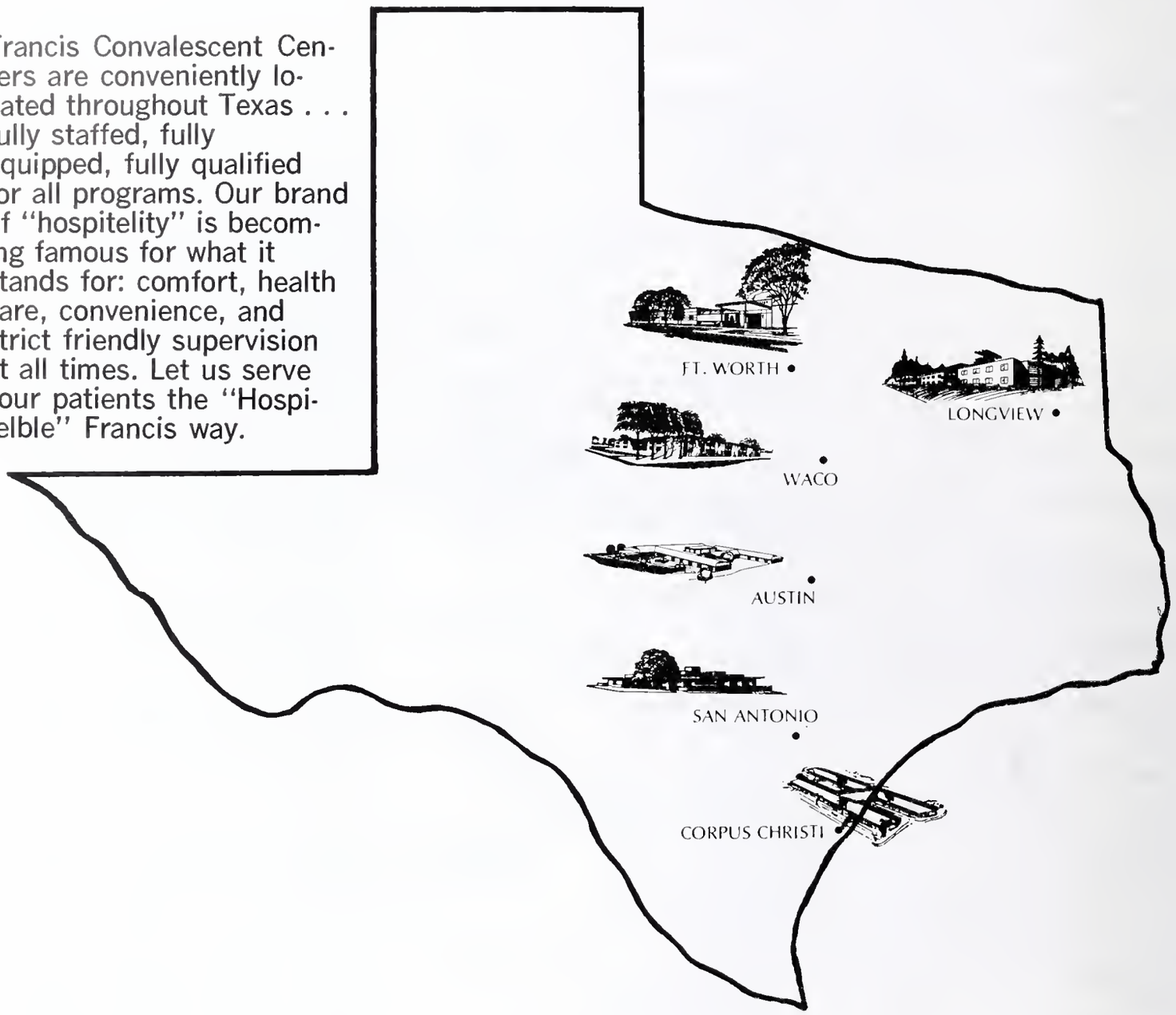
ADVERTISING & BUSINESS OFFICES: Texas Medical Association, 1801 North Lamar Blvd., Austin 78701; Telephone: 512-477-6704.

PRINTING OFFICES: Texas Medicine, c/o Stafford-Lowdon Company, 1114 West Daggett, Fort Worth 76104.

FRANCIS HOSPITELS INCORPORATED

FRANCIS CONVALESCENT CENTERS
DIVISION OF FRANCIS HOSPITELS, INC.

Francis Convalescent Centers are conveniently located throughout Texas . . . fully staffed, fully equipped, fully qualified for all programs. Our brand of "hospitality" is becoming famous for what it stands for: comfort, health care, convenience, and strict friendly supervision at all times. Let us serve your patients the "Hospitelble" Francis way.



FRANCIS HOSPITELS, INC., 7129 Highway 290 East, Austin, 512 454-2725

FRANCIS HOSPITELS—WACO: Francis Hospitel, 2501 Maple Avenue, Ph. 752-0311 **FRANCIS CONVALESCENT CENTERS**—AUSTIN: Retirement Inc., 6909 Burnet Road, Ph. 452-5719; FORT WORTH: Francis Convalescent Center, 1000 6th Avenue, Ph. 335-1903; CORPUS CHRISTI: Francis Convalescent Center, 3050 Sunnybrook, Ph. 853-9981; LONGVIEW: Highland Pines, 1100 N. 4th Street, Ph. 753-7661; SAN ANTONIO: San Pedro Manor, 616 West Russell, Ph. 732-5181.

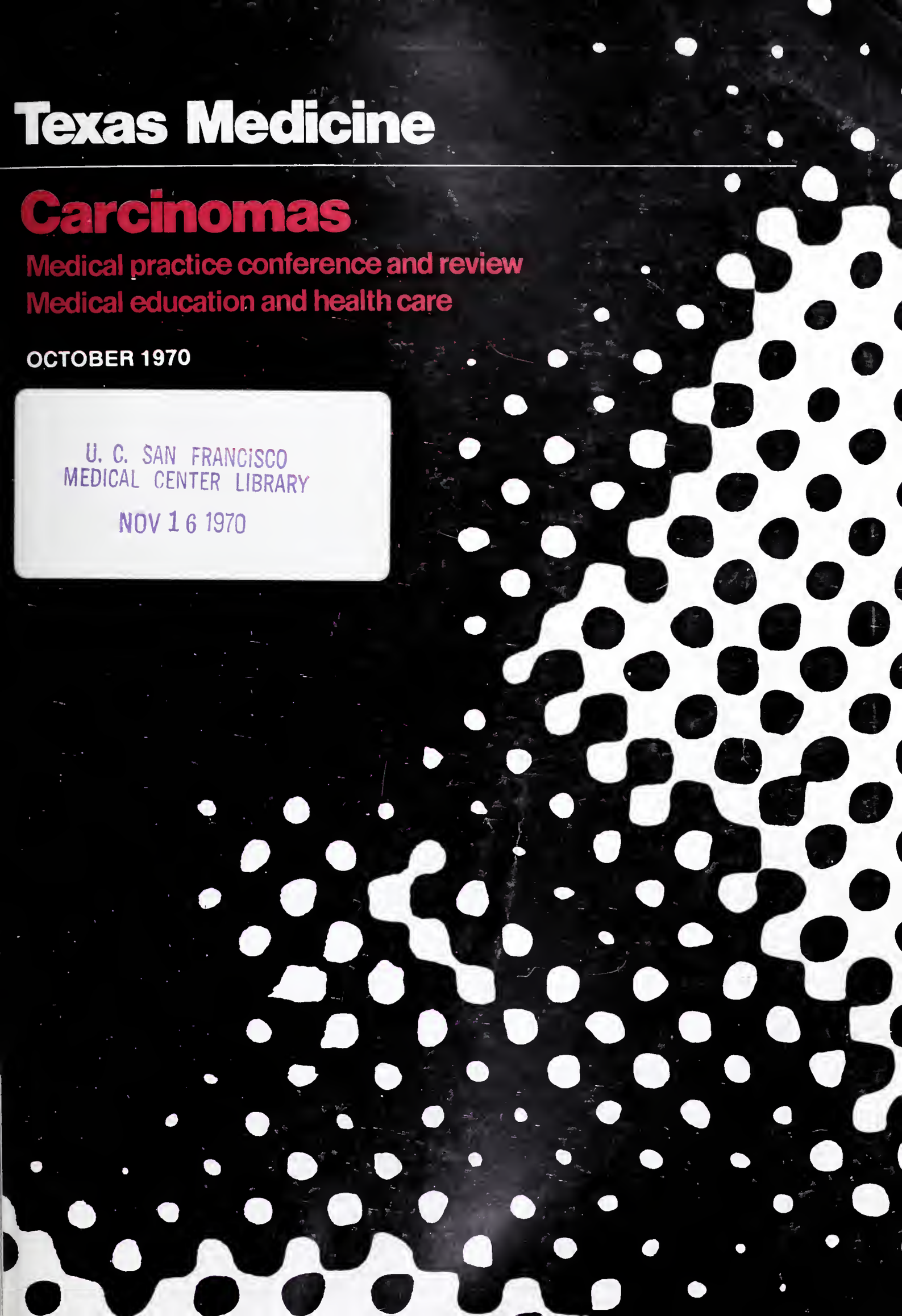
Texas Medicine

Carcinomas

Medical practice conference and review
Medical education and health care

OCTOBER 1970

U. C. SAN FRANCISCO
MEDICAL CENTER LIBRARY
NOV 16 1970



Torbett, Hutchings, Smith Memorial Hospital
And The Torbett Clinic

306 Coleman Street
Post Office Box 60

Marlin, Texas

Telephone: WE 6-3561

GENERAL SURGERY
Howard O. Smith, M.D., F.A.C.S.
D. R. Swetland, M.D., F.A.C.S.
Howard L. Smith, M.D., F.A.C.S.

INTERNAL MEDICINE
W. F. McKinley, Jr., M.D.
James S. Bussell, M.D.
C. G. Brown, M.D.

EYE, EAR, NOSE AND THROAT
S. W. Hughes, M.D.

ALLERGY
Walter S. Smith, M.D.*

OBSTETRICS AND PEDIATRICS
M. A. Davison, M.D., F.A.C.O.G.
W. L. Reese, M.D., F.A.C.O.G.
William Pickvance, M.D.

RADIOLOGY
J. M. Brown, M.D., F.A.C.R.

PATHOLOGY
Ronald E. Henderson, Jr., M.D.
Kent Smith, M.D.

UROLOGY
Howard O. Smith, M.D., F.A.C.S.

DENTISTRY
B. E. Latimer, D.D.S.

NEUROPSYCHIATRY
S. B. Morrison, M.D.

DERMATOLOGY
Maurice C. Barnes, M.D., D.A.B.D.

Administrator:
J. D. Norris, Jr.

Superintendent of Nurses:
Ruby Lowrance, R.N.

Howard O. Smith, M.D., FACS, Chairman of the Board of Trustees, of Torbett, Hutchings, Smith Memorial Hospital and the Torbett Clinic which opened January, 1963. The original hospital was founded by Dr. J. W. Torbett, Sr., in 1898.

The Torbett Clinic and Memorial Hospital continues to utilize the Marlin Hot Mineral Water and other forms of physical therapy as an adjunct in the treatment of arthritis and allied rheumatic conditions.

*Expired 4-24-69.

THE DALLAS MEDICAL & SURGICAL CLINIC AND HOSPITAL

4105 Live Oak Street

DALLAS, TEXAS

Telephone TA 3-4151

*Geo. M. Underwood, M.D., F.A.C.P., Diagnosis & Gastroenterology, D.A.B. Internal Medicine & Gastroenterology
P. E. Luecke, Sr., M.D., F.A.A.P., Pediatrics Diplomate American Board Pediatrics
*G. A. Davidson, B.S., M.D., Dermatology
*Wm. H. Potts, B.A., F.A.C.P., Internal Medicine
*Ozro T. Woods, M.D., Surgery, Emphasizing Tumors
*Richard M. Smith, M.D., F.A.C.P., Diagnosis & Internal Medicine
J. Wilbur Bourland, Jr., M.D., Obstetrics & Gynecology
Harry M. Spence, M.D., D.A.B.U., F.A.C.S., Urology
Wells M. Wade, D.D.S., Dental Surgery
Halcuit Moore, M.D., F.A.A.P., Pediatrics Diplomate American Board Pediatrics
John B. Bourland, M.D., Gynecology & Obstetrics Diplomate American Board OB-GYN
Raymond W. Burford, M.D., D.A.B.R., Radiology
Henry G. Montgomery, M.D., F.A.C.S., D.A.B.S., Surgery
Edwin M. Cleveland, M.D., Internal Medicine
John B. Allen, M.D., Internal Medicine Diplomate American Board Internal Medicine
R. M. Burnside, M.D., D.A.B.O., Ophthalmology
*Adam D. Green, M.D., Surgery
Morris E. Magers, M.D., Internal Medicine Diplomate American Board Internal Medicine
B. Celia Slaughter, M.D., F.A.A.P., Pediatrics Diplomate American Board Pediatrics
D. W. Shuster, M.D., D.A.B.O., Otolaryngology and Otologic Surgery
P. E. Luecke, Jr., M.D., Pediatrics, F.A.A.P., Diplomate American Board Pediatrics
Channing Woods, M.D., Internal Medicine
William W. Hoffman, M.D., D.A.B.U., F.A.C.S., Urology
James M. Copps, M.D., D.A.B.O., Ophthalmology
Joe B. Caldwell, M.D., D.A.B.R., Radiology
Terry D. Allen, M.D., D.A.B.U., Urology
J. Boyd Hollabaugh, D.D.S., General Dentistry
George P. Fosmire, M.D., F.A.C.S., D.A.B.S., General Surgery
Richard C. Stone, M.D., Internal Medicine and Gastroenterology
Daniel L. Maddox, D.D.S., General Dentistry
William N. New, M.D., Dermatology
Masashi Kawasaki, M.D., D.A.B.O., Otolaryngology, Tumor and Reconstructive Surgery of the Head and Neck
Landon W. Stewart, M.D., Internal Medicine
William S. Wolff, M.D., Surgery
George S. Phalen, M.D., Orthopedic Surgery
Miss Billye J. Norris, R.N., Director of Nurses
C. H. Rosamond, Administrator
Arthur L. Cook, Associate Administrator

*Inactive status

TERRELL'S LABORATORIES

T. C. TERRELL, M.D., F.C.A.P., F.A.C.P., DIRECTOR
JOHN S. TERRELL, M.D., F.A.A.P., ASSISTANT DIRECTOR

FORT WORTH, TEXAS

211 Medical Arts Building

DEPARTMENT OF PATHOLOGY
T. C. Terrell, M.D., F.C.A.P., F.A.C.P.
May Owen, M.D., F.C.A.P., F.A.C.P.
Robert Hausman, M.D., F.C.A.P.
Joan Windmiller, M.D., F.A.A.P.

DEPARTMENT OF RADIOLOGY
H. W. Banker, M.D., D.A.B.R., M.A.C.R.
Ernest E. Holt, M.D., D.A.B.R., M.A.C.R.
James C. Moore, M.D., D.A.B.R., M.A.C.R.

DEPARTMENT OF CHEMISTRY
LaMonte A. Tucker, Ph.D.

DEPARTMENT OF BACTERIOLOGY & MYCOLOGY

CONSULTING & ANALYTICAL SERVICES

PATHOLOGY, FORENSIC PATHOLOGY & VETERINARY PATHOLOGY: Histology, Cytology.
CLINICAL PATHOLOGY: Serology, Bacteriology & Mycology, Parasitology, Hematology.
INDUSTRIAL & CLINICAL CHEMISTRY: Radioassay, SMA-12 survey and other Automated Procedures. Hormone Chemistry, Chromatography, Electrophoresis, Immunochemistry.
TOXICOLOGY: Drugs, Water, Foods & Biological materials.
MANUFACTURING DEPARTMENT: Allergenic Extracts and Treatment Sets, Mounting Media, Specifically Prepared Reagents and Stains for Laboratory Use.

TERRELL MEDICAL GROUP

FORT WORTH, TEXAS

210 Medical Arts Building

INTERNAL MEDICINE Diagnosis, Allergy, Cardiology	T. C. Terrell, M.D., F.C.A.P., F.A.C.P. Elizabeth A. Taylor, M.D.
NEUROPSYCHIATRY Electroencephalography	Henry G. Gardiner, Jr., M.D.
PEDIATRICS Pediatric Hematology Adolescent Medicine & Pediatric Consultation	Joan Windmiller, M.D., F.A.A.P. John S. Terrell, M.D., F.A.A.P.
CLINICAL PSYCHOLOGY	Michael W. Wheeler, Ph.D.

Texas Medicine

VOLUME 66 NUMBER 10 OCTOBER 1970

Devoted to the interests of the medical profession and public health in Texas

BOARD OF PUBLICATION
Charles P. Hardwicke, MD, Austin
Chairman
James A. Hallmark, MD, Fort Worth
John M. Smith, Jr, MD, San Antonio
Vice Chairman
R. Harvey Bell, MD, Palestine
N. L. Barker, MD, Paris
C. W. Yates, MD, Rosenberg
Don G. Harrel, MD, Dallas

TMA OFFICERS
Walter Walthall, MD, San Antonio
President
C. Lincoln Williston, Austin
Executive Secretary

EDITORIAL AND BUSINESS OFFICES
1801 N Lamar Blvd, Austin 76701
Telephone: 477-6704
Marilyn Baker, Managing Editor
Rae Vajgert, Assistant Managing Editor
Sharon Timmons, Assistant Editor
Sharon Walker, Editorial Assistant
Judy Harris, Editorial Secretary
E. Maxwell Jones, Business Manager
Jon R. Hornaday Advertising Director
Anne Shelnutt, Advertising Assistant

PRINTING OFFICES
c/o Stafford-Lowdon Company
1114 West Daggett, Fort Worth 76104

Subscriptions: $3 per year for members;
$6 for nonmembers; $8 for foreign;
$3 for medical students.
Single copy: $1.

Copyright 1970 by The Texas Medical Association.
Owned and issued monthly by the Association.

SCIENTIFIC ARTICLES

44 Management of Breast Cancer

Dr. J. Harold Cheek, FACS, of Dallas practices general surgery and is a clinical associate professor of surgery at The University of Texas (Southwestern) Medical School. He is a diplomate of the American Board of Surgery and a member of the Southern Medical Association, Southwestern Surgical Congress, and Texas Surgical Society. Active in the Texas Division of the American Cancer Society, he also is immediate past president of the Society's Dallas County Unit.

56 Benign Tumors of the External Auditory Canal

Dr. Jerome Kosoy is an instructor in otolaryngology at The University of Texas Medical Branch, Galveston, where he recently completed a residency and now holds a fellowship in otology. His coauthor, Dr. Lindell B. Entzminger, Jr, is in residency at Parkland Memorial Hospital in Dallas, having served his internship at The University of Texas Medical Branch Hospitals.

60 Experimental Observations in Tracheal Transplantation

Dr. Byron J. Bailey is Wiess Professor and chairman of the Department of Otolaryngology, The University of Texas Medical Branch, Galveston. His coauthor, Dr. Jerome Kosoy, is an instructor in that department.

64 The Choice of an Esophageal Substitute

Dr. Edward A. Hanna is assistant professor of thoracic surgery at The University of Texas Medical Branch, Galveston. His coauthors are Dr. A. W. Harrison, professor emeritus, Beaumont;

PUBLICATION INFORMATION

Texas Medicine is published monthly by the Texas Medical Association.

Second Class Postage paid at Austin, Texas, with additional entry at Fort Worth, Texas, under Act of March 3, 1879.

Contributions, previously unpublished, are welcomed for review; suggestions for preparation are available from the Editorial Offices. News and other items should be sent to the Editorial Offices by the 10th of the month preceding the month of publication. All contributions are sent at the owner's risk.

Contents

Dr. John R. Derrick, professor, Galveston; Dr. Thomas Kirksey, thoracic surgeon, Austin; Dr. C. Roger Youmans, assistant professor, Galveston; and Dr. James Hopkins, thoracic and pediatric surgeon, Des Moines, Iowa.

70 Transcutaneous Cutting Needle Biopsy of Pulmonary Coin Lesions

Dr. Roger Youmans, Jr, is assistant professor of thoracic and cardiovascular surgery at The University of Texas Medical Branch, Galveston. His coauthors, all of whom are associated with the Medical Branch, are Dr. William J. deGroot, Division of Chest Medicine; Dr. Richard Marshall, Division of Surgical Pathology; Dr. Luis B. Morettin, Department of Radiology; and Dr. John R. Derrick, Division of Thoracic and Cardiovascular Surgery.

82 Intravenous Hyperosmolar Alimentation; Advantages and Complications

Maj Walter J. Wyrick, Jr, MC, USA, is now serving in the 56th General Hospital in Bad Kreuznach, Germany. Before entering the military service he was a resident in surgery at the Dallas VA Hospital and Parkland Memorial Hospital. At the time this article was prepared, he was chief resident at the VA Hospital, and he presented the paper to the TMA Section on Surgery during the 1970 annual session.

EDITORIALS

29 Health Care Challenge: Education, Distribution, Efficiency
G. V. Brindley, Jr, MD

31 Citizen, Pull Your Weight
Joe T. Nelson, MD

32 Who's Driving That Weapon? His Fitness Is Our Business
Bernard T. Fein, MD

33 Questions and Answers

39 Like It or Not, Physicians Lead Health Care Team
Walter Walthall, MD

DEPARTMENTS

4 Association and Late News

13 Highlights of Coming Meetings

19 Continuing Education Courses

91 News

100 The Changing Face of Texas Medicine

101 Personals

101 Pamphlets

104 Library offers mailbag full of services

109 Medicine in Literature

111 Recent Deaths

ON THE COVER

The cover art depicts changes—from normal to cancerous—at the cellular level. Two articles in this issue deal with cancer. Management of breast cancer begins on page 44, and transcutaneous cutting needle biopsy of pulmonary coin lesions begins on page 70. Of related interest is an article on benign tumors of the external auditory canal, page 56.

NEXT MONTH

November's articles keep bulging out of their file, but if all goes well the next issue will include the following: burn prevention; obstetric anesthesia; experiences with IUD complications; cervical cone frozen section diagnosis; guiding principles for obstetric care; obstetric hemorrhage, frequency, etiology, and prevention of deaths; and why do pregnant women die from anesthesia and other causes?

Association &

Association's Executive Board reviews dues increase, abortion, Medicredit at September conference

Excellence in medical education, policies on the rehabilitation of injured patients and on abortions, legislative recommendations, and the financial status of the Texas Medical Association were among major topics considered by the Association's Executive Board meeting in Austin on Sept. 20.

Excellence in medical education: Considering the long-range development of health educational schools in Texas, the Executive Board recommended continued support of a policy adopted by the House of Delegates in May, 1970, calling for high standards in the training of new physicians by strengthening programs in existing medical schools and the adequate and complete funding of two recently established medical schools in Lubbock and Houston. In addition, the Board adopted a statement emphasizing the policy: "Any new health educational facility which desires legislative support of the Texas Medical Association must demonstrate excellence of education and adequate resources (funds and facilities) before the consideration can be given."

Abortion as a medical procedure: The Executive Board also adopted as policy a statement declaring that "abortion is a medical procedure and should be performed only by a duly licensed physician and surgeon in a licensed hospital acting only in conformance with standards of good medical practice, and after proper medical consultation." The statement also said that "no physician or other professional personnel shall be compelled to perform any act which violates his good medical judgment. Neither physician, hospital, nor hospital personnel shall be required to perform any act which violates moral principles which they might hold."

In adopting the policy, the Board observed that abortion, "like any other medical procedure, should not be performed when contrary to the best interests of the patient since good medical practice requires due consideration for the patient's welfare and not mere acquiescence to the patient's demands." Further, the Board said, "the standards of sound clinical judgment, together with informed patient consent, should be determined according to the merits of each individual case."

Rehabilitation of injured patients: Rehabilitation of patients with severe injury was the subject of a third policy statement adopted by the Board on Sept. 20, as follows:

1. The Texas Medical Association feels that most patients with severe injury can be returned to gainful employment if properly placed.

2. The Association recognizes that there are many impediments in returning injured patients to work; therefore, it pledges its support to attempt to eliminate these impediments.

3. The Association pledges its support in assisting in the development of properly constituted work classification units for adequate evaluation of the work potential of patients with severe injury.

4. The Association believes an injured workman should be prepared for suitable employment if his disability prevents satisfactory performance in his original occupation.

5. It is also the policy of the Association to encourage physicians to make use of all community resources available for the total rehabilitation of persons with severe injury.

6. The Association, through its publications and conferences, will provide information on agencies and individuals that can provide rehabilitation services for those who cannot return to their regular employment.

7. The Association urges its members to cooperate fully with all public and private agencies that contribute to the ultimate restoration of patients to economic and social usefulness.

8. The Association urges all physicians to cooperate with industry in returning injured employees to their regular job or jobs commensurate with the employee's disability as determined through discourse between the physician and industry's personnel whenever indicated.

Dues increase: The Board of Trustees reported to the Executive Board that it was quite concerned about the Association's financial status, but that it would not be necessary to adopt the full $15 dues increase authorized by the House of Delegates in May.

"By increasing dues by $10 in 1971," the Board said, "the additional revenue should produce a small surplus for the year. Therefore, the trustees have voted to establish the Association's dues at $65 for 1971." The trustees noted that an additional $5 increase would probably be necessary in 1972 in order to present a balanced budget for that year.

Support of AMA Medicredit principles: In other action, the Association's Executive Board endorsed the principles contained in part A of the American Medical Association's "Medicredit" bill (H.R. 18567), which would provide for the issuance of health insurance certificates to those individuals of famlies whose income tax liability is $300 or less. Such a certificate would entitle the owner to a qualified medical care insurance policy. The Board also endorsed the principles in part B of the bill, which would establish a graduated scale of income tax credits to be allowed for the purchase of health insurance. The credits would be based on tax liability. The amount of the credit would be based on the amount of allowable premium such as the cost of a qualified health care insurance policy.

The Board agreed with the Council on Medical Jurisprudence that a more thorough study was needed on the proposal in part C, which would establish a peer review organization. It urged the AMA to draft an amendment to part C which would be more acceptable to physicians.

Immunization policies: Also consid-

_ate News

ered by the Board were recommendations from several Councils of the Association concerning immunization policies. The items were referred to the Association's Council on Medical Jurisprudence for its recommendations on TMA's position regarding immunizations of children.

Over $2 million invested in TMA retirement fund

Texas physicians and employees participating in the Texas Medical Association Members Retirement Program (Keogh Retirement Act) have now invested $2,116,519 in the program's various investment media. This information was presented by the program trustee, Mercantile National Bank of Dallas, to TMA members at a Sept. 18 meeting during the TMA fall Conference on Medical Practice.

A trustee representative also explained that in order to claim a 1970 tax deduction, physicians whose tax year ends Dec. 31 have until that date to enroll in and contribute to a Keogh Act retirement program.

The TMA Members Retirement Trust is a fully trusteed retirement program qualified under the Keogh Act and approved by the Internal Revenue Service so that certain tax advantages accrue to contributions.

Any TMA member is eligible to join the program if he is self-employed in the practice of medicine and is a Texas resident. A nonmember partner may also join, provided that one of his other partners who is a TMA member joins.

The TMA Members Retirement Trust is flexible, offering the physician several methods of investment: balanced and growth mutual funds, fixed retirement investments, US government retirement bonds, common trust fund, and savings account.

An information packet containing prospectuses, informational brochures on the retirement plan, enrollment forms, and other needed materials can be obtained by writing TMA Headquarters, 1801 North Lamar Boulevard, Austin 78701.

Interested physicians crowd around the outside insurance booth at the TMA Headquarters Building to hear more about the TMA-Prudential group insurance plans during the TMA Conference on Medical Practice.

Bright future foreseen for TMA insurance plans

Nov. 1 marks the first anniversary of the transfer of the Texas Medical Association's Disability Insurance Plan to the Prudential Insurance Company and the addition of the Office Overhead and Group Life Plan to the overall program. The Personal Accident Plan was placed with Prudential on Feb. 1 and the Major Medical Plan on April 1.

The progress of these plans was reviewed by the TMA Committee on Association Insurance Programs at its Sept. 18 meeting during the Association's fall conference in Austin. According to Dr. Donald S. Gibbs, chairman, the committee is gratified over the progress that has been made, and a bright future is anticipated under the arrangement with Prudential.

Dr. Gibbs based his remarks on the fact that the annual premium volume and number of participants has increased considerably since Prudential became the underwriting company.

The committee compared the loss figures to date with the premium collected thus far. While it is too early to establish a trend, it appears that a most favorable ratio is being maintained in the Personal Accident, Disability Income, and Overhead Plans. The Major Medical Plan will be subject to the costs of hospitalization, and the claims under the Group Life Plan were higher than anticipated.

In response to the many requests for a level term plan that does not reduce prior to age 70, an additional Life Plan is now available. This plan provides $50,000 coverage for physicians and lesser amounts for employees. Brochures on this plan were mailed to members early in October.

TMA Auxiliary "scores" at School of Instruction

The Woman's Auxiliary to the Texas Medical Association literally "kicked off" the Association's fall conference on Sept. 18 and 19, 1970.

Approximately 130 Auxiliary members and guests attended the Executive Board meeting and the School of Instruction, which featured a football atmosphere in accordance with the theme of Auxiliary president Mrs. Eugene P. Schoch, Jr., "The Name of the Game is Commitment." Football terminology and decorations highlighted the conference.

The "first quarter" comprised the fall Executive Board meeting, and the kick-off of the "second quarter" featured a full schedule of mini-workshops on such topics as international health, mental health, organization-membership, public affairs, community service, safety, and AMA-ERF. An enjoyable hospitality hour and dinner at the Austin Woman's Club provided the "half-time" entertainment on Thursday night.

At a continental breakfast meeting of the Organization-Membership Committee on Friday morning, C. Lincoln Williston, TMA executive secretary, discussed the role of physicians' wives and the role of TMA in representing organized medicine in Texas.

Following the breakfast meeting, the "third quarter" was under way with a presentation on "Drug Abuse and the Changing Family Patterns." Mrs. Barbara Williams, Hogg Foundation fellow and associate director of the Settlement Home of Austin, served as moderator of this discussion.

"Time out" was called for "football-game" box lunches in the TMA Headquarters Building. Members of the TMA Headquarters staff were luncheon guests of the Auxiliary.

Kick-off of the "fourth quarter" found the Health Careers Committee carrying the ball as they "Teamed Up For Better Health," and later on Friday afternoon, Patricia Reilly Hitt of Washington, D.C., assistant secretary of community and field services of the Department of Health, Education, and Welfare, addressed Auxiliary members on "Our Little World and Our Big Problems." Representatives of approximately 60 organizations were invited to hear her address on ecology and pollution. A feature of the meeting was a special display of football paintings by Brenda Polsky Morgan, daughter of Dr. and Mrs. Morris Polsky of Austin.

The "final gun" of the game of "Commitment vs. Complacency" sounded at 4 p.m. Friday.

Mrs. Schoch also appeared before the Executive Board of TMA on Sunday morning to report the activities and accomplishments of the Auxiliary. Memorial gifts from the TMA Auxiliary and the Travis County Auxiliary, given in memory of Mrs. Robert G. (Charlotte) Farris and the Farris family were presented to the Association Headquarters.

Members of the Woman's Auxiliary to the Travis County Medical Society served as hostesses throughout the Auxiliary's meetings and the TMA weekend conference.

Diphtheria epidemic undergoes intensive care

Through Oct. 8, 117 cases of tonsillar and pharyngeal diphtheria had been reported in San Antonio and Bexar County for 1970.

Dr. M. S. Dickerson, chief of the Communicable Disease Services for the Texas State Department of Health, reported that the control program for the outbreak was enhanced in early August. The program included immunization of susceptibles, with the target being the preschoolers and school-age children; a search, accomplished by nasal and pharyngeal cultures, for carriers of diphtheria in the immediate family of a case, as well as among close extra-family contact and, in some instances, classrooms where cases were discovered; isolation and quarantine of known carriers during their treatment until two negative cultures were obtained 24 to 48 hours after cessation of therapy, usually obtained 24 hours apart; and isolation and quarantine of all cases. Like treatment for carriers, two negative nose and throat cultures taken 24 hours apart was a criterion for hospital release, provided other complications were not present.

Diphtheria contact culture survey

Type of Contact	No. of Cultures	Positive Cultures	% Positive
Household contacts to case	320	43	13.4
Extra-household contacts to case	184	18	9.8
TOTAL case contacts	504	61	12.1
Household contacts to carrier	81	8	9.9
Extra-household contacts to carrier	21	2	9.5
TOTAL carrier contacts	102	10	9.7
12 school surveys	460	19	4.1

Diphtheria carriers are being treated with either erythromycin or penicillin.

Among the cases, the highest attack rate has been in the 5 to 9 and 10 to 14 year age groups. Fifty-four % had no previous immunization against diphtheria; 23% had lapsed or inadequate immunization, and 18% were reportedly fully immunized. Thirty-eight % of the cases are classed as mild, 50% as moderate, and 14% as severe.

Common complications observed included myocarditis, neuritis, otitis media, and airway obstruction.

Toxigenic strains of *C. diphtheriae* of the mitis, intermedius, and gravis types have been isolated. Beta-hemolytic streptococci have also been isolated in 17% of the confirmed cases.

More than 217,000 persons (of which approximately 65% had never been previously immunized) have received diphtheria toxoid during the first series of inoculations. About 190,000 persons received inoculations in the second series.

Assisting the San Antonio Metropolitan Health District in the management of the diphtheria epidemic were specialists from the Texas State Department of Health Communicable Disease Services; The University of Texas Medical School at San Antonio faculty; The University of Texas School of Public Health's team of doctoral program students; and the Center for Disease Control, U.S. Public Health Service, Atlanta, Ga. (epidemiological surveillance).

The coordination of activity was largely accomplished by Dr. W. R. Ross, director, San Antonio Metropolitan Health District, and Dr. Dickerson.

"What hospital-medical protection program will be the best one for *your* group?"

That's the question we ask decision-makers in Time, Newsweek and Wall Street Journal this month. Because all we ask is a chance to compare their program — or *any* program — side by side, point by point, with BLUE CROSS® and BLUE SHIELD®'.

It's this flat-out comparison that is greatly responsible for 72 million Americans being protected under the "Blues" today. And think what that means for the providers of health-care services today!

"Everybody's swingin' to the Blues!"

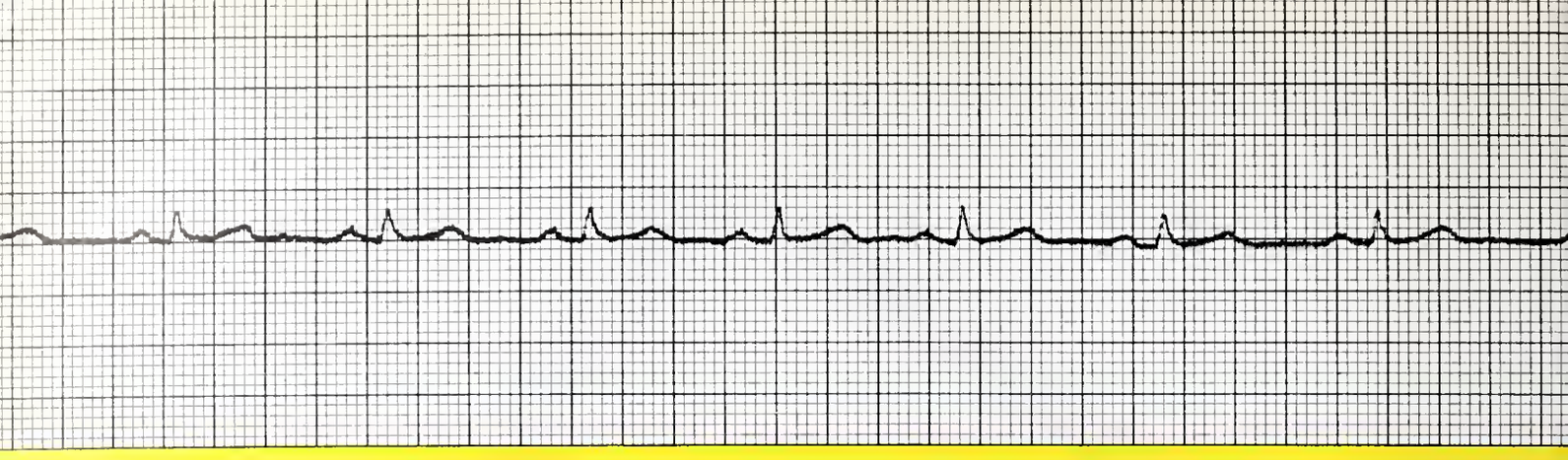
BLUE CROSS® and BLUE SHIELD®'

Hospital and Health Care Coverage
(GROUP HOSPITAL SERVICE, INC.)

Medical and Surgical Benefits
(GROUP LIFE & HEALTH INSURANCE COMPANY)

OF TEXAS MAIN AT NORTH CENTRAL EXPRESSWAY ■ DALLAS, TEXAS 75222

®American Hospital Association
®'National Association of Blue Shield Plans



When disease is ruled out and psychic tension is implicated

Valium® (diazepam) helps relax the patient and relieve his somatic symptoms

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Tension and anxiety states; somatic complaints which are concomitants of emotional factors; psychoneurotic states manifested by tension, anxiety, apprehension, fatigue, depressive symptoms or agitation; acute agitation, tremor, delirium tremens and hallucinosis due to acute alcohol withdrawal; adjunctively in skeletal muscle spasm due to reflex spasm to local pathology, spasticity caused by upper motor neuron disorders, athetosis, stiff-man syndrome, convulsive disorders (not for sole therapy).

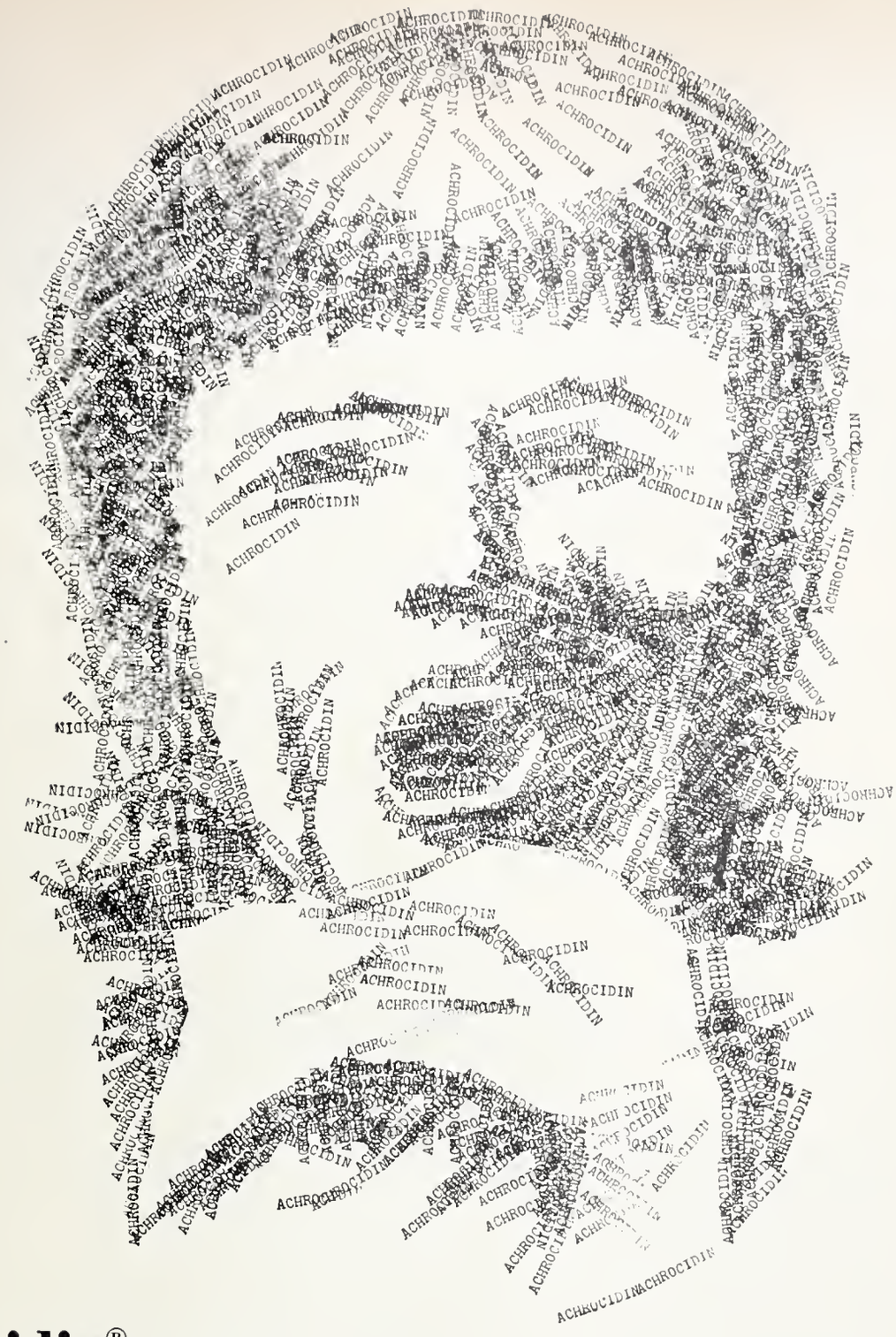
Contraindicated: Known hypersensitivity to the drug. Children under 6 months of age. Acute narrow angle glaucoma.

Warnings: Not of value in psychotic patients. Caution against hazardous occupations requiring complete mental alertness. When used adjunctively in convulsive disorders, possibility of increase in frequency and/or severity of grand mal seizures may require increased dosage of standard anticonvulsant medication; abrupt withdrawal may be associated with temporary increase in frequency and/or severity of seizures. Advise against simultaneous ingestion of alcohol and other CNS depressants. Withdrawal symptoms have occurred following abrupt discontinuance. Keep addiction-prone individuals under careful surveillance because of their predisposition to habituation and dependence. In pregnancy, lactation or women of childbearing age, weigh potential benefit against possible hazard.

Precautions: If combined with other psychotropics or anticonvulsants, consider carefully pharmacology of agents employed. Usual precautions indicated in patients severely depressed, or with latent depression, or with suicidal tendencies. Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.

Side Effects: Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances, stimulation, have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice; periodic blood counts and liver function tests advisable during long-term therapy.

ROCHE
Roche
LABORATORIES
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110



Achrocidin® Tablets and Syrup

Tetracycline HCl—Antihistamine—Analgesic Compound

Each tablet contains: ACHROMYCIN® Tetracycline HCl 125 mg.; Phenacetin 120 mg.; Caffeine 30 mg.; Salicylamide 150 mg.; Chlorothen Citrate 25 mg.

ACHROCIDIN Tetracycline HCl—Antihistamine—Analgesic Compound Tablets and Syrup are recommended for the treatment of tetracycline-sensitive bacterial infection which may complicate vasomotor rhinitis, sinusitis and other allergic diseases of the upper respiratory tract, and for the concomitant symptomatic relief of headache and nasal congestion. For children and elderly patients you may prefer caffeine-free ACHROCIDIN Syrup. Each 5 cc contains: ACHROMYCIN Tetracycline equivalent to Tetracycline HCl 125 mg.; Phenacetin 120 mg.; Salicylamide 150 mg.; Ascorbic Acid (C) 25 mg.; Pyrilamine Maleate 15 mg.

Contraindications: Hypersensitivity to any component.

Warning: In renal impairment, since liver toxicity is possible, lower doses are indicated; during prolonged therapy consider serum level determinations. Photodynamic reaction to sunlight may occur in hypersensitive persons. Photosensitive individuals should avoid exposure; discontinue treatment if skin discomfort occurs.

Precautions: Drowsiness, anorexia, slight gastric distress can occur. In excessive drowsiness, consider longer dosage intervals. Persons on full dosage should not operate vehicles. Nonsusceptible organisms may overgrow; treat superinfection appropriately. Treat beta-hemolytic streptococcal infections at least 10 days to help prevent rheumatic fever or acute glomerulonephritis. Tetracycline may form a stable calcium complex in bone-forming tissue and may cause dental staining during tooth development (last half of pregnancy, neonatal period, infancy, early childhood).

Adverse Reactions: *Gastrointestinal*—anorexia, nausea, vomiting, diarrhea, stomatitis, glossitis, enterocolitis, pruritus ani. *Skin*—maculopapular and erythematous rashes; exfoliative dermatitis; photosensitivity; onycholysis, nail discoloration. *Kidney*—dose-related rise in BUN. *Hypersensitivity reactions*—urticaria, angioneurotic edema, anaphylaxis. *Intracranial*—bulging fontanels in young infants. *Teeth*—yellow-brown staining; enamel hypoplasia. *Blood*—anemia, thrombocytopenic purpura, neutropenia, eosinophilia. *Liver*—cholestasis at high dosage.

Upon adverse reaction, stop medication and treat appropriately.

Lederle LEDERLE LABORATORIES, A Division of American Cyanamid Company, Pearl River, New York 10965

534-9

Mead Johnson–pharmaceuticals created for your specialized clinical needs

new 10% solution...
particularly convenient for home use

MUCOMYST®-10
(ACETYLCYSTEINE)

liquefies thick, viscid mucus in chronic bronchitis and emphysema

Mucomyst, as 20% acetylcysteine, has been used with safety and effectiveness in hospitals for over five years.

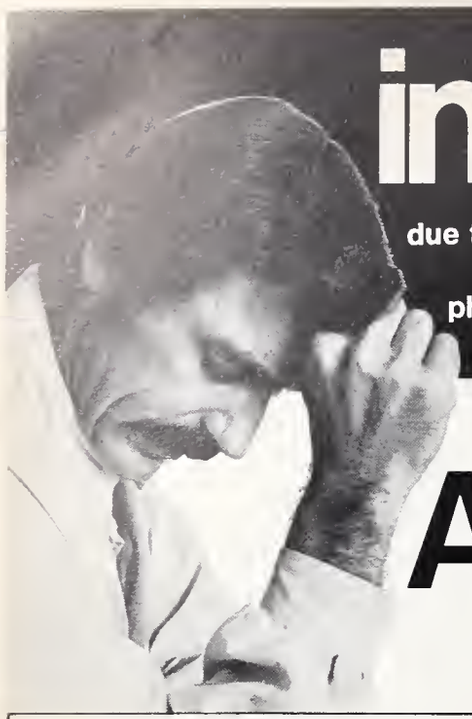
Now a new 10% solution, Mucomyst-10, offers you the choice of prescribing a lesser concentration whenever you feel this is desirable. It provides added convenience and simplicity, particularly for your patients using nebulizing units at home.

By including Mucomyst-10 in the home management regimen, you can provide full mucolytic benefits for many of your patients with chronic bronchitis and emphysema complicated by tenacious secretions.

Indications: Mucomyst has been demonstrated to be clinically effective as adjuvant therapy in a wide range of conditions in which thick, viscous mucus is a problem, including: postoperative atelectasis and pneumonia; chronic bronchopulmonary disease (emphysema, chronic bronchitis, asthma, and bronchiectasis); acute bronchopulmonary disease (pneumonia, bronchitis, and tracheobronchitis); tracheostomy care; facilitation of bronchial studies; maintenance of an open airway during anesthesia; and to help control pulmonary complications of cystic fibrosis. **Contraindications:** Mucomyst is contraindicated in those patients who are sensitive or who have developed a sensitivity to it. **Warnings: After proper administration of acetylcysteine, an increased volume of liquefied bronchial secretions may occur. When cough is inadequate, the open airway must be maintained by mechanical suction if necessary. When there is a large mechanical block due to foreign body or local accumulation, the airway should be cleared by endotracheal aspiration, with or without bronchoscopy. Asthmatics under treatment with Mucomyst should be watched carefully. If bronchospasm progresses, this medication should be immediately discontinued. Adverse Effects:** Adverse effects have included stomatitis, nausea and rhinorrhea. Sensitivity and sensitization to Mucomyst have been reported very rarely. A few susceptible patients, particularly asthmatics (see **Warnings**), may experience varying degrees of bronchospasm associated with the administration of nebulized acetylcysteine. Most patients with bronchospasm are quickly relieved by the use of a bronchodilator given by nebulization. **Administration & Dosage:** Mucomyst may be administered by nebulization into a tent, Croupette, face mask, or mouthpiece; or by direct instillation. **Mucomyst should not be placed directly into the chamber of a heated (hot-pot) nebulizer.** Complete details on dosage, administration, and compatibility are included in the package insert. Additional information may be obtained from Mead Johnson Laboratories. **Supplied: Mucomyst-10 (acetylcysteine)**, a sterile 10% solution, in vials of 10 ml. and 30 ml.; **Mucomyst (acetylcysteine)**, a sterile 20% solution, in vials of 10 ml. and 30 ml.

Mead Johnson
LABORATORIES

© 1969 MEAD JOHNSON & COMPANY • EVANSVILLE, INDIANA 47721 70469



The treatment of

impotence

due to androgenic deficiency in the American male. The concept of chemotherapy plus the physician's psychological support is confirmed as effective therapy.

NEW CLINICAL STUDY

The Treatment of Impotence with Methyltestosterone Thyroid (100 patients—Double Blind Study) T. Jakobovits Fertility and Sterility, January 1970 Official Journal of the American Fertility Society

Android®

(thyroid-androgen) tablets

Double-Blind Study and Type of Patient: 100 patients suffering from impotence. Of the patients receiving the active medication (Android) a favourable response was seen in 78%. This compares with 40% on placebo. Although psychotherapy is indicated in patients suffering from functional impotence the concomitant role of chemotherapy (Android) cannot be disputed.

Choice of 4 strengths:

Android

Each yellow tablet contains:
Methyl Testosterone ..2.5 mg.
Thyroid Ext. (1/6 gr.) ..10 mg.
Glutamic Acid .....50 mg.
Thiamine HCL .....10 mg.
Dose: 1 tablet 3 times daily.
Available:
Bottles of 100, 500, 1000.

REFER TO PDR

Android-HP

HIGH POTENCY

Each red tablet contains:
Methyl Testosterone ..5.0 mg.
Thyroid Ext. (½ gr.) ...30 mg.
Glutamic Acid .....50 mg.
Thiamine HCL .....10 mg.
Dose: 1 tablet 3 times daily.
Available:
Bottles of 100, 500, 1000.

Android-X

EXTRA HIGH POTENCY

Each orange tablet contains:
Methyl Testosterone .12.5 mg.
Thyroid Ext. (1 gr.) ....64 mg.
Glutamic Acid .....50 mg.
Thiamine HCL .....10 mg.
Dose: 1 or 2 tablets daily.
Available:
Bottles of 60, 500.

Android-Plus

WITH HIGH POTENCY B-COMPLEX AND VITAMIN C

Each white tablet contains:
Methyl Testosterone ..2.5 mg.
Thyroid Ext. (¼ gr.) ...15 mg.
Ascorbic Acid (Vit. C) .250 mg.
Thiamine HCL .....25 mg.
Glutamic Acid .....100 mg.
Pyridoxine HCL .....5 mg.
Niacinamide .....75 mg.
Calcium Pantothenate .10 mg.
Vitamin B-12 .....2.5 mcg.
Riboflavin .....5 mg.
Dose: 2 tablets daily.
Available: Bottles of 60, 500.

Contraindications: Android is contraindicated in patients with prostatic carcinoma, severe cardiorenal disease and severe persistent hypercalcemia, coronary heart disease and hyperthyroidism. Occasional cases of jaundice with plugging biliary canaliculi have occurred with average doses of Methyl Testosterone. Thyroid is not to be used in heart disease and hypertension.

Warnings: Large dosages may cause anorexia, nausea, vomiting abdominal pain, diarrhea, headache, dizziness, lethargy, paresthesia, skin eruptions, loss of libido in males, dysuria, edema, congestive heart failure and mammary carcinoma in males.

Precautions: If hypothyroidism is accompanied by adrenal insufficiency the latter must be corrected prior to and during thyroid administration.

Adverse Reactions: Since Androgens, in general, tend to promote retention of sodium and water, patients receiving Methyl Testosterone, in particular elderly patients, should be observed for edema.

Hypercalcemia may occur, particularly in immobilized patients; use of Testosterone should be discontinued as soon as hypercalcemia is detected.

References: 1. **Montesano, P., and Evangelista, I.** Methyltestosterone-thyroid treatment of sexual impotence. Clin Med 12:69, 1966. 2. **Dublin, M. F.** Treatment of impotence with methyltestosterone-thyroid compound. West Med 5:67, 1964. 3. **Titeff, A. S.** Methyltestosterone-thyroid in treating impotence. Gen Prac 25:6, 1962. 4. **Hellman, L., Bradlow, H. L., Zumoff, B., Fukushima, D. K., and Gallagher, T. F.** Thyroid-androgen interrelations and the hypocholesteremic effect of androsterone. J Clin Endocr 19:936, 1959. 5. **Farris, E. J., and Colton, S. W.** Effects of L-thyroxine and liothyronine on spermatogenesis. J Urol 79:863, 1958. 6. **Dsol, A., and Farrar, G. E.** United States Dispensatory (ed. 25). Lippincott, Philadelphia, 1955, p. 1432. 7. **Wershub, L. P.** Sexual Impotence in the Male. Thomas, Springfield, Ill., 1959, pp. 79-99.

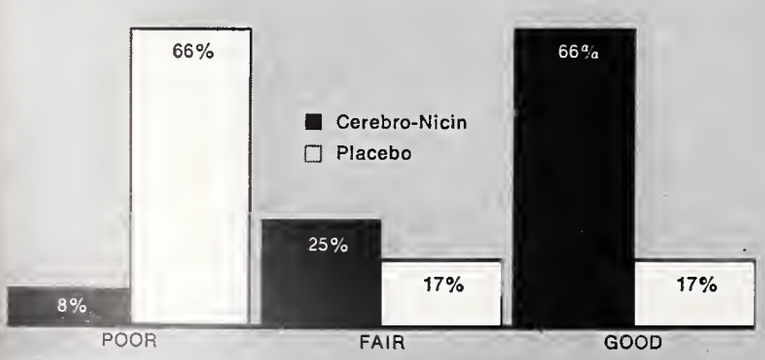
Write for literature and samples: BROWN **THE BROWN PHARMACEUTICAL CO., INC.** 2500 West 6th Street, Los Angeles, California 90057

For the treatment of the aging patient

Cerebro-Nicin®

capsules/elixir

A Gentle Cerebral Stimulant and Vasodilator



CEREBRO-NICIN® New double-blind study* shows how effectively senility can be forestalled. Four times as many aging patients showed striking improvement.

*A Double-Blind Study of Cerebro-Nicin, Therapy for the Geriatric Patient, R. Goldberg Jrnl,. of the Amer. Ger. Soc. June, 1964

Available in a tasty wine base elixir and capsules

Each Cerebro-Nicin capsule contains:

Pentylenetetrazole	100 mg.
Nicotinic Acid	100 mg.
Ascorbic Acid	100 mg.
Thiamine HCl	25 mg.
l-Glutamic Acid	50 mg.
Niacinamide	5 mg.
Riboflavin	2 mg.
Pyridoxine	3 mg.

DOSAGE: One capsule t.i.d. or as prescribed by physician.
AVAILABLE: Bottles of 100, 500, 1000 capsules.
Also elixir 8 oz. bottles.
CONTRAINDICATIONS: There are no known contraindications to Pentylenetetrazole although caution should be exercised when treating patients with a low convulsive threshold.
Most persons experience a flushing or tingling sensation after taking a higher potency niacin-containing compound. As a secondary reaction some will complain of nausea and other sensations of discomfort. This reaction is transient and is rarely a cause of discontinuance of the drug if the patient is forewarned to expect the reaction.

REFER TO PDR

Write for literature and samples...

BROWN **THE BROWN PHARMACEUTICAL CO.**
2500 W. 6th St., Los Angeles, Calif. 90057
Write for Product Catalog

SOUTHERN MEDICAL ASSOCIATION

Dr. John A. D. Cooper, president, Association of American Medical Colleges, will discuss the delivery of health services as related to the medical school during the general session of the Southern Medical Association's 64th annual meeting in Dallas, Nov. 16-19. Topics to be studied in scientific sessions include recent developments in the pharmacologic treatment of asthma, intravenous alcohol: its use in anesthesia for cardiovascular surgery, the dynamics of colon healing, the pathogenesis of sarcoidosis, immunoglobulins and the gastrointestinal tract, use of pituitary gonadotropins for induction of ovulation, motivational patterns and psychiatric aspects of plastic surgery patients, electrical burns, mechanisms of action of antimicrobial agents, drug therapy in hypertension, metachromatic leukodystrophy, psychoses in the general hospital, methods of relieving pain during delivery, episodic vertigo, and changing patterns in the practice of clinical pathology.

Contact: Robert F. Butts, 2601 Highland Ave., Birmingham 35205, executive director.

BLACKFORD MEMORIAL LECTURES

The 14th annual meeting of Blackford Memorial Lectures—a symposium on arthritis—will be staged at Memorial Hospital in Denison on Nov. 7. Sponsored by Grayson County Medical Society, the program will feature Drs. Leon Sokoloff, chief, section on rheumatic diseases, National Institute of Health, Bethesda, Md.; J. Donald Smiley, professor of internal medicine, The University of Texas (Southwestern) Medical School at Dallas; and A. B. Swanson, chairman, department of orthopaedic surgery, Blodgett Memorial Hospital, Grand Rapids, Mich. Pathology, physiological changes, etiology, and research in rheumatoid arthritis; and surgical and medical management of arthritis will be discussed.

Contact: Dr. John D. Gleckler, 211 N. Fannin, Denison 75020, chairman.

AMERICAN PUBLIC HEALTH ASSOCIATION

American Public Health Association will focus on new national programs and priorities for the more equitable delivery of health care, the environment and its implications for health, and community health problems and programs at its 98th annual meeting in Houston, Oct. 23-30. Topics to be discussed in scientific sessions include effective community programs on drug abuse, a new look at basic radiation standards, aged and chronically ill and mental health programs, noise control, birth control for adolescents, abortion, consumer development of health, public medical care for children, and accident and poison control.

Contact: Dr. James R. Kimmey, 1740 Broadway, New York 10019, executive director.

HIGHLIGHTS OF COMING MEETINGS

CURRENT MEETINGS IN TEXAS

AMERICAN SCHOOL HEALTH ASSOCIATION will meet Oct. 23-27 at the Sheraton-Lincoln Hotel in Houston. The 44th annual convention will be concerned with "The Comprehensive School Health Program" and will study the multi-media approach to health instruction and teaching in the difficult areas. Presentation topics include "Implications for Drug Abuse Education," "Implications for Venereal Disease Education," "Curriculum Evaluation in Health Education," and "An Investigation of Nutrition Quackery." Contact: Dr. Glenn R. Knotts (PhD), PO Box 416, Kent, Ohio 44240, executive director.

CURRENT REGIONAL MEETINGS

OKLAHOMA CITY CLINICAL SOCIETY will feature presentations on "Physical Fitness Program" and "The Upper Extremity" during its 40th annual fall conference, Oct. 26-28, at the Hotel Oklahoma in Oklahoma City. Guest lecturers will include Drs. Kenneth H. Cooper, San Antonio; Don W. Chapman, Houston; Robert J. Freeark, Chicago; Robert W. Goltz, Denver; Kermit E. Krantz, Kansas City, Kans.; Hunter L. Little, Palo Alto, Calif.; Donn G. Mosser, Minneapolis; John P. Naughton, Washington, DC; Vincent J. O'Conor, Jr., Chicago; and Kinsey M. Simonton, Rochester. Contact: Alma O'Donnell, 601 Northwest Expressway, Oklahoma City 73118, executive secretary.

CURRENT NATIONAL MEETINGS

AMERICAN ACADEMY OF CLINICAL TOXICOLOGY's third annual meeting will be held at the Jack Tar Hotel in San Francisco, Oct. 24-26. Preceding the meeting, the Academy will conduct a two-day intensive training program for the practicing physician. The program, planned to provide 16 hours of instruction and conferences on the diagnosis and treatment of acute intoxication, will also take place at the Jack Tar Hotel, Oct. 22-23. The Academy's annual meeting will consist of two symposia "Ethical and Legal Aspects of Clinical Toxicology" and "Clinical Toxicology of Drug Abuse." A general session on areas of clinical toxicology will also be held. A special feature, open to members only, will be an informal presentation of some of the problems of clinical management of acute intoxications as experienced by the speakers. Contact: Dr. Eric G. Comstock, PO Box 2565, Houston 77001, executive director.

AMERICAN ASSOCIATION OF BLOOD BANKS will meet Oct. 27-30 at the San Francisco Hilton in San Francisco. Advances in tissue matching and other phases of human organ transplantation will be the subject of a seminar and several paper presentations at the 23rd annual meeting. Contact: Lois J. James, 30 N. Michigan Ave., Chicago 60602, central office manager.

AMERICAN ASSOCIATION FOR LABORATORY ANIMAL SCIENCE will meet Nov. 1-6 at the Conrad Hilton Hotel in Chicago. Keynote speaker will be Dr. Norman E. Shumway, professor of surgery and chief of the division of cardiovascular surgery at Stanford University, Palo Alto, Calif. Several seminars and scientific sessions are planned. Contact: Joseph J. Garvey, PO Box 10, Joliet, Ill. 60434, executive secretary.

AMERICAN ASSOCIATION OF MEDICAL ASSISTANTS will present a review of special problems of pollution, a report on drug abuse, and six professional workshops at its 14th annual convention in Des Moines, Oct. 28-31. Dr. Walter C. Bornemeier, President, American Medical Association, will speak on "The Seventies—Decade of Challenge and Opportunity." Contact: Mrs. Dene R. Murray, 200 E. Ohio St., Chicago 60611, executive director.

AMERICAN COLLEGE OF CHEST PHYSICIANS will meet Oct. 25-29 at the Century-Plaza Hotel in Los Angeles. "Multidisciplinary Approach to Pulmonary and Cardiovascular Disease" is the theme of the meeting. General topics to be covered include surgical implications of cardiovascular disease, current approaches to therapeutics in pulmonary and esophageal disease, concepts in coronary artery disease, and clinical problems in cardiology. Contact: Dr. Alfred Soffer, 112 East Chestnut St., Chicago 60611, executive director.

AMERICAN DENTAL ASSOCIATION has set its 111th annual session for Nov. 8-12 in Las Vegas. The scientific program will take place at the Las Vegas Convention Center and will open with the display of scientific and educational exhibits. Essays, scientific session lectures, clinical lectures, table clinics, and motion pictures will be programmed. Contact: Dr. C. Gordon Watson (DDS), 211 East Chicago Ave., Chicago 60611, secretary.

AMERICAN HEART ASSOCIATION will hold its 43rd scientific sessions at Atlantic City Convention Hall in Atlantic City, NJ, Nov. 12-15. Lectures will include "Diverse Morphology of the Stenotic Aortic Valve," "Trifascicular Block," "Natural History of Patients with Prosthetic Valves," "Epidemiology of Stroke," "Physiological Basis of Heart Sounds and Murmurs," and "Diagnostic and Therapeutic Uses of Atrial Pacing." Symposia on cardiomyopathies, renaissance in electrophysiology/electrocardiography, therapeutic implications of recent research in myocardial infarction, sudden death, experimental cardiogenic shock, and primary and secondary prevention of atherosclerosis will be offered. Contact: Dr. James M. Hundley, 44 E. 23rd St., New York 10010, executive director.

AMERICAN MEDICAL ASSOCIATION's 24th clinical convention will be held Nov. 29-Dec. 2 in Boston. Motion pictures, courses, lectures, round table discussions, and scientific and industrial exhibits will make up the scientific program. A wide range of topics will be offered and will include surgery of the gastrointestinal tract, applied genetics, problems in pediatric surgery, pollution and the physician, medical practice in the future, respiratory pathophysiology and pulmonary failure, clinical immunology, renal failure, adolescents' medical care, present day problems in obstetrics, and cancer chemotherapy. The 12th National Conference on the Medical Aspects of Sports, sponsored by AMA, will be held in conjunction with and on the first day of the clinical convention. Included in the conference will be forums and discussion sections relating to research in sports, aquatic sports, football rules and injuries, psychology in sports, and emergency and public health aspects of sports. Contact: AMA Council on Medical Service, 535 N. Dearborn St., Chicago 60610.

AMERICAN MEDICAL RECORD ASSOCIATION's 42nd annual meeting will be held Nov. 1-6 at the Broadmoor Hotel in Colorado Springs. Scientific presentations will include "Ultrasonics in Obstetrics," "Transfusions and Other Procedures in Utero," "Organ Transplantation—Liver and Spleen," and "Heart Transplants—Present and Future." Various subjects related to medical records will be covered in a Medical Record Practice Forum. Contact: Mrs. Mary-j Waterstraat, 211 E. Chicago Ave., Chicago 60611, executive director.

AMERICAN SOCIETY OF CLINICAL HYPNOSIS will meet Nov. 6-8 at Eden Roc Hotel in Miami Beach. Subjects to be covered at the 13th annual scientific meeting are obesity, psychosexual problems, habit disruption, pain, drug abuse, surgery, learning disabilities, and obstetrics. A "Workshop on Clinical Hypnosis and Psychotherapy" will precede the meeting on Nov. 4-6 and will consist of lectures in the theory of hypnosis, demonstrations of induction techniques, and applications of hypnosis to specific situations as well as a philosophy of its use. Contact: F D. Nowlin, 800 Washington Ave., SE, Minneapolis 55414, executive secretary.

AMERICAN SOCIETY OF CYTOLOGY will hold its 18th annual scientific meeting at the Biltmore Hotel in Los Angeles, Nov. 4-7, and will reconvene in Honolulu, Nov. 7-11. Subjects to be covered in cytology workshops include diagnostic cytopathology of the uterine cervix, pitfalls in gynecologic cytology, cytology of uterine adenocarcinoma, postpartum and abortion cytology, basic techniques of cytogenetics, and cytopathology of the urinary bladder. A seminar on diagnostic problems in cytology and several round table luncheons are planned. Contact: Dr. Warren R. Lang, 7112 Lincoln Dr., Philadelphia 19119, secretary-treasurer.

AMERICAN SOCIETY OF INTERNAL MEDICINE has planned a meeting in Miami Nov. 6-8. To be discussed are the federal employee program's contribution to internal medicine, prepaid group practice as a method of delivery of medical care, the internist and allied health personnel, and the medical professional corporation. Workshops will focus on labor, insurance, government and health—1970, and ASIM and its components. Contact: William R. Ramsey, 525 The Hearst Bldg., Third at Market, San Francisco 94103, executive director.

ASSOCIATION OF AMERICAN MEDICAL COLLEGES will meet Oct. 29-Nov. 2 at the Biltmore Hotel in Los Angeles. Discussing the academic health center and health care delivery—the changing scene, preparing personnel to meet the demand, and organizational patterns for new responsibilities, will be Drs. Carleton B. Chapman, dean, Dartmouth Medical School; Joseph T. English, former administrator, Health Services and Mental Health Administration; George E. Burket, Jr., former president, American Academy of General Practice; Robert J. Haggerty, chairman, department of pediatrics, University of Rochester School of Medicine and Dentistry; George James, dean, Mount Sinai School of Medicine; and others. Contact: Dr. T. Stewart Hamilton, One Dupont Circle, NW, Washington, DC 20036, secretary.

ASSOCIATION OF MILITARY SURGEONS OF THE UNITED STATES will meet at the Washington Hilton Hotel, Washington, DC, Nov. 29-Dec. 2. Delivering the keynote address at the 77th annual meeting will be Dr. Roger O. Egeberg, assistant secretary for health and scientific affairs, Department of Health, Education, and Welfare. Topics of clinical medical interest will be covered in panel discussions. Contact: RADM Walter Welham, MC, USN, Ret, 8502 Connecticut Ave., Chevy Chase, Md. 20015, executive director.

THE RADIOLOGICAL SOCIETY OF NORTH AMERICA, INC., will offer presentations on neuroradiology, diagnosis, nuclear medicine, radiation therapy, pediatric radiology, and diagnosis in cardiovascular radiology at its 56th scientific assembly at the Palmer House in Chicago, Nov. 29-Dec. 4. Symposia and refresher courses will also be offered. Contact: Marguerite H. Henry, 713 E. Genesee St., Syracuse, NY 13210, executive director.

MORE HIGHLIGHTS OF COMING MEETINGS

■ Denotes Texas meetings.

ALSO IN NOVEMBER

AMERICAN ASSOCIATION FOR INHALATION THERAPY, New Orleans, Nov. 14-18, 1970. Mark T. Bowers, 3554 Ninth St., Riverside, Calif. 92501, Exec. Sec.

AMERICAN CANCER SOCIETY, annual, New York, Nov. 4-6, 1970. Norman R. Hollis, 219 E. 42nd St., New York 10017, Asst. Sec.

■ AMERICAN COLLEGE OF CHEST PHYSICIANS, Southern Chapter, annual, Dallas, Nov. 16, 1970. Dr. Charles Frank Tate, Jr., 1700 NW 10th Ave., Miami, Fla. 33136, Sec.-Treas.

AMERICAN MEDICAL WOMEN'S ASSOCIATION, INC., Puerto Rico, Nov. 7-10, 1970. Gertrude F. Conroy, 1790 Broadway, New York 10019, Exec. Dir.

■ BAYLOR COLLEGE OF MEDICINE, symposium on management of renal disease, Houston, Nov. 12-14, 1970. Dr. C. E. Carlton, Jr., Baylor College of Medicine, 1200 Moursund Ave., Houston 77025.

CONGRESS OF COUNTY MEDICAL SOCIETIES, annual, Cincinnati, Nov. 6-8, 1970. Dr. Joseph F. Boyle, P. O. Box 54571, Terminal Annex, Los Angeles 90054, Chrmn., Bd. of Trustees.

INTERNATIONAL COLLEGE OF SURGEONS, Las Vegas, Nov. 20-24, 1970. Dr. Aldo Parentela, 1516 Lake Shore, Chicago 60610, Exec. Officer.

INTERSTATE POSTGRADUATE MEDICAL ASSOCIATION OF NORTH AMERICA, annual, Chicago, Nov. 2-5, 1970. Roy T. Ragatz, 307 N. Charter St., Madison, Wis. 53715, Exec. Dir.

MEDICAL SOCIETY OF THE US AND MEXICO, annual, Guadalajara, Jal. Mexico, Nov. 4-7, 1970. Virginia E. Bryant, 333 W. Thomas Rd., #207, Phoenix 85013, Exec. Sec.

NATIONAL SOCIETY FOR THE PREVENTION OF BLINDNESS, INC., New York, Nov. 19, 1970. Margaret S. Banks, 79 Madison Ave., New York 10016, Admin. Asst.

■ SOUTHWESTERN MEDICAL ASSOCIATION, El Paso, Nov. 4-6, 1971. Bob Reid, 723 Mills Bldg., El Paso 79901, Exec. Sec.

■ TEXAS ASSOCIATION FOR CHILDREN WITH LEARNING DISABILITIES, INC., Austin, Nov. 20-21, 1970. Mrs. William F. Howard, 4601 Small Drive, Austin 78731, Chrmn.

■ THE UNIVERSITY OF TEXAS M. D. ANDERSON HOSPITAL AND TUMOR INSTITUTE AT HOUSTON, 15th annual clinical conference, Houston, Nov. 19-20, 1970. UT M. D. Anderson Hospital and Tumor Institute, Texas Medical Center, Houston 77025.

UNIVERSITY OF FLORIDA COLLEGE OF MEDICINE, seminar in obstetrics and gynecology, Gainesville, Fla., Nov. 19-20, 1970. Division of Postgraduate Education, University of Florida College of Medicine, J. Hillis Miller Health Center, Gainesville 32601.

DECEMBER

■ AMERICAN ACADEMY FOR CEREBRAL PALSY, annual, Houston, Dec. 8-12, 1970. Dr. Edward T. Smith, 6410 Fannin, Houston 77025, chrmn.

AMERICAN ACADEMY OF DERMATOLOGY, Chicago, Dec. 5-10, 1970. Mrs. Dorothy P. Compton, 2250 NW Flanders St., Portland, Ore., Exec. Sec.

AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE, Chicago, Dec. 26-31, 1970. Dr. Dael Wolfe, 1515 Massachusetts Ave., NW, Washington, DC 20005, Exec. Officer.

■ AMERICAN COLLEGE OF PHYSICIANS, Galveston, Dec. 4, 1970. Dr. Ralph R. Tompsett, 3500 Gaston Ave., Dallas 75246.

ASSOCIATION OF STATE AND TERRITORIAL HEALTH OFFICERS, Washington, DC, Dec. 6-10, 1970. Noble J. Swearingen, 234 E. Capitol St., Washington, DC 20002, Dir.

SOUTHERN SURGICAL ASSOCIATION, Boca Raton, Fla., Dec. 7-9, 1970. Dr. David C. Sabiston, Jr., Duke University Medical Center, Durham, NC, Sec.

■ TEXAS ACADEMY OF INTERNAL MEDICINE, Galveston, Dec. 5, 1970. Dr. O. Roger Hollan, 703 Nix Bldg., San Antonio 78205, Sec.

■ TEXAS SOCIETY OF INTERNAL MEDICINE, INC., Galveston, Dec. 4, 1970. Dr. Thomas Runge, 1801 N. Lamar Blvd., Austin 78701, Sec.-Treas.

■ TEXAS SOCIETY OF OPHTHALMOLOGY AND OTOLARYNGOLOGY, Corpus Christi, Dec. 4-5, 1970. Dr. Bland H. Schwarting, 304 Med. Prof. Bldg., San Antonio, Sec.

■ TEXAS STATE BOARD OF MEDICAL EXAMINERS, Fort Worth, Dec. 7-9, 1970. Dr. M. H. Crabb, 1612 Summit Ave., Suite 303, Fort Worth 76102, Sec.

JANUARY

ARIZONA HEART ASSOCIATION, Fourteenth Annual Cardiac Symposium, Phoenix, Jan. 22-24, 1971. Arizona Heart Association, 1720 E. McDowell Rd., Phoenix 85006.

■ FIFTH DISTRICT MEDICAL SOCIETY, annual, San Antonio, Jan. 29, 1971. S. E. Cockrell, Jr., 202 W. French Place, San Antonio 78212, Exec. Officer.

MORE HIGHLIGHTS OF COMING MEETINGS

■ INTERNATIONAL MEDICAL ASSEMBLY OF SOUTHWEST TEXAS, annual, San Antonio, Jan. 28-29, 1971; extension trip to Mexico follows. S. E. Cockrell, Jr., 202 W. French Place, San Antonio 78212, Exec. Officer.

NATIONAL CONFERENCE ON CANCER OF THE COLON AND RECTUM, San Diego, Jan. 7-9, 1971. Dr. Ronald N. Grant, c/o American Cancer Society, Inc., 219 E. 42nd St., New York 10017.

■ TEXAS MEDICAL ASSOCIATION, Austin, Jan. 15-17, 1971. C. Lincoln Williston, 1801 N. Lamar Blvd., Austin 78701, Exec. Sec.

■ TEXAS RADIOLOGICAL SOCIETY, annual, Dallas, Jan. 29-30, 1971. Dr. Herman C. Sehested, 1550 W. Rosedale, Fort Worth 76104, Sec.

FEBRUARY

AMERICAN ACADEMY OF ALLERGY, annual, Chicago, Feb. 20-24, 1971. James O. Kelley, 756 N. Milwaukee St., Milwaukee, Wis. 53202, Exec. Officer.

AMERICAN COLLEGE OF CARDIOLOGY, annual, Washington, DC, Feb. 3-7, 1971. William D. Nelligan, 9650 Rockville Pike, Bethesda, Md. 20014, Exec. Dir.

AMERICAN SOCIETY OF ABDOMINAL SURGEONS, New Orleans, Feb. 14-17, 1971. Dr. Blaise F. Alfano, 675 Main St., Melrose, Mass., Exec. Sec.

■ FIRST DISTRICT MEDICAL SOCIETY, annual, Pecos, February, 1971. Dr. John Emmett, 1900 N. Oregon, El Paso, Sec.

INTERNATIONAL ACADEMY OF PROCTOLOGY, 23rd annual congress and teaching seminar, Mexico City, Feb. 26-March 5, 1971. Dr. Alfred J. Cantor, 147-41 Sanford Ave., Flushing, NY 11355, Exec. Sec.

PAN-PACIFIC SURGICAL ASSOCIATION, annual, Honolulu, Feb. 26-March 3, 1972. Harriet N. DeVault, 236 Alexander Young Bldg., Honolulu 96813, Exec. Sec.

■ TEXAS PUBLIC HEALTH ASSOCIATION, annual, Fort Worth, Feb. 28-March 3, 1971. Joseph N. Murphy, Jr., PO Box 5192, Austin 78703, Exec. Sec.

MARCH

AMERICAN ACADEMY OF ORTHOPAEDIC SURGEONS, annual, San Francisco, March 6-11, 1971. John K. Hart, 430 N. Michigan Ave., Chicago 60611, Exec. Sec.

AMERICAN ASSOCIATION OF PATHOLOGISTS AND BACTERIOLOGISTS, annual, Montreal, Quebec, March 6-9, 1971. Dr. K. M. Brinkhous, Dept. of Pathology, University of North Carolina, Chapel Hill, NC 27514, Sec.

AMERICAN COLLEGE OF ALLERGISTS, annual, San Francisco, March 28-April 1, 1971. Dr. John D. Gillaspie, 2141 14th St., Boulder, Colo. 80302, Exec. Sec.

AMERICAN COLLEGE OF PHYSICIANS, annual, Denver, March 28-April 2, 1971. Dr. Edward C. Rosenow, Jr., 4300 Pine St., Philadelphia 19104, Exec. Dir.

AMERICAN COLLEGE OF RADIOLOGY, annual, St. Louis, March 29-April 3, 1971. William C. Stronach, 20 N. Wacker Dr., Rm. 2920, Chicago 60606, Exec. Dir.

AMERICAN COLLEGE OF SURGEONS, Phoenix, March 1-3; New Orleans, March 15-17, 1971. Dr. C. Rollins Hanlon, 55 E. Erie St., Chicago 60611, Dir.

AMERICAN SOCIETY OF INTERNAL MEDICINE, annual, Denver, March 26-28, 1971. W. R. Ramsey, 525 The Hearst Bldg., San Francisco 94103, Exec. Officer.

■ DALLAS SOUTHERN CLINICAL SOCIETY, annual, Dallas, March 15-18, 1971. Millard J. Heath, 433 Medical Arts Bldg., Dallas 75201, Exec. Officer.

NEW ORLEANS GRADUATE MEDICAL ASSEMBLY, annual, New Orleans, March 8-11, 1971. Irma B. Sherwood, 1430 Tulane Ave., New Orleans 70112, Exec. Sec.

SOCIETY FOR CRYOSURGERY, annual, Hollywood, Fla., March 1-5, 1971. Dr. John G. Bellows, 30 N. Michigan Ave., Chicago 60602, Sec.

■ SOCIETY OF NUCLEAR MEDICINE, Southwestern Chapter, annual, Houston, March 19-21, 1971. Dr. Herbert C. Allen, Jr., 100 Hermann Prof. Bldg., Houston 77025, Sec.-Treas.

■ TEXAS ASSOCIATION OF OBSTETRICIANS AND GYNECOLOGISTS, annual, Corpus Christi, March 5-6, 1971. Dr. J. L. Jinkins, Jr., 200 University Blvd., Galveston 77550, Sec.-Treas.

■ TEXAS UROLOGICAL SOCIETY, annual, Wichita Falls, March 11-13, 1971. Dr. Charles Dryden, 1605 Tenth St., Wichita Falls 76301, Sec.-Treas.

US-MEXICO BORDER PUBLIC HEALTH ASSOCIATION, annual, Tucson, March 29-April 2, 1971. Dr. Jorge Jimenez-Gandica, 501 US Court House, El Paso 79901, Sec.

APRIL

■ AEROSPACE MEDICAL ASSOCIATION, annual, Houston, April 26-29, 1971. Dr. Merrill H. Goodwin, Washington Nat'l Airport, Washington, DC 20001, Exec. Sec.

AMERICAN ACADEMY OF NEUROLOGY, annual, New York City, April 26-May 1, 1971. Stanley A. Nelson, 4005 W. 65th St., Minneapolis 55435, Exec. Sec.

AMERICAN ASSOCIATION OF ANATOMISTS, annual, Philadelphia, April 18-23, 1971. Dr. Russell T. Woodburne, Dept. of Anatomy, The University of Michigan,

4648 Medical Science Bldg., Ann Arbor, Mich. 48104, Sec.-Treas.

AMERICAN ASSOCIATION FOR THORACIC SURGERY, Atlanta, April 26-28, 1971. Ada Hanvey, 7710 Carondelet Ave., St. Louis 63105, Admin. Asst.

AMERICAN COLLEGE HEALTH ASSOCIATION, annual, San Francisco, April 27-30, 1971. James W. Dilley, 2807 Central St., Evanston, Ill. 60201, Exec. Dir.

AMERICAN COLLEGE OF SURGEONS, Montreal, Quebec, Canada, April 5-7, 1971. Dr. C. Rollins Hanlon, 55 E. Erie St., Chicago 60611, Dir.

AMERICAN GERIATRICS SOCIETY, annual, Chicago, April 23-24, 1971. Dr. Edward Henderson, 10 Columbus Circle, New York 10019, Exec. Dir.

■ BAYLOR COLLEGE OF MEDICINE, seventh annual orthopaedic symposium, Houston, April 22-24, 1971. Dr. W. Malcolm Granberry, 6624 Fannin St., Houston 77025, Chrmn.

■ EIGHTH DISTRICT MEDICAL SOCIETY, annual, Galveston, April, 1971. Dr. Paul J. Cunningham, 200 University Blvd., Galveston, Sec.-Treas.

INDUSTRIAL MEDICAL ASSOCIATION, annual, Atlanta, April 19-22, 1971. Howard N. Schulz, 55 E. Washington, Chicago 60602, exec. dir.

SOUTHWESTERN SURGICAL CONGRESS, annual, Las Vegas, April 19-22, 1971. Dr. Jack A. Barney, 301 Pasteur Medical Bldg., Oklahoma City 73103, Sec.-Treas.

■ ST. LUKE'S EPISCOPAL HOSPITAL, annual orthopaedic symposium, Houston, April 22-24, 1971. Dr. W. Malcolm Granberry, 6624 Fannin, Houston 77025, chrmn.

■ TEXAS MEDICAL ASSISTANTS ASSOCIATION, annual, Dallas, April 28-May 3, 1971. Mrs. Jo Alice Thompson, 2321 Hillsboro, Dallas 75228, Sec.

MAY

AMERICAN ACADEMY OF FACIAL PLASTIC AND RECONSTRUCTIVE SURGERY, annual, San Francisco, May 25-27, 1971. Dr. Carl N. Patterson, 1110 W. Main, Durham, N.C. 27701, Sec.

AMERICAN ACADEMY OF PSYCHOANALYSIS, Washington, DC, May 8-10, 1971. Charlotte Bruskin, 40 Gramercy Park N., New York 10010, exec. sec.

AMERICAN COLLEGE OF OBSTETRICIANS AND GYNECOLOGISTS, annual, San Francisco, May 3-6, 1971. Dr. Michael Newton, 79 W. Monroe St., Chicago 60603, Exec. Dir.

■ AMERICAN COLLEGE OF SURGEONS, North Texas Chapter, annual, May 1971. Dr. Ronald F. Garvey, 6011 Harry Hines Blvd., Dallas 75235, Sec.-Treas.

AMERICAN DERMATOLOGICAL ASSOCIATION, annual, Skytop, Pa., May 16-20, 1971. Dr. Barrett Kennedy, 1542 Tulane Ave., New Orleans 70112, Exec. Sec.

■ AMERICAN PHYSICAL THERAPY ASSOCIATION, TEXAS CHAPTER, annual, San Antonio, May, 1971. Hilda McKethan, 4162 Monaco Dr., Corpus Christi 78411, Sec.

AMERICAN PROCTOLOGIC SOCIETY, annual, Las Vegas, May 9-13, 1971. Harriette Gibson, 320 W. Lafayette, Detroit 48226, Exec. Officer.

AMERICAN PSYCHIATRIC ASSOCIATION, annual, Washington, DC, May 3-7, 1971. Dr. Walter E. Barton, 1700 18th St., NW, Washington, DC 20009, Med. Dir.

AMERICAN SOCIETY FOR AESTHETIC PLASTIC SURGERY, annual, Boston, May, 1971. Dr. Simon Fredricks, 1103 Medical Towers, Houston 77025, Sec.

AMERICAN THORACIC SOCIETY, annual, Los Angeles, May 17-19, 1971. Robert G. Weymueller, 1740 Broadway, New York 10019, exec. sec.

AMERICAN UROLOGICAL ASSOCIATION, INC., annual, Chicago, May 17-20, 1971. Richard J. Hannigan, 1120 N. Charles St., Baltimore 21201, Exec. Sec.

MEDICAL LIBRARY ASSOCIATION, annual, New York City, May 30-June 3, 1971. Helen Brown Schmidt, 919 N. Michigan Ave., Chicago 60611, exec. dir.

■ NATIONAL LEAGUE FOR NURSING, Dallas, May 10-14, 1971. Margaret E. Walsh, 10 Columbus Circle, New York 10019, Sec.

NATIONAL TUBERCULOSIS AND RESPIRATORY DISEASE ASSOCIATION, annual, Los Angeles, May 16-19, 1971. Dr. Robert J. Anderson, 1740 Broadway, New York 10019, Mng. Dir.

SOUTH CENTRAL ASSOCIATION OF BLOOD BANKS, annual, Little Rock, May, 1971. Elsie Howard, 2109 Commerce St., Dallas 75201, Exec. Officer.

STUDENT AMERICAN MEDICAL ASSOCIATION, annual, St. Louis, May 4-8, 1971. Charles C. Hewitt, JD, 2635 Flossmoor Rd., Flossmoor, Ill. 60422. Exec. Officer.

■ TEXAS DENTAL ASSOCIATION, annual, Houston, May 16-19, 1971. Bill Howard, 3707 Gaston Ave., Dallas 75246, Exec. Sec.

■ TEXAS HOSPITAL ASSOCIATION, annual, San Antonio, May 16-19, 1971. O. Ray Hurst, PO Box 4553, Austin 78751, Exec. Vice-Pres.

JUNE

AMERICAN DIABETES ASSOCIATION, annual, San Francisco, June 17-23, 1971. J. Richard Connelly, 18 E. 48th St., New York 10017, Exec. Dir.

AMERICAN PHYSICAL THERAPY ASSOCIATION, annual, Boston, June 27-July 2, 1971. Royce P. Noland, 1156 15th St., NW, Washington, DC 20005, Exec. Dir.

Is your program listed in the Texas Medical Association's Directory of Continuing Education Courses?

TEXAS MEDICINE will carry a comprehensive listing of continuing education courses scheduled in Texas during 1971 in the January 1971 issue.

If your organization will have one or more continuing education programs during the coming year, you will want it listed. This directory will provide greater publicity to all courses which will be offered in Texas and stimulate greater participation in many programs.

After the directory is published in TEXAS MEDICINE, it will be reproduced and sent to all Texas physicians.

Don't miss this opportunity to further promote your continuing education course. Time is limited, so write today for the questionnaire that must be filled out for each listing.

Complete and mail the form below and a questionnaire will be rushed to you. Do it now!

To: Mrs. Marilyn Baker
Managing Editor
TEXAS MEDICINE
1801 North Lamar Blvd.
Austin, Texas 78701

Name of Course_____

Dates_____

Sponsoring Organization_____

Please send me the TMA Continuing Education Course questionnaire in order that my organization may be listed in the Directory to be published in the January 1971 issue of TEXAS MEDICINE.

Name_____

Address_____

City_____ Zip_____

CONTINUING EDUCATION COURSES

Ophthalmology: A course on "The Aging Eye" will be presented Nov. 9 in Houston. Sponsors are the division of continuing education of The University of Texas Graduate School of Biomedical Sciences at Houston, the department of ophthalmology at Hermann Hospital, and St. Anthony Center. The program will review the basic principles of diagnosis of diseases of the anterior and posterior segment of the aging eye; the concept of glaucoma and its detection by general physicians; the effect of aging changes on the refractive status of the eye; and neurological, vascular, and adnexal changes in the aging eye that are of general diagnostic importance.

For further information write The University of Texas Graduate School of Biomedical Sciences at Houston, Division of Continuing Education, PO Box 20367, Houston 77025.

Pediatrics: "Seizure Disorders of Children" is the theme of the annual pediatric postgraduate symposium sponsored by the departments of pediatrics and neurology, Baylor College of Medicine, and Blue Bird Circle Children's Clinic for Neurological Disorders. The symposium will be held at Texas Children's Hospital in Houston, Nov. 12-14.

There is no registration fee. Further information may be obtained from Dr. Thomas E. Zion, Department of Pediatrics, Baylor College of Medicine, 1200 Moursund Ave., Houston 77025.

Brain Chemistry and Mental Disease: This symposium, sponsored by Texas Research Institute, will be held Nov. 18-20 in Houston. Subjects to be studied include enzymes: implications in mental disease; psychoactive agents: biological actions; biological aspects of affective disorders; genetic and metabolic factors in mental disorders; and modern concepts of chemotherapy.

There is no registration fee. Inquiries should be addressed to Dr. Beng T. Ho (PhD), Texas Research Institute of Mental Sciences, 1300 Moursund Ave., Texas Medical Center, Houston 77025.

Laryngology and Bronchoesophagology: The course will be conducted by the University of Illinois at the Medical Center, Department of Otolaryngology, Chicago, Nov. 9-20. Registration is limited. Write directly to the Department of Otolaryngology, Abraham Lincoln School of Medicine of the College of Medicine, University of Illinois at the Medical Center, P. O. Box 6998, Chicago 60680.

Hospital Problems: The Fourth Annual Postgraduate Conference on "Today's Hospital Problems: An Interdisciplinary Approach" will be held Nov. 11-14. Sponsored by Mound Park Hospital Foundation, Inc., and the University of Florida, the course will take place at the Tides Hotel and Bath Club in Redington Beach, Fla. Acceptable for 20 accredited hours by the AAGP, the program is designed specifically for administrators, chiefs of staff, and governing personnel of hospitals.

Fee for the course is $100. Contact: Mound Park Hospital Foundation, Inc., Postgraduate Medical Education, St. Petersburg, Fla. 33701.

Electrocardiography: The Houston Chapter, American Heart Association, will sponsor a three-day ECG Technician's Course at Astroworld Hotel in Houston, Dec. 2-4. The course will include such topics as basic electrocardiograph techniques, cardiovascular anatomy and physiology, and pulse wave reading and multi-channel electrocardiography. The course is also open to industrial nurses who may work with ECG testing. For information and registration contact the chapter at 3201 Lake, Houston 77006, or telephone 524-8343. Dr. William L. Winters, Jr., is course chairman.

Dietitians: The division of postgraduate education of The University of Texas (Southwestern) Medical School at Dallas announces a seminar for dietitians, Dec. 4-5, at the school. "Dietary Prevention of the Epidemic of Atherosclerosis in the Diabetic Patient," "Diabetes Mellitus and Adipose Tissue," and various topics in nutrition research will be presented. Guest faculty will be Dr. Daniel B. Stone, chief, diabetes division and professor of internal medicine, The University of Iowa, Iowa City.

The session is limited to 200 registrants and the fee is $15. Inquiries and registrations should be addressed to Dr. John S. Chapman, Assistant Dean for Postgraduate Education, The University of Texas (Southwestern) Medical School at Dallas, 5323 Harry Hines Blvd., Dallas 75235.

Polyparametric Electrocardiography: The University of Texas Graduate School of Biomedical Sciences at Houston, Division of Continuing Education will present a course on "Polyparametric Electrocardiography" Dec. 7-10 in Houston. Guest lecturer will be Dr. Demetrio Sodi-Pallares, director, department of electrocardiography, National Heart Institute of Mexico City. The primary discussions will be concerned with polyparametric approach to the injured and ischemic tissues, eutropy and cybernetic concepts in coronary artery disease, a new concept in coronary artery disease, and the depolarization of the heart: cardiac and extra-cardiac conditions.

For further information write The University of Texas Graduate School of Biomedical Sciences at Houston, Division of Continuing Education, PO Box 20367, Houston 77025.

Coronary Atherosclerotic Heart Disease: This three-day program, offered by the department of medicine, Emory University School of Medicine, in association with the American College of Physicians and the American Heart Association, will be held at Grady Memorial Hospital in Atlanta, Ga., Jan. 13-15, 1971. Three facets of the coronary atherosclerotic heart disease problems—prevention, treatment, and rehabilitation—will be discussed by experts in great detail.

For information write Dr. Edward C. Rosenow, Jr., c/o ACP, 4200 Pine St., Philadelphia, Pa. 19104.

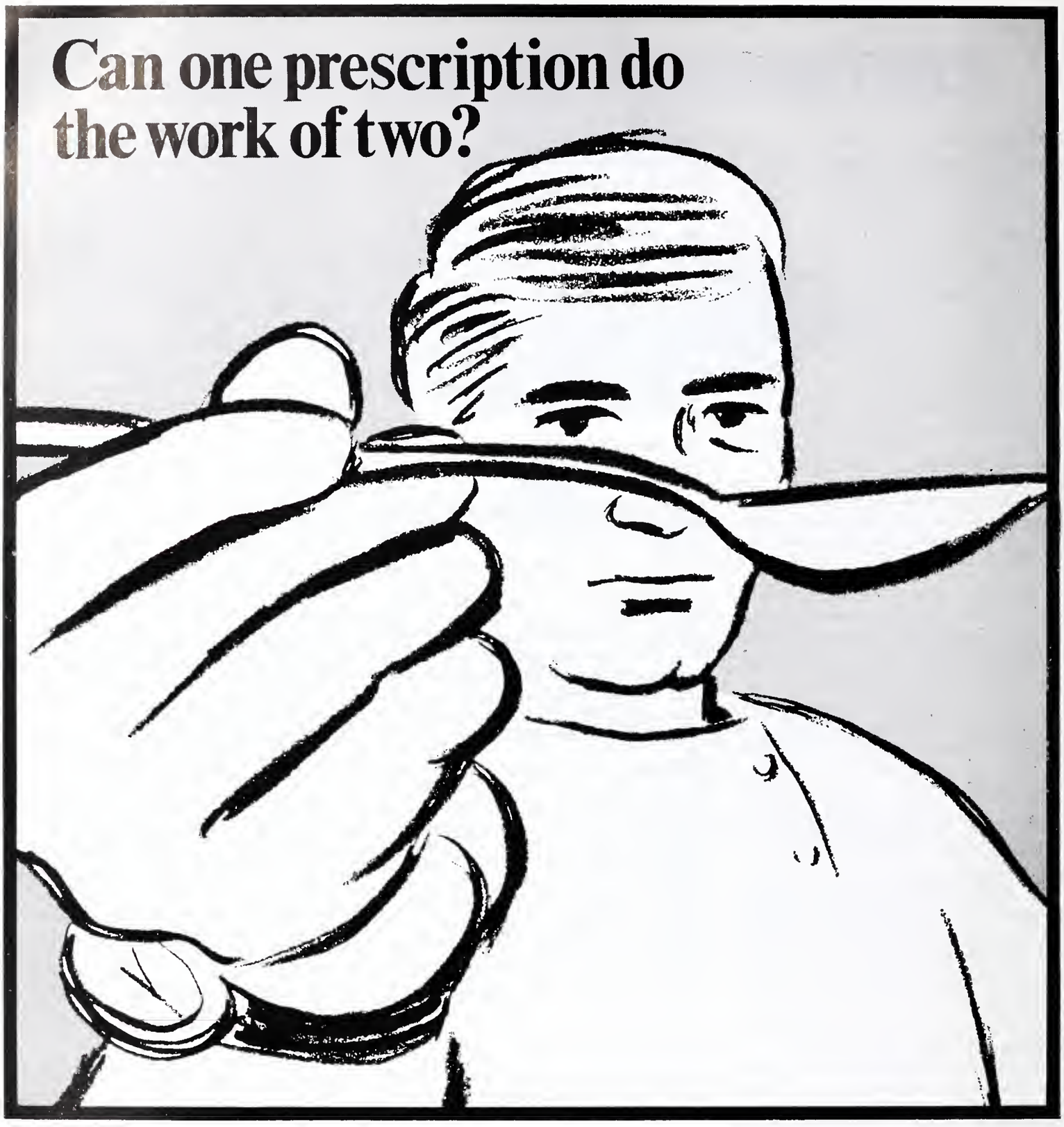
Internal Medicine: Important recently developed concepts in internal medicine will be explored in a course offered by the Medical College of Georgia, Augusta, Ga., Jan. 18-22, 1971, and co-sponsored by American College of Physicians. Time will be devoted to cardiology, gastroenterology, rheumatology, nephrology, infectious disease, pulmonary disease, hematology, metabolism, endocrinology, and dermatology. Focus will be primarily clinical, but emphasis will also be placed on underlying pathophysiologic principles and their relevance in the interpretation of diagnostic tests and selection of therapy. Participation of registrants with faculty in panel discussions will be encouraged.

For information write Dr. Edward C. Rosenow, Jr., c/o ACP, 4200 Pine St., Philadelphia, Pa. 19104.

Medical Oncology: An approach to management of patients with cancer and hematologic malignancies, built on a theoretical background in experimental therapeutics, pharmacology, cell population kinetics, and immunology, will be developed in a program to be held March 8-12, 1971, at Shamrock-Hilton Hotel, Houston. Offered by Texas Medical Center, Houston, and co-sponsored by American College of Physicians, this course will emphasize the medical and psychological aspects of supportive care of the patient under treatment. Case material will further illustrate specific diseases, diagnostic techniques, complications of management, and results of therapy.

Contact Dr. Edward C. Rosenow, Jr., c/o ACP, 4200 Pine St., Philadelphia, Pa. 19104.

Can one prescription do the work of two?



Yes, Kolantyl®.

Kolantyl Gel/Wafers contain antacids, and Bentyl® (dicyclomine hydrochloride) too.

Merrell

The Wm. S. Merrell Company
Division of Richardson-Merrell Inc.
Cincinnati, Ohio 45215

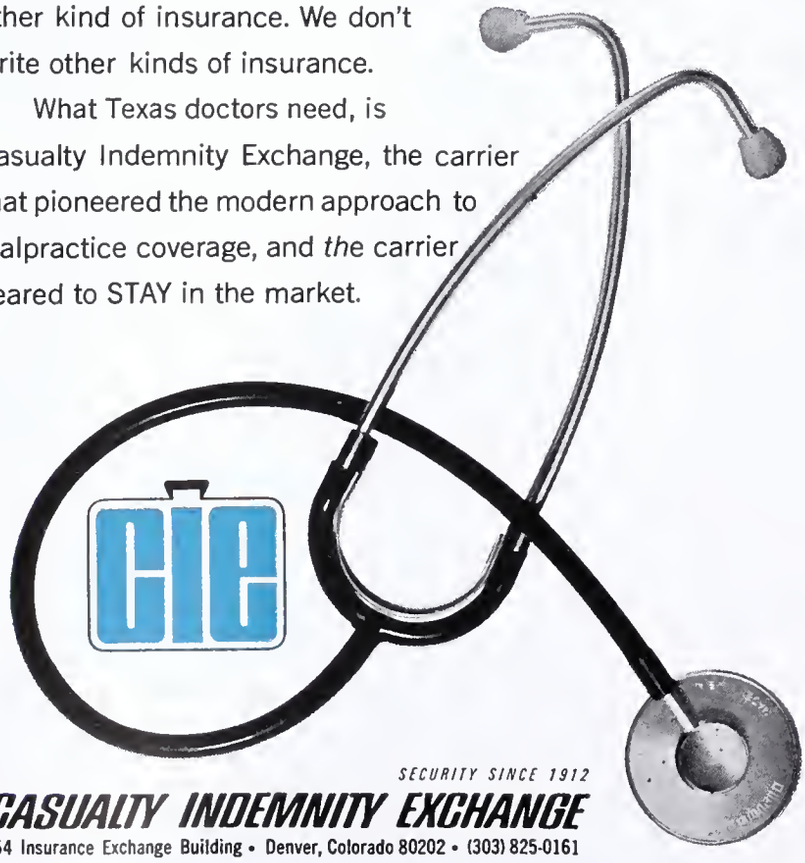
0-2102 (1832)

What Texas doctors need, is a Malpractice Liability Carrier that won't fade when trouble comes.

This means the up-to-date carrier. The one that's replete with innovations and new developments in this clouded, sensitive area of liability protection. And the one that doesn't talk malpractice coverage just to get a foot in the door for every other kind of insurance. We don't write other kinds of insurance.

What Texas doctors need, is Casualty Indemnity Exchange, the carrier that pioneered the modern approach to malpractice coverage, and *the* carrier geared to STAY in the market.

Contact your local agent or
RUSSELL GRACE INSURANCE
2304 W. 7th St.
Ft. Worth, Texas 76107
(817) 332-9269
In Dallas, Call
(214) 264-4300



SECURITY SINCE 1912
CASUALTY INDEMNITY EXCHANGE
754 Insurance Exchange Building • Denver, Colorado 80202 • (303) 825-0161

Gone with the wind

The gas/acid group of disorders

"The two most common complaints referable to the upper gastrointestinal tract for which patients seek medical relief are hyperacidity and 'gas.' The two often occur together."*

Frees captured gas...neutralizes free acid

SILAIN-GEL Tablets and Liquid are separate formulas designed to provide equivalent dual-action symptomatic relief. Both dosage forms contain simethicone which effectively frees trapped gas, enabling the patient to eliminate it. Magnesium hydroxide in both assures a rapid rise in pH for prompt relief of hyperacidity. The special co-dried aluminum hydroxide/magnesium carbonate gel in the tablets assures the same rapid and uniform reaction rate as the liquid. Thus, both medications achieve prompt and prolonged neutralization of free acid *plus* prompt relief from the pain and pressure of trapped gas.

Always in good taste

The pleasant, distinctive flavor of SILAIN-GEL, as well as its non-constipating feature, make it a therapy your patients can live with—in comfort and without complaint.

Select the form of SILAIN-GEL you want to provide symptomatic relief in: gastric ulcer • duodenal ulcer • heartburn • gastric hyperacidity • gastritis • dyspepsia

when the patient prefers the convenience of a tablet, select

Silain-Gel® Tablets:

when the patient prefers a liquid, select

Silain-Gel® Liquid

Also available for the patient who needs an antifrothicant/antiflatulent agent only: **Silain®** (simethicone) Tablets

*Slanger, A.: Med. Times *94*:150 (Feb.) 1966.

Announcing the "Antgasid"

Silain-Gel®

Tablets: simethicone plus aluminum hydroxide/magnesium carbonate co-dried gel and magnesium hydroxide

Liquid: simethicone plus aluminum hydroxide and magnesium hydroxide

one dose does both: frees captured gas...neutralizes free acid

A·H·ROBINS A.H. Robins Company, Richmond, Virginia 23220

Drip stopped, Congestion cleared

For upper respiratory allergies and infections, up to 12 hours clear breathing on one tablet. Dimetapp Extentabs® does an outstanding job of helping to clear up the stuffiness, drip and congestion of colds and upper respiratory allergies and infections. Each Extentab keeps working up to 12 hours. And for most patients drowsiness or overstimulation is unlikely.

INDICATIONS: Dimetapp is indicated for symptomatic relief of the allergic manifestations of respiratory illnesses, such as the common cold and bronchial asthma, seasonal allergies, rhinitis, conjunctivitis, and otitis.

CONTRAINDICATIONS: Hypersensitivity to antihistamines. Not recommended for use during pregnancy.

PRECAUTIONS: Until patient's response has been determined, he should be cautioned against engaging in operations requiring alertness. Administer with care to patients with cardiac or peripheral vascular diseases or hypertension. SIDE EFFECTS: Hypersensitivity reactions including skin rashes, urticaria, hypotension and thrombocytopenia, have been reported on rare occasions. Drowsiness, lassitude, nausea, giddiness, dryness of the mouth, mydriasis, increased irritability or excitement may be encountered.

DOSAGE: 1 Extentab morning and evening. SUPPLIED: Bottles of 100 and 500.

A·H·ROBINS

A. H. Robins Company
Richmond, Va. 23220

Dimetapp® Extentabs

Dimetane® (brompheniramine maleate), 12 mg.; phenylephrine HCl, 15 mg.; phenylpropanolamine HCl, 15 mg.

The girth control pill

Tepanil® Ten-tab®

(continuous release form)

(diethylpropion hydrochloride)

works on the appetite not on the 'nerves'

When girth gets out of control, TEPANIL can provide sound support for the weight control program you recommend. TEPANIL reduces the appetite—patients enjoy food but eat less. Weight loss is significant—gradual—yet there is a relatively low incidence of CNS stimulation.

Contraindications: Concurrently with MAO inhibitors, in patients hypersensitive to this drug; in emotionally unstable patients susceptible to drug abuse.

Warning: Although generally safer than the amphetamines, use with great caution in patients with severe hypertension or severe cardiovascular disease. Do not use during first trimester of pregnancy unless potential benefits outweigh potential risks.

Adverse Reactions: Rarely severe enough to require discontinuation of therapy, unpleasant symptoms with diethylpropion hydrochloride have been reported to occur in relatively low incidence. As is characteristic of sympathomimetic agents, it may occasionally cause CNS effects such as insomnia, nervousness, dizziness, anxiety, and jitteriness. In contrast, CNS depression has been reported. In a few epileptics an increase in convulsive episodes has been reported. Sympathomimetic cardiovascular effects reported include ones such as tachycardia, precordial pain, arrhythmia, palpitation, and increased blood pressure. One published report described T-wave changes in the ECG of a healthy young male after ingestion of diethylpropion hydrochloride; this was an isolated experience, which has not been reported by others. Allergic phenomena reported include such conditions as rash, urticaria, ecchymosis, and erythema. Gastrointestinal effects such as diarrhea, constipation, nausea, vomiting, and abdominal discomfort have been reported. Specific reports on the hematopoietic system include two each of bone marrow depression, agranulocytosis, and leukopenia. A variety of miscellaneous adverse reactions have been reported by physicians. These include complaints such as dry mouth, headache, dyspnea, menstrual upset, hair loss, muscle pain, decreased libido, dysuria, and polyuria.

Convenience of two dosage forms: TEPANIL Ten-tab tablets: One 75 mg. tablet daily, swallowed whole, in midmorning (10 a.m.); TEPANIL: One 25 mg. tablet three times daily, one hour before meals. If desired, an additional tablet may be given in midevening to overcome night hunger. Use in children under 12 years of age is not recommended.

T-006A / 1/70 / U.S. PATENT NO. 3,001,910

THE NATIONAL DRUG COMPANY
DIVISION OF RICHARDSON-MERRELL INC
PHILADELPHIA, PENNSYLVANIA 19144

Painful night leg cramps...

unwelcome bedfellow for any patient– including those with arthritis, diabetes or PVD

One thing patients can sleep without, particularly patients with chronic disease conditions such as arthritis, diabetes or PVD, is painful night leg cramps. Although seldom the presenting complaint, night leg cramps can tie your patients up in painful knots. Now, just one tablet of QUINAMM at bedtime can usually bring an end to shattered sleep and needless suffering. Your patients will sleep restfully—gratefully—with QUINAMM, specific therapy to prevent painful night leg cramps.

Prescribing Information—Composition: Each white, beveled, compressed tablet contains: Quinine sulfate, 260 mg., Aminophylline, 195 mg. **Indications:** For the prevention and treatment of nocturnal and recumbency leg muscle cramps, including those associated with arthritis, diabetes, varicose veins, thrombophlebitis, arteriosclerosis and static foot deformities. **Contraindications:** QUINAMM is contraindicated in pregnancy because of its quinine content. **Precautions/Adverse Reactions:** Aminophylline may produce intestinal cramps in some instances, and quinine may produce symptoms of cinchonism, such as tinnitus, dizziness, and gastrointestinal disturbance. Discontinue use if ringing in the ears, deafness, skin rash, or visual disturbances occur. **Dosage:** One tablet upon retiring. Where necessary, dosage may be increased to one tablet following the evening meal and one tablet upon retiring. **Supplied:** Bottles of 100 and 500 tablets.

THE NATIONAL DRUG COMPANY
DIVISION OF RICHARDSON-MERRELL INC.
PHILADELPHIA, PENNSYLVANIA 19144

Quinamm™
(quinine sulfate 260 mg., aminophylline 195 mg.)

Specific therapy for night leg cramps

in cardiac edema

Dyazide®

Trademark

Each capsule contains 50 mg. of Dyrenium® (brand of triamterene) and 25 mg. of hydrochlorothiazide.

gets the water out

spares the potassium

Before prescribing, see complete prescribing information in SK&F literature or *PDR*.

Indications: Edema associated with congestive heart failure, cirrhosis of the liver, the nephrotic syndrome, late pregnancy; also steroid-induced and idiopathic edema, and edema resistant to other diuretic therapy. 'Dyazide' is also indicated in the treatment of mild to moderate hypertension.

Contraindications: Pre-existing elevated serum potassium. Hypersensitivity to either component. Continued use in progressive renal or hepatic dysfunction or developing hyperkalemia.

Warnings: **Do not use dietary potassium supplements or potassium salts unless hypokalemia develops or dietary potassium intake is markedly impaired.** Enteric-coated potassium salts may cause small bowel stenosis with or without ulceration. Hyperkalemia (>5.4 mEq/L) has been reported in 4% of patients under 60 years, in 12% of patients over 60 years, and in less than 8% of patients overall. Rarely, cases have been associated with cardiac irregularities. Accordingly, **check serum potassium during therapy, particularly in patients with suspected or confirmed renal insufficiency (e.g., certain elderly or diabetics). If hyperkalemia develops, substitute a thiazide alone. If spironolactone is used concomitantly with 'Dyazide', check serum potassium frequently**—they can both cause potassium retention and sometimes hyperkalemia. Two deaths have been reported in patients on such combined therapy (in one, recommended dosage was exceeded; in the other, serum electrolytes were not properly monitored). Observe regularly for possible blood dyscrasias, liver damage or other idiosyncratic reactions. Blood dyscrasias have been reported in patients receiving Dyrenium (triamterene, SK&F). Rarely, leukopenia, thrombocytopenia, agranulocytosis, and aplastic anemia have been reported with the thiazides. Watch for signs of impending coma in acutely ill cirrhotics. Thiazides are reported to cross the placental barrier and appear in breast milk. This may result in fetal or neonatal hyperbilirubinemia, thrombocytopenia, altered carbohydrate metabolism and possibly other adverse reactions that have occurred in the adult. When used during pregnancy or in women who might bear children, weigh potential benefits against possible hazards to fetus.

Precautions: Do periodic serum electrolyte and BUN determinations. Do periodic hematologic studies in cirrhotics with splenomegaly. Antihypertensive effects may be enhanced in postsympathectomy patients. The following may occur: hyperuricemia and gout, reversible nitrogen retention, decreasing alkali reserve with possible metabolic acidosis, hyperglycemia and glycosuria (diabetic insulin requirements may be altered), digitalis intoxication (in hypokalemia). Use cautiously in surgical patients. Concomitant use with antihypertensive agents may result in an additive hypotensive effect.

Adverse Reactions: Muscle cramps, weakness, dizziness, headache, dry mouth; anaphylaxis; rash, urticaria, photosensitivity, purpura, other dermatological conditions; nausea and vomiting (may indicate electrolyte imbalance), diarrhea, constipation, other gastrointestinal disturbances. Rarely, necrotizing vasculitis, paresthesias, icterus, pancreatitis, and xanthopsia have occurred with thiazides alone.

Supplied: Bottles of 100 capsules.

SK&F

Smith Kline & French Laboratories

Each 5 cc. contain erythromycin estolate equivalent to 250 mg. erythromycin base.
When mixed as directed, each 5 cc. will contain erythromycin estolate equivalent to 125 mg. erythromycin base.
When mixed as directed, each cc. will contain erythromycin estolate equivalent to 100 mg. erythromycin base.
Each 5 cc. contain erythromycin estolate equivalent to 125 mg. erythromycin base.
Each tablet contains erythromycin estolate equivalent to 125 mg. erythromycin base.
Each Pulvule® contains erythromycin estolate equivalent to 125 mg. erythromycin base.
Each Pulvule contains erythromycin estolate equivalent to 250 mg. erythromycin base.
ILOSONE LIQUID ERYTHROMYCIN ESTOLATE ORAL SUSPENSION, U.S.P. 125
ILOSONE LIQUID ERYTHROMYCIN ESTOLATE ORAL SUSPENSION, U.S.P. 250
ILOSONE CHEWABLE ERYTHROMYCIN ESTOLATE TABLETS N.F. 125 mg.
ILOSONE ERYTHROMYCIN ESTOLATE CAPSULES, N.F. 125 mg.
ILOSONE ERYTHROMYCIN ESTOLATE CAPSULES, N.F. 250 mg.
SHAKE WELL BEFORE USING
REFRIGERATE
AVOID FREEZING
The many forms of Ilosone®
Erythromycin Estolate
Lilly
Additional information available upon request.
Eli Lilly and Company
Indianapolis, Indiana 46206
900761

Editorials

VOLUME 66 NUMBER 10 OCTOBER 1970

HEALTH CARE CHALLENGE: EDUCATION, DISTRIBUTION, EFFICIENCY

One of the greatest challenges to our state and nation in the immediate years ahead is to provide high-quality health care for all. In view of the rapidly expanding population, demands of the public for greater amounts of medical care, the establishment of many new programs for financing medical services by the federal government, and the remarkable expansion of biomedical research programs, this is a difficult challenge. Fundamentally, the problem appears to have at least three important components. The number of well-prepared physicians must be adequate. The distribution of medical personnel, geographically and by specialty, must be improved to permit optimal care for all citizens. Simply graduating more physicians will not assure that more of them will elect to practice in some of our smaller rural communities or in the deprived sections of our cities. Consideration should be given to the voluntary formation and support of small regional clinics that will be shared by sparsely settled communities or located in low-income areas in our cities. Such clinic groups of physicians should be provided adequate allied health personnel, and support from our medical schools and medical centers should be available.

Another fundamental method for increasing the availability of health care is to increase physicians' capabilities. Computer sciences and other technical advances will be valuable, but the most important step in enabling each physician to serve more patients is to train a large number of men and women in the allied health sciences. Recruitment efforts by the Texas Medical Association, Texas Hospital Association, nursing organizations and other associations are encouraging greater numbers of capable young people to enter these fields. Our junior colleges, senior colleges, and universities have responded to these needs and are providing excellent, practical curricula. Adequate financing must be provided for this essential education of paramedical personnel.

Medical education in Texas has been good, and the quality progressively improves. Three of our excellent schools are well established and have achieved national stature; a fine young school in San Antonio has graduated its first class; two new schools have glowing prospects for the future. With the approval of the administrators, the

SCHOOL	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980
University of Texas:												
Galveston	164	164	175	200	200	200	200	200	200	200	200	200
Dallas	105	105	105	105	150	150	200	200	200	200	200	200
San Antonio	104	104	104	104	104	104	150	150	150	150	150	200
Houston	—	19	32	48	56	64	128	200	200	200	200	200
Total, All UT System Medical Schools	373	392	416	457	510	518	678	750	750	750	750	800
Texas Tech University	—	—	—	10-15	10-15	10-15	200	200	200	200	200	200
Baylor College of Medicine	92	124	145	166	166	166	166	166	166	166	166	166
Total, All Texas Medical Schools	465	516	561	638	691	699	1044	1116	1116	1116	1116	1166

Fig 1. Current and projected freshman enrollment in Texas medical schools.

Coordinating Board of the Texas College and University System has recommended increased enrollment in each medical school. The response as indicated by the present and proposed enrollment of freshmen medical students (Fig 1) will double enrollment within five years, exceeding the reported progress of any other state and placing Texas well above the national average. Baylor College of Medicine is an excellent institution and should receive state financial support. Medical education is expensive, and many states find it extremely difficult to support their present medical schools. Our medical educators, state government officials, and citizens deserve congratulations for their emphasis on, and support of, superior medical education.

Another way to increase the number of physicians is to shorten the time required for education without jeopardizing the quality. Texas medical school administrators have been active and prudent in this regard. A task force has been appointed by chancellor-elect Charles A. LeMaistre of The University of Texas to make recommendations regarding development of programs which would allow the pre-professional school requirement to be completed in two years by exceptional students, in three years on a routine basis, and in four years at the discretion of the student. In the first two instances, the baccalaureate degree could be awarded after two years or one year, respectively, in medical school. Revised curricula in the medical institutions would routinely allow completion in no more than 36 months. This would permit the exceptional student to obtain his MD degree in five years after graduation from high school, and the routine requirement would be six years.

Recognizing the great need for specialists in family practice, our schools are placing greater emphasis on this important division of medicine. The University of Texas Medical Branch has a new division of family medicine, and the major goal of Texas Tech University School of Medicine is the training of young students in this type of practice.

Throughout the state, Texas has splendid medical centers that are not directly associated with medical schools. Our medical school deans and presidents are being encouraged to strengthen rapport with

these sources of clinical medical education and to make optimal use of these facilities for broadening undergraduate and graduate medical experiences. We must review medical education in our state continuously. When practical need for additional medical schools is shown and funds are available to enhance quality, proper consideration should be given.

Our state is extremely fortunate in having excellent schools of medicine that are administered by cooperative men of nationally recognized stature. Medical educational opportunities are expanding rapidly. The time required for training is being shortened while the quality is being retained and even improved. Soon, every needed and well-qualified student desiring admission should have an opportunity to enter the health field and help to provide better medical care for all Texans.

G. V. Brindley, Jr, MD, Temple.

CITIZEN, PULL YOUR WEIGHT

Theodore Roosevelt said, "The first requisite of a good citizen . . . is that he shall be able and willing to pull his weight." Today most Americans are able, but a growing number seem to be unwilling to do so. Sadly, the unwilling include many professional men and women who seem content to sit on the sidelines, criticizing the present and glorifying the past.

Does "pulling your weight" require more than earning your living, paying taxes and obeying the law? Not of the man who must use his total resources to keep his head above water. But what about the highly capable member of society who is blessed with a keen mind, economic opportunities, and time for personal pleasures? If he dutifully pays his taxes and obeys the law, is he pulling his weight? I think not.

We can't dismiss our better life situation by saying, "I worked hard to be what I am." True as this may be, we had the capacity to achieve our positions. That in itself is an advantage not given to all men.

The need for leadership in local, state, and national affairs has never been more acute. Why should positions of responsibility and decision-making be left, too often, to those who are the least capable? Why should physicians and other informed and able citizens abdicate their responsibilities?

We must participate *individually* in political questions of public policy; we must sort through the many opportunities for service and select the areas where we can make the greatest contribution. Whether it is service on the local school board, an advisory council to a government program, or activity in local political conventions, our participation is both desired and needed.

The turmoil of the past few years is making us realize the extent to which the local community is the basic unit of our society. It is where teamwork starts and where leadership is developed. We need local vigilance, integrity and energy. Effective community participation is the highest form of service that most citizens can render in the public interest.

Leaders in our TEXPAC program remind

us that noninvolvement is a particularly unhappy phenomenon in a democracy, because this is the only system of government which offers citizens a standing invitation to participate in public affairs. Despite its strengths, our democracy is particularly vulnerable to failure from within. The average age of the world's great civilizations has been 200 years. It has been said that these nations progressed through this sequence: from bondage to spiritual faith, from spiritual faith to great courage, from courage to liberty, from liberty to abundance, from abundance to selfishness, from selfishness to complacency, from complacency to apathy, from apathy to dependence, and from dependence to bondage again.

The elections on Nov 3 give us a special opportunity to show that we are individually concerned and willing to participate in preserving our democracy. But beyond this date and this single act of citizenship, we have a continuing responsibility to pull our weight. We must share our talents and make community service part of our daily lives. We dare not be complacent lest we sacrifice this great nation.

Joe T. Nelson, MD, Weatherford,
Member, AMPAC Board of Directors.

WHO'S DRIVING THAT WEAPON? HIS FITNESS IS OUR BUSINESS

What are most of us doing about the greatest killer in the United States? Not much. We constantly try to prevent death; we advise stringent immunization programs, endorse public health laws and use drugs to prevent the progress of disease; we are interested in preventing pollution and drug abuse. But few of us even snipe at the greatest killer—the automobile.

When are we going to get to the etiology of this killer? Why are we not actively promoting the use of safety belts when we know this would reduce fatalities by 40%? Did you ever ask why your school district's buses are not equipped with seat belts? The last time you took a taxi, did you ask the driver where the seat belts were?

We physicians are interested in preventing alcoholism and its effects, but how many of us have done even the simple things that might keep one drunken driver from killing one innocent person. Did you know that in 1969 drunk drivers killed 35,000 Americans, while the number of deaths in Vietnam was 9,365? Have you checked lately to see if the law that prohibits driving while intoxicated is being enforced in your community? Have you ever followed up on your patient whose driver's license was suspended? Is he still aiming his car at your children as they cross the street or ride with your wife? Next time you are out socially with the judge who handles these cases, ask him how many DWI cases in his court result in convictions.

We all have read about these problems, but, you say, "What can we do?" We seem to believe in education. How about taking an interest in early school driver education, and getting involved with our sons and daughters and their teachers? Why wait until all they want to do is step on the gas? Get interested early. In Florida, one community has built a miniature town for early driver education. Too, we can cooperate with our newly established medical review board in Texas in examining old, diseased, and physically disabled patients; remember, too, that a physically healthy person may be mentally or emotionally unfit to drive. We can write our congressmen and senators about more stringent laws regarding a routine vehicle inspection program, and support federal programs to safeguard us from the killer (automobile).

As a starter, we might get our county

medical societies active in education and auto safety, and work with our medical schools to indoctrinate the future physicians in the need for preventing death by automobiles. We can begin educating our patients by adding one question to our routine history: "Mrs. Smith, do you use seat belts in your cars?"

We must continue to get our young colleagues interested in this killer, regardless of their specialties. They must assume future reponsibility for early driver education. We must stimulate our judiciary to assist us in our efforts. Some of our auxiliaries already have done a herculean job in this field, but have had little assistance from their husbands, the doctors! We must take the lead in finding the unfit driver; we must discuss every patient's disability in relation to his driving fitness.

We could also make the ultimate commitment in the war against lethal driving: Stuff our egos into our hip pockets, proceed to the nearest driver training school, and ask for a complete checkup of our own driving habits.

Bernard T. Fein, MD, San Antonio,
Member, TMA Committee on Transportation Safety.

Insurance Whys and Wherefores

Q Why do many insurance companies question payment for laboratory tests instead of referring to the diagnosis listed on the insurance report?

A Most health insurance policies reimburse for pertinent diagnostic tests in the treatment of a disease, disorder or injury. If a test, which under normal circumstances would be unnecessary, is needed for proper treatment, a brief note from the attending physician usually will answer all questions. Additional unrelated tests might be done as a follow-up but usually would not be covered.

Q Do insurance companies pay for tests which may not relate to diagnosis but which are done for medical-legal protection?

A Insurers will pay for these tests following illness, injury or treatment. However, if the reason for ordering the tests is not obvious, a brief explanation from the attending physician will save everyone's time.

Q Does any company offer a policy which will cover psychiatric day hospital care?

A This coverage is available under major medical policies but usually is subject to a deductible and coinsurance provision.

Q Some insurance companies have facilities which enable the attending physician to report his past findings and care of a patient by telephone. Why isn't this service offered by more companies?

A Companies which have installed this system report that besides being expensive, the service is used by only a small number of physicians when it is available. For these reasons, several companies have now discontinued it.

M. E. Rougraff, MD, Houston,
Vice President and Medical Director,
Great Southern Life Insurance Company.

GENERAL PRACTITIONER

WANTED

BY

Texas Rehabilitation Hospital of Gonzales Warm Springs Foundation, Gonzales, Texas.

Work with Medical Director in 55 bed hospital now in process of expansion. Hospital chartered in 1937—33 years of service to Texans.

Many fringe benefits, including *new* colonial type 4 bedroom home with all utilities *paid.*

IF INTERESTED,

Write: Lynn Smith, Sr., Box 58, Gonzales, Texas 78629

Or Call Collect 672-2831, Gonzales, Texas

ORTHO COMFORT PRODUCTS

HELP YOU FEEL BETTER EVERY DAY

READING

WATCHING TV

SLEEPING

The only adjustable bed with coil box springs.

Drop foot angle adjustable. Electric High Low optional.

Dual side controls and optional remote control.

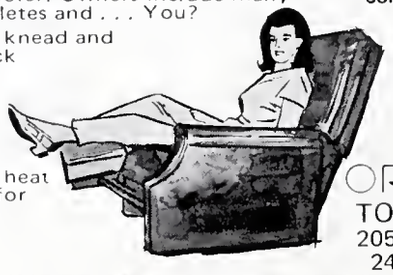
Electrically adjustable beds in any size or style that you prefer. Owners include many of the best known people in America, leading doctors, athletes and . . . You?

Roller massage chairs with built-in rotating massagers that knead and massage your back from the base of spine to the lower neck area. Extra massage unit in the foot rest. Choice of fabric and color.

Unique Car Pal that plugs into your car or home with an optional accessory. Has deep massage, soothing action. Drive refreshed. Avoid accidents.

Also Duomatic electric sleeper sofas, action baths, saunas, heat and massage cushions and other Ortho Comfort Products for home and professional use.

We Honor American Express, Bank Americard and Master Charge Credit Cards.



ORTHO COMFORT STORES

TOWN & COUNTRY SHOPPING RESORT

2051 E. Camelback Rd. • Phoenix, Arizona 85016

24 Hour Nationwide Service At (602) 955-7600

ASK ABOUT BEDS UNDER MEDICARE & VETERANS PLANS

Visit our booth #30 in Women's Bldg., Texas State Fair in Dallas, Oct. 10-25. Mention this ad & save!

The actions of the official Tincture and Extract of Belladonna result chiefly from their Atropine content . . . conclude Goodman and Gilman

THE PHARMACOLOGICAL BASIS OF THERAPEUTICS
3rd Edition, page 522

ANTROCOL®

Antrocol provides the prompt, predictable antisecretory action of the belladonna alkaloid, atropine, fortified with sedation and blended with Bensulfoid, contributing to even absorption.

Each tablet or capsule contains: Atropine sulfate, 0.324 mg.; Phenobarbital, 16 mg. (may be habit forming); Bensulfoid, 65 mg. (see white section PDR). The atropine content of Antrocol is the maximum amount the average patient can take at six hour intervals over long periods with comfort.

SUPPLIED
Tablet in bottles of 100, 500 and 5000
Capsule in bottles of 100, 500 and 1000

Caution: Federal law prohibits dispensing without prescription.

PRESCRIBING INFORMATION

Contraindicated in glaucoma. Use cautiously in prostatic hypertrophy. Side-effects of toxic dose of atropine: flushing, dryness of mouth, cycloplegia, tachycardia and urinary retention.

DOSAGE: One tablet or capsule after each meal to correct emotional stress and normalize gastric secretions. In treating peptic ulcer, doses at regular intervals up to eight (8) tablets or capsules per day to provide the proper gastric titer for healing. After ulcer has healed, one tablet or capsule after each meal to maintain a titer unfavorable to recurrence.

Clinical supply available to physicians.

WILLIAM P. POYTHRESS & CO., INC.
RICHMOND, VIRGINIA 23217
Manufacturers of Ethical Pharmaceuticals

Roche announces

Efudex®

(fluorouracil) cream/solution

for the treatment of solar/actinic keratoses... a topical alternative to conventional therapy

Fluorouracil—the Roche contribution

In 1962, Roche Laboratories introduced Fluorouracil Roche® (5-fluorouracil). Early clinical work with this drug suggested that it possessed a selective cytotoxic activity when applied topically to certain kinds of lesions. Based on this work and years of clinical trials, a standardized form of topical fluorouracil can now be recommended for treatment of multiple solar or actinic keratoses.

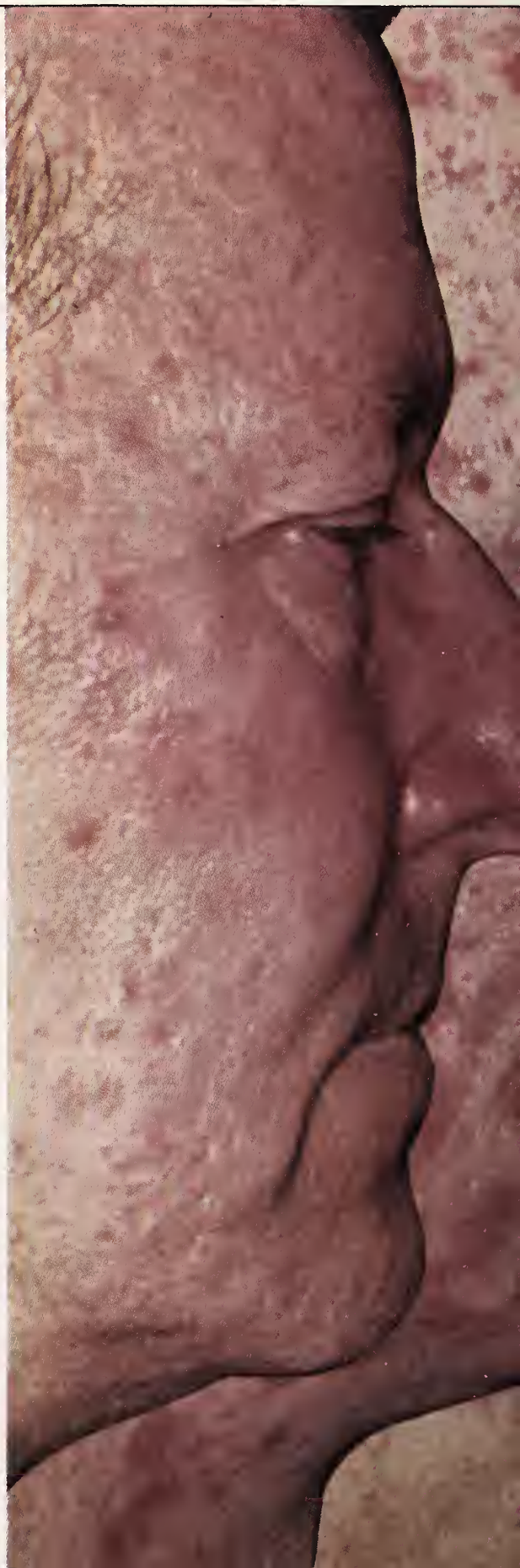
Efudex®(fluorouracil)—a new alternative to conventional therapy

Efudex presents the physician with a topical alternative to surgery in the treatment of solar or actinic keratoses. It is effective, comparatively inexpensive and especially well-suited for treatment of multiple lesions. Important, too, is the highly desirable cosmetic result. Clinical experience demonstrates that treatment with Efudex results in an extremely low incidence of scarring.*

Highly effective on first and later applications

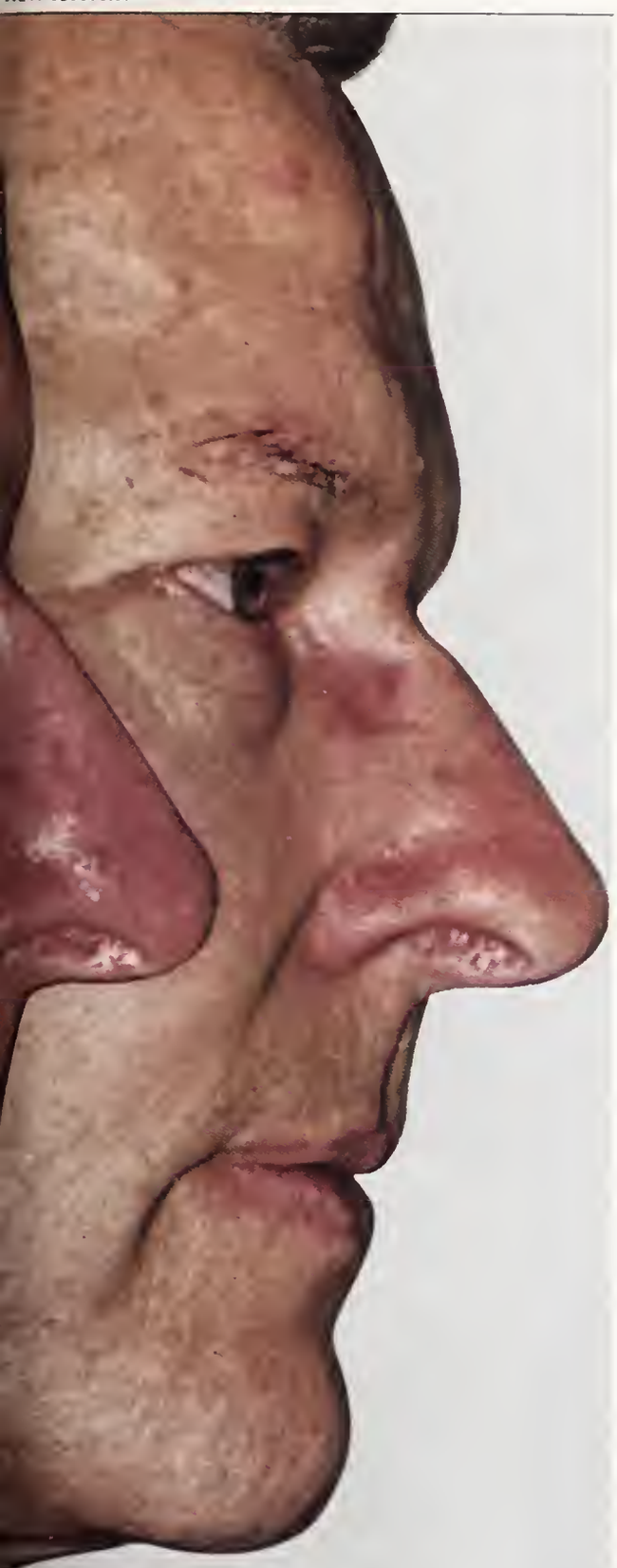
In clinical trials, depending on the dosage form and strength used, complete involution occurred in 77 to 88 per cent of lesions following treatment. The rate of recurrence was low, ranging from 1.7 to 5.6 per cent up to a year after completion of therapy. When lesions did recur or new ones appeared, repeated courses of Efudex therapy proved effective.*

1/22/68—Treatment with 5% 5-FU cream commences. Patient K.L. showing widespread but mild solar keratoses (also known as actinic keratoses).



2/2/68—After 11 days of treatment. Erythema is seen at site of keratoses. In addition, numerous lesions not apparent prior to therapy have become manifest by sharply defined reactions. Intervening skin, also treated, shows no response to therapy.

2/19/69—One year after cessation of therapy. Skin appears clear with no evidence of scarring. Examination reveals lack of recurrence or the formation of new lesions.



Predictable sequence of therapeutic response

Two to four weeks constitutes a typical course of Efudex therapy. The response is usually characteristic and predictable. After three or four days of treatment, erythema begins to appear in the area of the keratoses. This is followed by an intense inflammatory response, scaling and occasionally moderate tenderness or pain. The height of the inflammatory reaction generally occurs two weeks after the start of therapy, and then begins to subside as treatment is stopped. Within two weeks of discontinuing medication, the inflammation is usually gone. A mild erythema may remain for two to three months before gradually receding.

Selective—with a high degree of safety

Despite the temporary unsightliness and discomfort of the inflammatory episode, Efudex is, in general, more readily tolerated than surgery. Clinical work shows the intense inflammatory response to be limited to the area of the lesion. Normal skin is not similarly affected. Another measure of Efudex safety: systemic absorption of topical fluorouracil was insignificant, indicating a low risk of systemic toxicity.*

Two strengths—two convenient dosage forms

Efudex is available as a 2% or 5% solution or as a 5% cream. It is applied twice daily by the patient with a nonmetal applicator or suitable glove.

Before prescribing Efudex, however, there are two important considerations. First, please consult the complete prescribing information for precautions, warnings and adverse reactions. Second, advise the patient that treated lesions should respond with the characteristic but transient inflammation. A positive sign that Efudex is working for them.

*Data on file, Hoffmann-La Roche Inc., Nutley, New Jersey.

2% and 5% Solutions; 5% Cream Applied twice daily—resolves solar or actinic keratoses.

new Efudex® (fluorouracil) cream/solution

For full prescribing information, please see the following page.

Roche introduces

Efudex®

(fluorouracil) cream/solution the new standardized topical for solar/actinic keratoses

Description: Efudex solutions and cream are topical preparations containing the fluorinated pyrimidine 5-fluorouracil, an antineoplastic antimetabolite.

Efudex Solution consists of 2% or 5% fluorouracil on a weight/weight basis, compounded with propylene glycol, tris-(hydroxymethyl) aminomethane, hydroxypropyl cellulose, parabens (methyl and propyl) and disodium edetate.

Efudex Cream contains 5% fluorouracil in a vanishing cream base consisting of white petrolatum, stearyl alcohol, propylene glycol, polysorbate 60 and parabens (methyl and propyl).

Actions: There is evidence that the metabolism of fluorouracil in the anabolic pathway blocks the methylation reaction of deoxyuridylic acid to thymidylic acid. In this fashion fluorouracil interferes with the synthesis of deoxyribonucleic acid (DNA) and to a lesser extent inhibits the formation of ribonucleic acid (RNA). Since DNA and RNA are essential for cell division and growth, the effect of fluorouracil may be to create a thymine deficiency which provokes unbalanced growth and death of the cell. The effects of DNA and RNA deprivation are most marked on those cells which grow more rapidly and which take up fluorouracil at a more rapid pace. The catabolic metabolism of fluorouracil results in degradative products (*e.g.*, CO_2, urea, α-fluoro-β-alanine) which are inactive.

Studies in man with topical application of ^{14}C-labeled Efudex demonstrated insignificant absorption as measured by ^{14}C content of plasma, urine and respiratory CO_2.

Indications: Efudex is recommended for the topical treatment of multiple actinic or solar keratoses.

Contraindications: Efudex is contraindicated in patients with known hypersensitivity to any of its components.

Warnings: If an occlusive dressing is used, there may be an increase in the incidence of inflammatory reactions in the adjacent normal skin.

Prolonged exposure to ultraviolet rays should be avoided while under treatment with Efudex because the intensity of the reaction may be increased.

Usage in Pregnancy: Safety for use in pregnancy has not been established.

Precautions: If Efudex is applied with the fingers, the hands should be washed immediately afterward. Efudex should be applied with care near the eyes, nose and mouth. To rule out the presence of a frank neoplasm, a biopsy should be made of those areas failing to respond to treatment or recurring after treatment.

Adverse Reactions: The most frequently encountered local reactions were pain, pruritus, hyperpigmentation and burning at the site of application. Other local reactions included dermatitis, scarring, soreness and tenderness.

Also reported were insomnia, stomatitis, suppuration, scaling, swelling, irritability, medicinal taste, photosensitivity and lacrimation.

Laboratory abnormalities reported were leukocytosis, thrombocytopenia, toxic granulation and eosinophilia.

Dosage and Administration: Efudex should be applied twice daily with a nonmetal applicator or suitable glove in an amount of the solution or cream sufficient to cover the lesion. When Efudex is applied to a lesion, a response occurs with the following sequence: erythema, usually followed by vesiculation, erosion, ulceration, necrosis and epithelization. The lower frequency and intensity of activity in adjacent normal skin indicate a selective cytotoxic property. Medication should be continued until the inflammatory reaction reaches the erosion, necrosis and ulceration stage, at which time use of the drug should be terminated. The usual duration of therapy is from 2 to 4 weeks. Complete healing of the lesion may not be evident for 1 to 2 months following cessation of Efudex therapy.

How Supplied: Efudex Solution, 10-ml drop dispensers—containing 2% or 5% fluorouracil on a weight/weight basis, compounded with propylene glycol, tris(hydroxymethyl)aminomethane, hydroxypropyl cellulose, parabens (methyl and propyl) and disodium edetate.

Efudex Cream, 25-Gm tubes—containing 5% fluorouracil in a vanishing cream base consisting of white petrolatum, stearyl alcohol, propylene glycol, polysorbate 60 and parabens (methyl and propyl).

Clinical Studies: The effectiveness of the three preparations as determined by complete involution of solar keratoses was: 2% Solution, 77% of 282 lesions; 5% Solution, 88% of 202 lesions; and 5% Cream, 85% of 189 lesions. In those lesions where complete involution followed treatment, the rate of possible recurrences observed clinically at periods up to 12 months or more was: 2% Solution, 4.6% of 218 lesions; 5% Solution, 1.7% of 177 lesions; and 5% Cream, 5.6% of 160 lesions. Because of the toxic potential of fluorouracil, some physicians preferred to use the 2% solution when large areas were to be treated. Approximately 30% of the lesions required treatment for two weeks or less; approximately 78% required four weeks or less for adequate treatment.

ROCHE Roche LABORATORIES
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

Like It or Not, Physicians Lead Health Care Team

To say that—because of the veritable explosion in medical knowledge, medical institutions, and allied personnel—we physicians have lost control is a gross understatement. At the turn of the century the physician, almost alone, supplied what care he could; this often included running and staffing his own hospital, training his own personnel and dispensing his own drugs. World War I brought a tremendous increase in medical knowledge, ushering in a greater need for hospitals with their employees, drug stores with pharmacists, and other supporting facilities and people. Recently, the expansion of medical knowledge and the demand for medical care for all, supported by tremendous government spending, has caused near chaos in the attempt to supply this care.

As a result of this rapid growth, the health care system, including hospitals and their personnel, nurses, pharmacists, and all others in allied and/or supportive areas, will soon surpass manufacturing in the use of our economy's dollars. Each segment, formerly considered as part of the support system for physicians' activities, has a separate organization. Today, the Texas Hospital Association represents scores of separate groups of workers; the Texas nurses have an organization that represents registered nurses, another for licensed vocational nurses, and still another for practical nurses. There is a fine organization of ASCP laboratory technologists and a strong pharmaceutical association. Each association has its own organizational structure, its own code of ethics, its own long- and short-range plans, and its own desires and efforts in legislative affairs. Much of the time we find ourselves directly opposed to the stands of the people with whom we work.

Yet, without physicians, there would be no "health care field." Without physicians there can be no team to deliver care to the many who need it. Only physicians admit patients to hospitals, write orders on charts, supervise the work of nurses and technologists, and write prescriptions. We still "quarterback" the health care team whether we or others on the team like it or not. I cannot agree with Dr. Gerald Dorman, Immediate Past President of the AMA, that we must prove to the other members of the health care team that we deserve to be their leaders. We are the key to the entire industry and we must exert ourselves forcefully, commensurate with that role.

Walter Walthall, M.D.

Walter Walthall, MD, President, Texas Medical Association.

QUIET: AMYLOFENE® WORKING

(chloral hydrate with glycine)

When insomnia is the problem, AMYLOFENE may be the answer. A formulation of Chloral Hydrate and Glycine, it contains *no barbiturates*. This makes it safe and effective for virtually all ages.

As a basic sedative-hypnotic, Chloral Hydrate has been in use *more than a century*. And in AMYLOFENE tablets, Chloral Hydrate is better than ever. Easier and more pleasant to take. No disagreeable odor or taste. Buffered with Glycine.

Fast action is another feature. With onset of 30 to 60 minutes, AMYLOFENE helps patients get to sleep easily. And with duration of 4 to 8 hours, it helps them *stay* asleep . . . a "natural" sleep with refreshed awakening.

For any type of simple insomnia: AMYLOFENE. It works.

First Texas Pharmaceuticals, Inc. Dallas, Texas 75222

the Concern for Care

Amylofene® Tablets (Chloral Hydrate, U.S.P.) Buffered with Glycine.
Each tablet contains:
Chloral Hydrate, U.S.P. .....486 mg.
(Warning: May be habit forming)
Aminoacetic Acid .....243 mg.

AMYLOFENE TABLETS (Chloral Hydrate, U.S.P.) is an effective sedative-hypnotic drug in stable coated tablet form, buffered with aminoacetic acid.

ACTION: Onset of action is from 30 minutes to 1 hour with duration of 4 to 8 hours.

CONTRAINDICATIONS: Chloral Hydrate is contraindicated in patients with hepatic or renal impairment. Larger doses should be avoided in individuals with cardiac disease.

WARNINGS: Concomitant chloral hydrate and coumarin anticoagulant therapy should be administered with caution. Chloral hydrate may cause an increase or decrease in expected anticoagulant action.

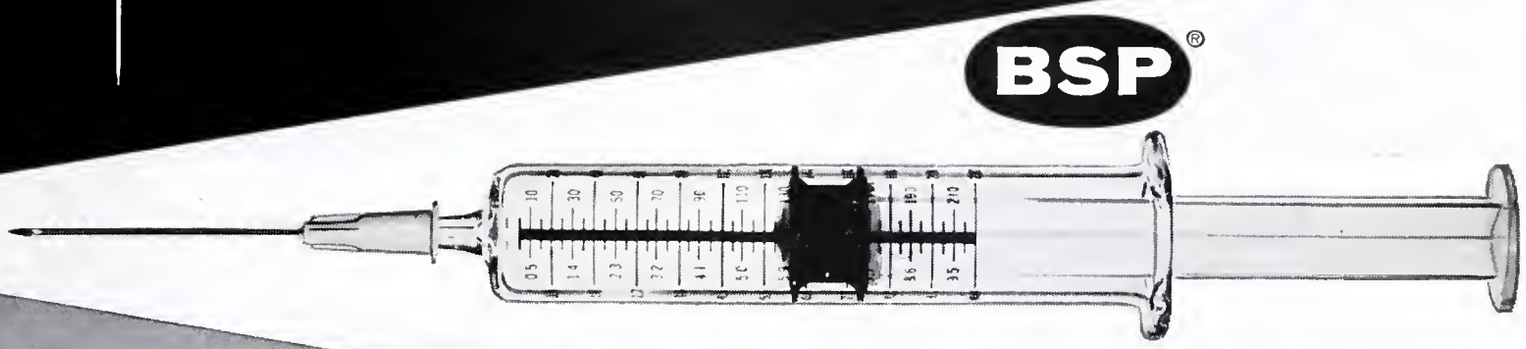
ADVERSE REACTIONS: Chloral hydrate may cause gastic irritation, nausea and vomiting in some patients. Occasionally skin eruptions may occur.

ADMINISTRATION AND DOSAGE: Orally: Adults, as a hypnotic, 1 or 2 tablets taken one-half hour before bedtime. Caution: Federal law prohibits dispensing without a prescription.

BSP® DISPOSABLE UNIT

HW&D BRAND OF SODIUM SULFOBROMOPHTHALEIN INJECTION, USP

(50 mg. per ml.)



BROMSULPHALEIN® IN A STERILE, DISPOSABLE, ECONOMICAL UNIT

The Bromsulphalein test is a convenient, sensitive, reliable test of liver function.

The precalibrated syringe contained in the BSP Disposable Unit makes weight calculations unnecessary, providing proper dosage regardless of patient-weight. Each unit contains complete directions for use, precautions and contraindications.

The all-inclusive BSP Disposable Unit provides economic unit dispensing.

Complete literature available on request.

HYNSON, WESTCOTT & DUNNING, INC.

HW&D **Baltimore, Maryland 21201**

(BSP04)

Suddenly, she stopped...confused.

(Did she mention it the last time you checked her blood pressure?)

A moment of confusion now and then... a few gaps in her memory... a spell of dizziness: The early warnings of cerebrovascular disease are often subtle, easy for the patient to dismiss.

But they are by no means uncommon.

You are most likely to detect them, of course, in the hypertensive, the diabetic, the cardiac patient... surprisingly often during their forties and fifties.

Detecting these warnings, however, may require careful questioning, sometimes of the family as well as the patient. You can't always trust the patient to speak of them spontaneously.

It pays to be suspicious. Early diagnosis of transient ischemia means more viable vascular muscle capable of responding to the direct spasmolytic and dilating action of Cyclospasmol... a better chance to protect and maintain adequate cerebral circulation.

Cyclospasmol has a smooth, gradual onset of action... chances for the desired result increase with continued use... it is notably free of adrenergic, cardiostimulant and other unwanted effects.

Before transient cerebral ischemia gives way to lasting damage

Cyclospasmol® (cyclandelate)

For long-term enhancement of cerebral blood flow

See facing page for Brief Summary

Cyclospasmol (cyclandelate)

ACTIONS: Cyclospasmol (cyclandelate) is an orally effective peripheral spasmolytic and vasodilator that acts directly on the vascular smooth musculature to produce a gradual and progressive relaxation that enhances the peripheral and cerebral blood flow. **INDICATIONS:** For adjunctive therapy in occlusive and vasospastic diseases of the vascular system associated with an impaired circulation, such as: intermittent claudication; arteriosclerosis obliterans; thrombophlebitis (to control associated vasospasm and muscular ischemia); nocturnal leg cramps; local frostbite; Raynaud's phenomenon; as an aid to encourage healing of diabetic and trophic ulcers of the legs; and for selected cases of ischemic cerebral vascular disease. A faster response may be expected in conditions in which vasospasm is predominant in the pathological process. The drug is not intended to substitute for an adequate medical or surgical program in the treatment of peripheral or cerebral vascular disease. It is imperative that the patient continue to follow established therapy, e.g., foot care, discontinuance of smoking, etc., while taking Cyclospasmol. Since cerebrovascular disease is diagnosed most frequently only after destruction of nerve tissue, it cannot be expected that signs and symptoms arising from an interruption of neuronal function can be completely reversed by correcting the exciting cause. Nevertheless, restoration of blood flow towards more normal levels with cyclandelate may often produce marked relief from such signs and symptoms as head noises, ringing in the ears, a feeling of weakness, unsteady gait, mental confusion, temporary fluctuations in hearing acuity, poor memory and slurred speech. More important, the drug may provide prophylaxis against further circulatory embarrassment, particularly if the diminished circulation is associated with spasm of the vascular wall. **CONTRAINDICATIONS:** Cyclospasmol is contraindicated in cases of known hypersensitivity to the drug. **WARNINGS: 1.** Cyclandelate should be used with extreme caution in patients with severe obliterative coronary artery or cerebral vascular disease, since there is a possibility that these diseased areas may be compromised by vasodilatory effects of the drug elsewhere. **2. USE IN PREGNANCY:** The safety of cyclandelate for use during pregnancy or lactation has not been established; therefore, it should not be used in pregnant women or in women of childbearing age unless, in the judgment of the physician, its use is deemed absolutely essential to the welfare of the patient. **3.** Although no prolongation of bleeding time has been demonstrated in humans in therapeutic dosages, it has been demonstrated in animals at very large doses. Therefore, the hazard of a prolonged bleeding time should be carefully considered when administering cyclandelate to a patient with active bleeding or a bleeding tendency. **PRECAUTIONS:** Since Cyclospasmol is a vasodilator, it should be used with caution in patients having glaucoma. Consult direction circular before prescribing. **ADVERSE REACTIONS:** Gastrointestinal distress (pyrosis, pain and eructation) may occur with Cyclospasmol. These symptoms occur infrequently and are usually mild. Relief can often be obtained by taking the medication with meals or by the concomitant use of antacids. Mild flush, headache, feeling of weakness or tachycardia may occur, especially during the first weeks of administration. **SUPPLIED:** 200 mg. blue capsules in bottles of 100 and 500; 100 mg. orange tablets in bottles of 100 and 500.
May we send you reprints, detailed literature or professional samples?

IVES LABORATORIES INC.
685 Third Avenue, New York, N.Y. 10017

painless intramuscular therapy for calcium deficiencies:

Calphosan®

calcium glycerophosphate, calcium lactate

To bring effective calcium therapy to the patient, Calphosan may be administered intramuscularly . . . without pain, inflammatory reactions, induration or sloughing. Injections twice weekly for a series of 5 to 10 injections are recommended.

Average dose per injection: One or two 10 ml. injections of Calphosan each week for the first four or five weeks, and on a when-needed basis thereafter.

Calphosan is a specially processed solution of calcium glycerophosphate and calcium lactate, containing 1% of each, in a physiological solution of sodium chloride. Each 10 ml. contains 50 mg. of calcium glycerophosphate, 50 mg. calcium lactate, with 0.25% phenol as preservative. Available in 10 ml. ampules in boxes of 10s and 100s; 60 ml. multiple-dose vials. Also available as Calphosan with B-12. U. S. Patent No. 2657172.

Contraindication: Hypercalcemia; neoplastic diseases; and fully digitalized patients. Do not use intramuscularly in infants and young children. Before starting therapy, consult complete product literature.

Write for free copy of "Calcium: The Ubiquitous and Essential Element" and for samples.

THE CARLTON CORP
Tenafly, New Jersey 07670

Management of Breast

The treatment of carcinoma of the breast by a team of informed physicians is desirable if not essential. The need for this team approach has increased with the accumulation of knowledge and improved understanding of breast cancer, especially in the past 25 years. Some of the changes and newer ideas in this management are discussed. Particular attention is given to five- and ten-year results of the International Cooperative Study; also, the author presents a small series of his own cases. From these studies and a comparison of results, a current plan of treatment is suggested.

THE MANAGEMENT OF BREAST cancer demands our continuing interest because of the increasing incidence and mortality from this disease. It is the most common form of cancer in the female, and surely the most dreaded. It is now estimated that 6% of women will develop this disease. As many as 67,000 new cases probably will be diagnosed this year, and more than 29,000 deaths can be expected.[1]

Volumes have been written on this subject, and one will find much confusion and even contradictions as to the proper method of treatment of carcinoma of the breast. If he desires, he may find support for almost any method of management—even for no treatment at all.[2] Because of the biological predeterminism or host resistance in human cancer, others have tended to agree although accepting that in some instances radical mastectomy is proper.[3,4] Gradually the concept of management has changed, and much to the patients' advantage. It is now recognized that the management of breast cancer is a team effort, initiated by the referring physician, or when the patient discovers her lesion either by accident or, more desirably, by planned breast self-examination. The team is composed of the surgeon, the radiologist, the pathologist, and in many instances ultimately the internist or chemotherapist. Emphasis on this team approach has appeared in the literature.[5-7]

The treatment of breast cancer was totally unsatisfactory prior to introduction of a suitable operation for its "cure" by Halsted in 1894.[8] Since that time much has been learned of the natural history of the disease. Without treatment, 20% of these patients can be expected to survive five years.[9,10] Some of the factors influencing the outcome of treatment include age, position and size of the primary tumor, cell type and grade, nuclear grade, status of the lymph nodes draining the breast, and host resistance. There are variations in the clinical characteristics of patients within a class, and the same treatment method is not necessarily indicated in all patients.[11] Indeed there are two types of carcinoma of the breast: a slow-growing form (about 80% of cases), and a rapid-growing form (about 20% of cases).[12] In the latter type treatment may not be of much benefit.

A comprehensive review of this subject is not intended in this article since a number are available for study,[13-16] but it does seem important to review some of the "recent" progress in the management of the patient with breast cancer. Actually the major changes have been within the past 20 to 25 years, and this is the interval in which we are especially interested.

Selection of Patients for Surgery: Those familiar with carcinoma of the breast have learned that all patients cannot be treated the same. Useful classifications of breast cancer have been developed with criteria of operability that aid in selecting the proper treatment.[17,18] Emphasis to the proper selection of treatment for these patients was given by Haagensen and Stout when they presented their criteria of operability for the first time.[19] These were an outgrowth of a

Cancer

J. HAROLD CHEEK, MD

careful study of the results of treatment in their hospital; they found that in following these criteria no patient was denied the benefit of cure, yet none was subjected to a useless and possibly harmful procedure. Subsequently, these criteria were altered only as they related to carcinoma developing during pregnancy and lactation (Table 1).[20] Following that time Haagensen modified these only by his triple biopsy studies to prove the status of the nodes at the periphery of the area that could be sensibly resected. As a result of this experience he now proposes to do no further internal mammary node biopsies except in those patients in whom the clinical stage of the disease is in doubt.[21]

1. Extensive edema of skin of breast
2. Satellite skin nodules
3. Inflammatory carcinoma
4. Supraclavicular metastases (clinically)
5. Parasternal metastases (clinically)
6. Edema of the arm
7. Distant metastases
8. Any two or more of the following signs of locally advanced disease:
    a. Ulceration of skin
    b. Limited edema of skin of breast (less than 1/3)
    c. Solid fixation of tumor to chest wall
    d. Axillary nodes measuring 2.5 cm in transverse diameter
    e. Axillary nodes fixed to skin or deeper axillary structures

Table 1. Criteria of operability in carcinoma of the breast.[20]

The need for a useful staging of breast cancer has been recognized and in recent years a number have been developed. To be useful to the clinician these need to be easily understood, precise and simple. An early one was the Manchester classification; since then some have advocated a pathological staging and some a clinical staging. The former surely is important from a prognostic viewpoint, and Butcher's modification of the Tornberg biological classification[22] is an important contribution. The International Classification of breast cancer[23] for clinical staging is excellent, but is quite complex and awkward to use. The Columbia Clinical Classification which evolved from Haagensen's criteria of operability has been the most useful and has been widely adopted. This will be presented subsequently.

Simple Mastectomy Plus Irradiation: New concepts for the management of breast cancer have been advocated only in recent years. Simple mastectomy with postoperative irradiation was one of the first. It was introduced in 1948 by McWhirter, who developed it because conventional treatment had yielded poor results in his area. Following his report of only 15 years ago,[24] this method of treatment rapidly gained many followers despite the caution by Ackerman in the same year.[25] Experience with this modality has indicated to some that indeed it might be as beneficial as the "standard" radical mastectomy.[26-28] Others have taken exception to McWhirter's method of treatment and have offered material for comparison.[29-32] His thesis has made an impact on the choice of treatment of breast cancer, although it has not been firmly established. Simple mastectomy plus irradiation might be indicated in aged patients or when some serious disease is present concurrently. If one chooses this means of treatment, it should be clearly understood that a thorough and complete mastectomy is indicated.[6,33] This is followed by irradiation under the direction of an experienced radiotherapist.

Modified Radical Mastectomy: In 1948, Patey and Dyson introduced the idea of a modified radical operation for breast cancer.[34] In a small number of cases, their results were as good or better than those with radical mastectomy. They believed that the modified operation offered cosmetic advantages (less mutilation) and was less shocking (less blood loss), and that the pectoralis major muscle was more suitable for skin grafting than the bare chest wall (most of their patients required grafting

because they believed that all the skin of the breast should be removed). They believed that their operation was more acceptable to the patient than the treatment then being advocated by McWhirter. This method of attack was subsequently adopted by Handley following investigation of the internal mammary node chain.[35-37] Auchincloss in 1963, after much study, presented his modification of the conventional radical mastectomy and offered data suggesting that this procedure may be useful in control of cancer of the breast.[38-40] Madden described his technique for the modified procedure in 1965 and his material indicates results as good or better than those obtained with the classical operation.[41-42] Much more data will need comparison before the proper place of this operation can be determined. Its use in the older patient,[43] in lobular carcinoma in situ,[44] or as suggested in the less malignant histological types of mammary carcinoma[45] may be indicated. One must remember, however, that this procedure must be done as meticulously as the classical radical operation, and indeed may not be a shorter operation in length of time (Auchincloss).

Extended Radical Mastectomy: The super-radical operation for cancer of the breast, directed at an attack on the internal mammary chain of nodes and in some instances the supraclavicular nodes, has matured in the past 20 years. Wangensteen, Urban, Sugarbaker, and others in this country; Dahl-Iverson in Copenhagen; and Caceres in Lima, Peru, have made the most significant contributions. Wangensteen has indicated that the preliminary reports failed to supply evidence of better results than with the standard radical procedure, but that the effort should be continued.[46] Urban, reporting his results in 1959, believed that he had been able to increase the clinical cure rate by at least 10%.[47] Caceres probably has had more experience with extended radical mastectomy than any other. In his report of 600 cases (the number now has reached more than 800), the results were essentially the same as those obtained with the radical mastectomy.[48] Thus, increasing experience with this operation seemingly has not increased the survival rate to the degree that was expected. It may be indicated in patients with medial or subareolar lesions. Urban's caution should be heeded, however, in that it is a more difficult procedure and should be done only under ideal circumstances.[49] His continuing effort, and that of Caceres, will be observed with interest.

Simple Mastectomy Only: A lesser surgical attack on cancer of the breast, ranging from essentially only a simple mastectomy to even suggesting only local excision of the lesion with or without irradiation, has been suggested.[50-52] The report of Smith and Meyer[53] perhaps influenced this method of management since their data suggested that neither the five-year nor the ten-year survival rate was affected by the type of operation, the duration of the tumor, or the skill of surgeon. However, Crile should be given the credit for much courage and for presenting a more sensible reason for simple mastectomy. Beginning in 1955 he decided to use simple mastectomy as the treatment of choice and, subsequently, in his clinic about one-half of the cases of breast cancer have been treated in this manner. The results have been recorded frequently, and suggest to him that the survival rate is improved over that of radical mastectomy. Similar results have been reported by DenBesten and Ziffren,[54] but these have not gone unchallenged[55] and this treatment method has not been accepted overwhelmingly.

Irradiation: The role of irradiation therapy in the control of carcinoma of the breast is firmly established, but recent advances are important. The early equipment and techniques probably were inadequate, and certainly so when compared to the super-voltage machines and techniques available today. Properly used, modern irradiation therapy does reduce morbidity and it is apparent that even better control may be accomplished; some now advise this treatment alone essentially, and with surprising results.[56]

New York researchers have had the opportunity to treat Haagensen's inoperable cases by irradiation alone. Atkins used orthovoltage primarily, and in 1961 reported that he did not

believe the results achieved by irradiation alone were as good as when irradiation followed simple mastectomy.[57] Subsequently, however, Guttmann treated patients with supervoltage irradiation and improved techniques, and has reported a 52% survival rate at five years and 33% at ten years.[58] When one considers the advanced stage of disease in these patients, these are notable results. The results of treatment of carcinoma by irradiation alone as practiced by Baclesse also has been noted with interest.[59] His results, however, have been surprising in showing that at least in stage 3 cases it appears that orthovoltage is more efficacious than cobalt 60.[60]

Much data is available concerning the use of postoperative irradiation, and the usefulness of good therapy has gained recognition with increased experience.[31,61,62] Generally, it is agreed that its use postoperatively is indicated when more than two or three of the low axillary lymph nodes are found to contain metastatic disease. Others believe, however, that postoperative irradiation with the orthovoltage machines gives no benefit and may even do harm, particularly when used prophylactically.[63,64]

The argument for preoperative irradiation, introduced less than 20 years ago,[65] seems to have gained increasing acceptance. This plan of therapy may have a definite place for patients with locally advanced disease. The enlarging experience of those in Toronto,[66] and particularly in Houston,[67-69] is encouraging and indicates that a significant number of lesions may be reduced from borderline to operable. Fletcher notes that this treatment is used with the more advanced disease, but the survival rate and incidence of local chest wall recurrences are essentially the same as when mastectomy alone is used in the more favorable stages. Handley has expressed conviction to the contrary.[70] A comprehensive review on preoperative irradiation by Cady in 1968 is recommended.[71]

A less frequently mentioned method of control of the internal mammary chain of nodes is the use of radium needles in the stage 3 lesions. In 1953 Goode and Martin reintroduced this method of treatment in a few patients.[72] Recently McNeill and associates furnished a follow-up on this unfavorable group, showing that 43% had been controlled for five years.[73] This modality probably needs further investigation although it may be that supervoltage irradiation can sterilize these nodes equally well and with less morbidity.

Modalities in Breast Cancer Detection: Nothing can replace a careful examination of the breast, but when one considers the management of carcinoma of the breast, the place of the newer means of detection that have been developed must be mentioned. These are not a substitute for careful evaluation or biopsy study when clinically indicated.

Mammography has become established as an aid in the diagnosis of breast cancer in the past ten years. Gershon-Cohen and Egan have been most influential in this field, and with the development of new techniques and equipment the usefulness of the procedure has gained increasing acceptance. A technique for mass screening has not yet evolved, although where used in large groups of women its worth has been proven.[74] The continuing importance of mammography has led to major seminars and the First National Conference on Breast Cancer in 1969, from which so much information has come. Mammography is indicated in the high-risk group, and the remaining breast of the postmastectomy patient, but to rely on it solely is fraught with danger. The discovery of the occult or preclinical cancer of the breast justifies its continued use.

Radiologists have developed similar techniques to study the surgical specimen or entire organ; these have helped the pathologist and the surgeon in locating the primary lesion, verifying once more the value of the team effort. These techniques have proved of real value in selecting the proper area for frozen section or specimen selection.[75-77]

The use of other modalities has been investigated more recently. Xerography or xeroradiography may have a number of advantages, give much better detail, and is advocated by some;[78] but thus far technical difficulties, ex-

posure time and equipment have prohibited its wide acceptance or use. Thermography (studying local heat radiation) has been studied extensively but because of the expense and problems encountered, its usefulness has not been established.[79] Gershon-Cohen and Hermel suggested the use of mammometry to measure heat radiation of breast lesions, but sufficient data is not available to determine the usefulness of these mammometers. The use of angiography has been reported recently with the suggestion that it might be of value.[80] It is doubtful that such studies will be of much help.

Adjuvant Treatment: Adjuvant treatment methods are not to be completely considered but some comment is needed. The place of hormonal alterations in treating carcinoma of the breast has long been established and is of unquestioned value in controlling advanced and recurrent disease. Endocrine ablative procedures are indicated in certain cases in the sequential plan of treatment.

During the past decade chemotherapy has been investigated extensively in a cooperative study, and also by others, in an effort to determine the efficacy of certain drugs in conjunction with surgery for the control or cure of cancer of the breast. Unfortunately the initially promising results did not materialize; however, in the premenopausal patient with four or more positive axillary nodes, it appears that Thio-TEPA is beneficial.[81] Numerous investigative studies in chemotherapy are continuing and indeed are needed. The occasional patient who shows a good palliative response gives promise for the future of these drugs, and those yet undiscovered.

Cooperative International Study: Comparative studies have been recommended repeatedly by many interested in the problem of breast cancer. In 1963 the first report from such a study, "Treatment of Early Mammary Carcinoma,"[82] was presented by Haagensen and a group of authorities. Each reported his experience with the plan of treatment which he had used. It was recognized by this group that for a cooperative comparative study to be meaningful, certain basic requirements had to be met. Complete records with accurate clinical details and follow-up for each stage of the disease were essential. Accurate clinical staging was necessary with complete patient evaluation, including roentgenograms of the chest and bones. There also had to be microscopic proof of the carcinomatous nature of the disease.

It was believed that clinical staging of the disease made possible a valid comparison of the treatment results; and that in the absence of microscopic proof of nodal disease, clinical regional lymph node criteria could be exact enough to provide reliable staging for each patient. The plan was directed toward the crucial question regarding the treatment of early breast carcinoma, and also toward obtaining data on results in all stages.

The clinical classification was the one developed at the Columbia Presbyterian Medical Center (as an outgrowth of the critical clinical signs found in advanced cancer of the breast, or those of the criteria of operability) as shown in Table 1. It was one that was considered clinically applicable, simple, yet precise. It depended upon the presence or absence of the following clinical features of the disease:

1. Edema of the skin of limited extent. This is defined as edema of less than one-third of the skin over the breast.

2. Solid fixation of the carcinoma to the chest wall. This means definite and firm fixation of the carcinoma to the underlying chest wall under all circumstances.

3. Ulceration of the skin means just that, and even a small ulcer of the skin over the carcinoma is termed ulceration. Erosion of the areola or nipple of the Paget's variety is not included.

4. Clinically involved axillary nodes. These are axillary lymph nodes that, in the examiner's opinion, contain metastases. Though it is known that axillary evaluation is difficult, it

is possible to make useful comparisons and these will be valid.

5. Massively involved axillary nodes. This is defined as one or more clinically involved nodes measuring 2.5 cm or more in transverse diameter.

6. Fixation of axillary nodes when palpation suggests that the clinically positive nodes are fixed to the deep structures of the axilla or adherent to the overlying skin.

The Columbia Clinical Classification uses these clinical features of breast cancer to place every case of breast cancer into one of four stages:

Stage A: No skin edema, ulceration, or solid fixation of tumor to the chest wall. Axillary nodes not clinically involved.

Stage B: No skin edema, ulceration, or solid fixation of tumor to chest wall. Clinically involved axillary nodes, but less than 2.5 cm in transverse diameter and not fixed to overlying skin or deeper structures of axilla.

Stage C: Any one of five grave signs of comparatively advanced carcinoma: (a) edema of skin of limited extent (involving less than one-third of the skin over the breast); (b) skin ulceration; (c) solid fixation of tumor to chest wall; (d) massive involvement of axillary lymph nodes (measuring 2.5 cm or more in transverse diameter); or (e) fixation of axillary lymph nodes to overlying skin or deeper structures of axilla.

Stage D: All other patients with more advanced breast cancer, including: (a) a combination of any two or more of the five grave signs listed in stage C; (b) extensive edema of skin (involving more than one-third of the skin over the breast); (c) satellite skin nodules; (d) inflammatory type of carcinoma; (e) supraclavicular metastases (clinically apparent); (f) parasternal metastases (clinically apparent); (g) edema of the arm; and (h) distant metastases.

In this cooperative study no distinction as to size, position, or pathological grade was made. From this study the initial results were presented in 1963 with the five-year survival rates in each of the clinical stages.

Kennedy and Miller, from Detroit, presented

Method	Author	% 5-Year Survival	% 10-Year Survival
Simple mastectomy	Miller	45	29
Simple with irradiation	Kaae & Johansen	64	44
Modified radical	Handley	65	51
Total mastectomy with irradiation	Williams	62	49
Radical mastectomy	Butcher	60	41
Radical mastectomy	Haagensen	72	56
Super-radical mastectomy	Dahl-Iversen	67	49

Table 2. Five- and ten-year results of treatment of breast cancer of all stages in a cooperative study.[82, 83]

Method	Author	5-Year %	10-Year %
Simple mastectomy	Miller	57	37
Simple with irradiation	Kaae & Johansen	66	47
Modified radical	Handley	63	42
Total mastectomy with irradiation	Williams	66	52
Radical mastectomy	Butcher	65	46
Radical mastectomy	Haagensen	77	61
Super-radical mastectomy	Dahl-Iversen	71	51

Table 3. Five- and ten-year results of treatment of breast cancer in stages A and B in a cooperative study.[82, 83]

Table 4. Comparative results of treatment methods in stages A and B.

Method	Author	% 5-Year Survival	% 10-Year Survival
Simple mastectomy	Miller*	57	37
	Crile†	63	46
Simple plus irradiation	McWhirter	58	39
	Kaae & Johansen*	66	47
Modified radical	Handley*	63	42
Modified radical plus irradiation	Williams*	66	52
Radical mastectomy	Butcher*	65	46
	Haagensen*	77	61
Super-radical mastectomy	Dahl-Iversen*	71	51
	Urban†	72	60
Irradiation only	Guttmann‡	52	33
	Peters	75	50
No treatment	Daland	22	5
	Bloom	18	3.6

*From International Cooperative Study.
†Stage A cases only.
‡Advanced disease only.

212	Patients
32	Consultations
50	Less than 5 years
130	Over 5 years
58	Over 10 years

Table 5. Personal series, breast cancer.

Columbia Clinical Classification	No. Patients	Followed 5 Years	Followed Less Than 5 Years
A	124	90	34
B	36	25	11
C	6	4	2
D	14	11	3
Total	180	130	50

Table 6. Clinical staging of personal cases of breast cancer.

Columbia Clinical Classification	No. Patients	No. Survivals	% 5-Year Intervals
A	90	79*	87
B	25	16	64
C	4	1	25
D	11	1	9
Total	130	97	74

*Six died of other causes and were free of disease three to five years.

Table 7. Five-year survival, personal cases.

Stage	Haagensen % 5-Year Survival	Haagensen % 10-Year Survival	Present Study % 5-Year Survival	Present Study % 10-Year Survival
A	84	69	87	79
B	56	37	64	57
C	37	23	25	50
D	18	18	9	0
Gross Survival	72	56	74	67

Table 8. Comparison of personal five- and ten-year results with Haagensen's, all stages of breast cancer.

Table 9. Comparison of personal five- and ten-year results with Haagensen's, stages A and B only.

	% 5-Year Survival	% 10-Year Survival
Haagensen	77	61
Present study	82	76

the results of treatment essentially by simple mastectomy only.

Handley and Thackray from the Middlesex Hospital in London presented their experience with the Patey or modified radical mastectomy.

Butcher presented the experience with the standard radical mastectomy done by many different surgeons at the Barnes Hospital in St. Louis, but with the Columbia method of clinical staging.

Haagensen and Cooley, from the Columbia Presbyterian Medical Center, presented the results with Haagensen's personal cases or those under his personal supervision in which his clinical or biopsy criteria of operability was used in selecting patients for surgery using his technique of radical mastectomy.

Dahl-Iversen and Tobiassen from Copenhagen presented the results of both the smaller group of parasternal dissections and the larger series with radical mastectomy, including supraclavicular and parasternal dissection. The latter is the one that is selected for comparison as being the most meaningful.

Williams and Curwen from St. Bartholomew's Hospital in London reported their experience with total mastectomy with axillary dissection plus postoperative irradiation. This is actually the so-called modified radical mastectomy plus irradiation rather than the classical radical mastectomy with irradiation.

Kaae and Johansen, Copenhagen, reported on a part of their randomized series of cases and gave their results with that group treated by simple mastectomy and postoperative irradiation (McWhirter method).

In December 1969, the significant second report of this cooperative study appeared, giving the ten-year survival rates in these seven different case series or treatment methods being compared.[83] These latter figures surely will have more meaning with regard to what one should be able to accomplish with these modalities of treatment; it is known that five years is too soon for survival rates to have real meaning, whereas the ten-year rate will begin to reach a plateau or level of life expectancy survival curve that can be expected to continue

to parallel that of the normal woman (Haagensen and Cooley). The overall results from this study are presented in Table 2. It was observed that because of the small number of cases of advanced stages of breast carcinoma and the known poor prognosis of these, that the most meaningful comparisons would be of the clinical stages A and B, and fortunately these are the stages in which the choice of treatment is the most controversial. With this view in mind survival data from stages A and B in each of the treatment categories are shown in Table 3.

From this study it seems that a well-planned and performed radical mastectomy of the type described by Haagensen continues to offer the best hope of cure in the selected case of carcinoma of the breast. However, to compare further these results with those of others, data were selected from reports of Crile,[52] McWhirter,[24] Urban,[49] Guttmann,[58] and Peters,[56] and tabulated in Table 4. Also included are the results in the untreated cases. Crile and Urban included only those cases in stage 1 (A), whereas Guttmann's results are from those with advanced disease only. This further comparison does not alter the impression which favors a meticulous radical mastectomy, though one must observe that irradiation alone, or essentially so, demands consideration.

Personal Experience: Early in training and subsequently in private practice the criteria of operability of cancer of the breast, as advocated by Haagensen and Stout and modified later by Haagensen, have been a guide to the treatment of this disease. The triple biopsy was done early in a few instances, but was abandoned after some seven or eight cases as being impractical for private patients. The radical operation done for operable cancer of the breast has been that described by Haagensen[84] with modifications (which are to be reported). These are essentially only those which would make the operation a bit more radical, and have allowed primary closure without grafting in a majority of cases. Lesser operations have been done for reasons only of the physical condition of the patient, or in those with advanced disease to aid the radiotherapist in the management of the local chest wall disease.

Method, Author	Negative Nodes, %	Positive Nodes, %	Gross 5-Year Survival, %
Radical Mastectomy:			
Adair	77	39	54
Hendrick	78	49	
Byrd	81	36	
Harrington	78	36	53
Haagensen	86	51	67
Watson	77	49	52
Simple Mastectomy with Irradiation:			
Watson	55	9	
Hendrick	66	27	
McWhirter	58	30	42
No Treatment:			
Daland			22
Nathanson & Welch			19

Table 10. Results of comparative survey of treatment of breast cancer by radical mastectomy versus simple mastectomy with irradiation (1961).

This review of personal cases was begun with hesitancy because the number of cases to be reported is too small to be of statistical value. However, this study has offered the opportunity for evaluation of this number and to determine if, in our own hands, we are treating these patients in the proper manner and with what results. Included in this series are all cases of carcinoma of the breast that have been seen. None has been omitted and any case lost to follow-up (1) has been counted as dead from the disease; 212 patients have been seen (Table 5), 32 in consultation and treated by others, or referred to the various clinic services in this community. Two of these patients refused treatment. One was three months pregnant when advanced disease was diagnosed, and she died five months later. The other patient died with the disease untreated at the end of 18 months. Of the 180 patients who have been treated, 50 have been followed less than five years; 130 have been followed five years or longer; and 58 have been followed longer than ten years.

A majority of these cases have been in stages A and B (Table 6). Since Haagensen's criteria of operability have been followed, it has not been difficult to stage these patients using the Columbia Clinical Classification. It has been a bit distressing to see the number in stage D, but overall it seems from this data that certainly in this experience patients have been seen at an earlier stage of their disease.

The five-year results of treatment in Table 7 show that in stages A and B a reasonably satisfactory outcome has been obtained, but it is apparent that in the locally or far-advanced cases the results are not going to be good. Indeed a lesser procedure or a different treatment method may be indicated. Stage C cases have been treated by radical mastectomy if the general condition of the patient and evaluation indicated that it was justified. Stage D cases were treated in two instances by ill-advised radical mastectomy; the remainder by simple mastectomy (for large mass or large breast) and irradiation, or irradiation alone. The results are as one would expect. The ten-year results are much better than had been anticipated, though this small number of cases has little significance.

To compare this series with any other is useless because of its small size. The only one that would be suitable for comparison would be one in which one person had done the staging, evaluation, and the operation. Because of my respect for Haagensen, and since his philosophy of management had been followed (as closely as could be followed personally), the temptation to compare was too great to resist. It was satisfying to find that our results are comparable. Table 8 shows this comparison in all stages of the disease; the results in stages A and B are compared in Table 9.

Comments: It is important for one treating breast cancer to review periodically their criteria of operability and the treatment that will give the patient the best chance for cure or control of disease. In the past such an attempt was made,[6] particularly concerning the choice of radical mastectomy or simple mastectomy plus irradiation (Table 10). At that time it seemed evident that radical mastectomy for properly selected patients was indicated. The present study has not altered that impression.

In spite of the continuing controversy concerning the best treatment of this disease, there seems to be evidence that progress is being made in the management of carcinoma of the breast. Particularly have the past 25 years been important, and the number of authorities that should be recognized for their contributions are many. Haagensen's contribution to our understanding of this disease and its proper management has been greater than any other since Halsted, and has had increasing acceptance. His influence since 1943 has been most significant. One may not agree with all of his tenets, but must be aware of his dedicated effort to find the best means of control and cure of this disease. The most unfortunate aspect of this era of our surgical history is that he could not have been the one to conduct, in his institution, a randomized study and evaluation of the treatment methods that are available or are recommended, but which remain so controversial. His place in the history of the management of breast cancer is firmly established, and will not likely be replaced for years to come. Through his influence and that of others, the place of radical mastectomy in the treatment of cancer of the breast seems to remain foremost but not unchallenged.

A Current Plan of Treatment: From our experience and from the experience of others, the current plan of treatment of carcinoma of the breast requires dividing these patients into two groups. Those patients in stages A and B would continue to be treated by radical mastectomy unless some coexisting disease or situation dictated a lesser procedure.

Stage A. A meticulous radical mastectomy (of the type described by Haagensen) would be the treatment of choice. The general physical condition of the patient sometimes might indicate a lesser procedure; if so, this would be followed by good irradiation treatment. Postoperative irradiation to the internal mammary chain of nodes and to the supraclavicular nodes would be advised for those with medial

quadrant or subareolar lesions, and likewise to those with more than two or three low axillary nodes found to contain metastatic disease.

Stage B. Radical mastectomy and postoperative irradiation as in stage A, depending upon the location of the "primary" and the status of the lymph nodes.

Those patients in stage C with locally advanced disease are the ones in which the most critical evaluation will be required. Some have suggested that they should be included with the advanced disease (stage D) cases as being inoperable, but in view of the experience of White and Fletcher this does not seem quite justified. Because of the borderline nature of this stage, the treatment plan decision is difficult.

Stage C. Preoperative irradiation followed by radical mastectomy seems indicated, particularly in patients with larger primaries or in those with medial or subareolar lesions.

Radical mastectomy alone may still be the treatment of choice if the primary tumor is relatively small and is in a lateral quadrant. Postoperative irradiation would likely be advised.

Irradiation followed by the modified radical mastectomy might be indicated in certain instances.

Simple mastectomy followed by irradiation therapy also must be considered.

Stage D. This is the group in which irradiation therapy only is indicated.

Simple mastectomy before the irradiation may be desired or requested in patients with large breasts, or when the primary tumor is large, to reduce the mass size for treatment by the radiotherapist. This usually depends upon the patient's general condition and the lung, liver, and bone studies.

The role of hormonal alteration and chemotherapy also becomes important in the management of this group of patients, much as in those patients with recurrent carcinoma of the breast.

Discussion: *Dr. E. C. White:* Dr. Cheek has presented an informative review of one of the most controversial subjects in surgical oncology; the proper management of patients with cancer of the breast. Despite the small number of cases in this study, I think that the excellent results speak for themselves. I cannot help being a bit envious of the large number of stage A and B cases which Dr. Cheek encounters in his practice; in a cancer hospital there is most often a predominance of patients in the C and D groups.

Some of the more important factors that have led to Dr. Cheek's excellent survival results are: First, there has been an accurate clinical evaluation of the patient's status with regard to operability. Once evaluated, there has been close adherence to the criteria of operability. There has been a team approach to the management of the patient, with the treatment selected tailored to the status of the individual. Finally, the patients in this study obviously have received careful and skilled surgical care.

I am in complete agreement with the proposed plan of treatment for patients with cancer of the breast. It is essentially the same that has been in use at The University of Texas MD Anderson Hospital for the past 20 years. The patient with an operable outer quadrant primary received a radical mastectomy and, if microscopically the nodes are free of tumor, no further treatment is given. The local recurrence rate is 4%, and the ten-year survival rate is 60%. Should the operable lesion be central or medial, or the axillary nodes be involved, the probability that the internal mammary chain and supraclavicular areas may be involved greatly increases; postoperative irradiation is added to the treatment of these patients. The ten-year survival rate in this group is 62% when the nodes are not involved, and 28% if the nodes are involved with metastasis. The recurrence rates are 7 and 14% respectively. Preoperative irradiation is given to patients who have had biopsies elsewhere and who present with greatly disturbed breasts that are difficult to evaluate, and also to patients with lesions of borderline operability. The rate of local recurrence has been quite low in this group and

the ten-year survival of 71% when the axillary nodes are negative, and 40% when they are positive, represents the best survival data of any category of our treatment plan. In the inoperable group with locally advanced disease in which the breast cannot be removed without cutting through tumor, radiotherapy alone is used; the recurrence rate is high at 22% and the ten-year survival rate is low at 10%. Should, however, the status of the local lesion in the breast allow simple mastectomy without gross cut-through of tumor, the patient can be treated by radiotherapy with a recurrence rate of only 14% and a ten-year survival of 22%. With this plan of treatment, patients with lesions in the medial quadrants of the breast have survived just as well as those with lateral quadrant lesions, a situation not usually true in most series reported.

In summary, we think that (1) radical mastectomy is the surgical treatment of choice for the patient with invasive carcinoma of the breast; (2) modifications of the radical mastectomy or extensions of the simple mastectomy should be reserved for that small group of patients whose cancer is not invasive, such as the lobular lesion in situ, or the intraductal lesion without invasion; (3) a planned program of combined surgery and radiotherapy can reduce the rate of local recurrence of breast cancer and hopefully increase survival; and finally (4) the overall plan of treatment of carcinoma of the breast, which is theoretically curable, must be a definite planned program wherein with rare exceptions patients may be definitely categorized.

REFERENCES

1. Seidman H: Cancer of the breast, statistical and epidemiological data. Cancer 24:1355-1378, 1969.

2. Park WW, Lees JC: The absolute curability of cancer of the breast. Surg Gynec Obstet 93:129-152, 1951.

3. MacDonald IG: Biological predeterminism in human cancer. Surg Gynec Obstet 92:433-452, 1951.

4. MacDonald I: The natural history of mammary carcinoma. Amer J Surg 111:435-442, 1966.

5. Mallams JT, Miller JE: Therapy of carcinoma of the breast. Texas Med 53:11-16, 1957.

6. Cheek JH: Treatment of carcinoma of the breast. Dallas Med J 48:132-137, 1962.

7. Scott WG: Interdisciplinary approach to the control of cancer of the breast. Cancer 24:1104-1105, 1969.

8. Halsted WS: The results of operations for the cure of cancer of the breast performed at the Johns Hopkins Hospital from June, 1889, to January 1894. Ann Surg 20:497-555, 1894.

9. Daland EM: Untreated cancer of the breast. Surg Gynec Obstet 44:264-268, 1927.

10. Bloom HJ, Richardson WW, Harries EJ: Natural history of untreated breast cancer (1805-1933). Comparison of untreated and treated cases according to histological grade of malignancy. Brit Med J 5299:213-221, 1962.

11. Cutler SJ, Myers MH: Clinical classification of extent of disease in cancer of the breast. J Nat Cancer Inst 39:193-203, 1967.

12. Slack NH, Blumenson LE, Bross IDJ: Therapeutic implications from a mathematical model characterizing the course of breast cancer. Cancer 24:960-971, 1969.

13. Miller MW, Pendergrass EP: Some observations concerned with carcinoma of the breast. Amer J Roentgen 72: 263-270, 462-468, 942-952, 1954.

14. Delarue NC: The management of primary breast cancer. Surg Gynec Obstet 118:133-152, 1964.

15. Rubin P: Carcinoma of the breast. Stage I—Surgical spectrum. JAMA 199:732-735. Stage II—Radiation range. 200:132-133. Stage III—Inoperable. 200:609. Assorted problems. 201:527, 1967.

16. Haagensen CD: Diseases of the Breast. Philadelphia, WB Saunders Co, 1956.

17. Portmann UV: Classification of mammary carcinomas to indicate preferable therapeutic procedures. Radiology 29:391-402, 1937.

18. Portmann UV: Cancer of the breast: classification of cases, criteria of incurability and treatment. JAMA 144:513-516, 1950. Correction 144:701, 1950.

19. Haagensen CD, Stout AP: Carcinoma of the breast; criteria of operability. Ann Surg 118:1032-1051, 1943.

20. Haagensen CD, Stout AP: Carcinoma of the breast; results of treatment, 1935-1942. Ann Surg 134:151-172, 1951.

21. Haagensen CD, Bhonslay SB, Guttmann RJ, et al: Metastasis of carcinoma of the breast to the periphery of the regional lymph node filter. Ann Surg 169:174-190, 1969.

22. Butcher HR Jr: Effectiveness of radical mastectomy for mammary cancer: an analysis of mortalities by the method of probits. Ann Surg 154:383-396, 1961.

23. Copeland MM: American Joint Committee on Cancer Staging and end results reporting. Objectives and progress. Cancer 18:1637-1640, 1965.

24. McWhirter R: Simple mastectomy and radiotherapy in the treatment of breast cancer. Brit J Radiol 28:128-139, 1955.

25. Ackerman LV: An evaluation of the treatment of cancer of the breast at the University of Edinburgh (Scotland), under the direction of Dr. Robert McWhirter. Cancer 8:883-887, 1955.

26. Byrd BF Jr, Conerly DB Jr: The role of simple mastectomy in treatment of carcinoma of the breast. Ann Surg 141:477-481, 1955.

27. Devitt JE, Beattie WG: The rational treatment of carcinoma of the breast? Ann Surg 160:71-80, 1964.

28. Gold D, Poth EJ: Current operative treatment of carcinoma of the breast and its rationale. Amer J Surg 110:724-731, 1965.

29. Haagensen CD: Diseases of the Breast. Philadelphia, WB Saunders Co, 1956, p 679.

30. Berkson J, Harrington SW, Clagett OT, et al: Mortality and survival in surgically treated cancer of the breast: a statistical summary of some experience of the Mayo Clinic. Proc Mayo Clinic 32:645-670, 1957.

31. Watson TA: Treatment of breast cancer; comparison of results of simple mastectomy and radiotherapy with results of radical mastectomy and radiotherapy. Lancet 1:1191-1194, 1959.

32. McLaughlin CW Jr: The present status of simple mastectomy and radiation therapy in the treatment of carcinoma of the breast. Amer J Surg 114:436-442, 1967.

33. Holleb AI, Farrow JH: St. Agatha and inadequate simple mastectomy. Amer J Roentgen 99:962-964, 1967.

34. Patey DH, Dyson WH: The prognosis of carcinoma of the breast in relation to the type of operation performed. Brit J Cancer 2:7-13, 1948.

35. Handley RS, Thackray AC: The internal mammary lymph chain in carcinoma of the breast; study of 50 cases. Lancet 2:276-278, 1949.

36. Handley RS, Thackray AC: Invasion of internal mammary lymph nodes in carcinoma of the breast. Brit Med J 1:61-63, 1954.

37. Handley RS, Thackray AC: Conservative radical mastectomy (Patey's operation). Ann Surg 157:162-164, 1963.

38. Auchincloss H: Significance of location and number of axillary metastases in carcinoma of the breast. Ann Surg 158:37-46, 1963.

39. Pickren JW, Rubé J, Auchinloss H Jr: Modification of conventional radical mastectomy; a detailed study of lymph node involvement and follow-up information to show its practicality. Cancer 18:942-949, 1965.

40. Auchincloss H: Personal communication.

41. Madden JL: Modified radical mastectomy. Surg Gynec Obstet 121:1221-1230, 1965.

42. Madden JL: Personal communication.

43. Berg JW, Robbins GF: Modified mastectomy for older, poor risk patients. Surg Gynec Obstet 113:631-634, 1961.

44. Hutter, RVP, Foote FW Jr: Lobular carcinoma in situ; long term follow-up. Cancer 24:1081-1085, 1969.

45. Kouchoukos NT, Ackerman LV, Butcher HR Jr: Prediction of axillary nodal metastases from the morphology of primary mammary carcinomas. Guide to operative therapy. Cancer 20:948-960, 1967.

46. Wangensteen OH, Lewis FJ, Arhelger SW: The extended or super-radical mastectomy for carcinoma of the breast. Surg Clin N Amer 36:1051-1063, 1956.

47. Urban JA: Clinical experience and results of excision of the internal mammary lymph node chain in primary operable breast cancer. Cancer 12:14-22, 1959.

48. Caceres E: An evaluation of radical mastectomy and extended radical mastectomy for cancer of the breast. Surg Gynec Obstet 125:337-341, 1967.

49. Urban JA: Current cancer concepts. What is the rationale for an extended radical procedure in early cases? JAMA 199:742-743, 1967.

50. Crile G Jr: Simplified treatment of cancer of the breast: early results of a clinical study. Ann Surg 153:745-761, 1961.

51. Crile G Jr: Treatment of breast cancer by local excision. Amer J Surg 109:400-403, 1965.

52. Crile G Jr: Results of simple mastectomy without irradiation in the treatment of operative stage I cancer of the breast. Ann Surg 168:330-336, 1968.

53. Smith SC, Meyer AC: Cancer of the breast in Rockford, Illinois. Amer J Surg 98:653-656, 1959.

54. DenBesten L, Ziffren SE: Simple and radical mastectomy; a comparison of survival. Arch Surg 90:755-759, 1965.

55. Prohaska JV: Simple mastectomy and principles of cancer surgery. Arch Surg 90:665-666, 1965.

56. Peters MV: Carcinoma of the breast. Stage II—radiation range. Wedge resection and irradiation. An effective treatment in early breast cancer. JAMA 200:134-135, 1967.

57. Atkins HL, Horrigan WD: Treatment of locally advanced carcinoma of the breast with roentgen therapy and simple mastectomy. Amer J Roentgen 85:860-864, 1961.

58. Guttmann RJ: Role of supervoltage irradiation of regional lymph node bearing areas in breast cancer. Amer J Roentgen 96:560-564, 1966.

59. Baclesse F: Five-year results in 431 breast cancers treated solely by roentgen rays. Ann Surg 161:103-104, 1965.

60. Baclesse F: Current cancer concepts. Conventional irradiation vs cobalt 60 therapy. JAMA 200:613, 1967.

61. Watson TA: Carcinoma of the breast. Stage II—radiation range. Can survival be increased by postoperative irradiation following radical mastectomy? JAMA 200:136-137, 1967.

62. Edland RW, Maldonado LG, Johnson RO, et al: Postoperative irradiation in breast cancer. Radiology 93:905-913, 1969.

63. Butcher HR Jr, Seaman WB, Eckert C, et al: An assessment of radical mastectomy and postoperative irradiation therapy in the treatment of mammary cancer. Cancer 17:480-485, 1964.

64. Robbins GF, Lucas JC Jr, Fracchia AA, et al: An evaluation of postoperative prophylactic radiation therapy in breast cancer. Surg Gynec Obstet 122:979-982, 1966.

65. Ash CL, Peters V, Delarue NC: The argument for preoperative radiation in the treatment of breast cancer. Surg Gynec Obstet 96:509-521, 1953.

66. Delarue NC, Ash CL, Peters V, et al: Preoperative irradiation in management of locally advanced breast cancer. Arch Surg 91:136-154, 1965.

67. Fletcher GH, White EC: Possibilities of supervoltage roentgenotherapy in the management of cancer of the breast. South Med J 52:805-812, 1959.

68. White EC, Fletcher GH, Clark RL: Surgical experience with preoperative irradiation for carcinoma of the breast. Ann Surg 155:948-956, 1962.

69. Fletcher GH: Carcinoma of the breast. Stage II—radiation range. The advantages of preoperative irradiation. JAMA 200:140-141, 1967.

70. Handley RS: Indications and contraindications for mastectomy. JAMA 200:610-612, 1967.

71. Cady B: Preoperative radiation. Surg Gynec Obstet 125:851-865, 1968.

72. Goode JV, Martin JA: Surgical experience with mammary cancer; growth characteristics observed during treatment of 258 private patients with breast cancer. Ann Surg 137:856-863, 1953.

73. McNeill JP, Goode JV, Martin JA: The implantation of low intensity radium needles in the supraclavicular and intercostal spaces, an adjunct in the treatment of carcinoma of the breast. Amer J Surg 110:717-719, 1965.

74. Strax P, Venet L, Shapiro S: Mass screening in mammary cancer. Cancer 23:875-878, 1969.

75. Goldsmith HS: Clinical advances in the treatment of cancer. Amer J Surg 118:368-376, 1969.

76. Egan RL, Ellis JT, Powell RW: Team approach to the study of diseases of the breast. Cancer 23:847-854, 1969.

77. Sears AD: Personal communication.

78. Wolfe JN: Xerography of the breast. Cancer 23:791-796, 1969.

79. Gershon-Cohen J, Hermel MB: Modalities in breast cancer detection: xeroradiography, mammography, thermography, and mammometry. Cancer 24:1226-1230, 1969.

80. Feldman F: Angiography of cancer of the breast. Cancer 23:803-808, 1969.

81. Fisher B, Ravdin RG, Ausman RK, et al: Surgical adjuvant chemotherapy in cancer of the breast: results of a decade of cooperative investigation. Ann Surg 168:337-356, 1968.

82. Haagensen CD, Cooley E, Kennedy CS, et al: Treatment of early mammary carcinoma: a cooperative international study. Ann Surg 157:157-179, 1963.

83. Haagensen CD, Miller E, Handley RS, et al: Treatment of early mammary carcinoma: a cooperative international study. Ann Surg 170:875-878, 1969.

84. Haagensen CD: Symposium on cancer of the breast; a technique for radical mastectomy. Surgery 19:100-131, 1946.

Dr. Cheek, 3707 Gaston Avenue, Suite 600, Dallas, Tex 75246.

JEROME KOSOY, MD

Benign tumors of the

Ten cases of benign tumors of the external auditory canal are discussed in terms of clinical and pathological findings. The tumors showed considerable variation depending on size, location, and pathology. Each tumor presented its own problems in management. In most cases, local excision provided satisfactory results; inflammatory tumors also require treatment of the basic inflammatory disease. Generally, the prognosis is favorable.

BENIGN TUMORS OF THE EXTERNAL auditory canal are rather infrequent as compared to the overall incidence of malignancies in this area. We have had four cases in the past two years, and we found only six others in the medical records in the University of Texas Medical Branch Library in Galveston. The highlights of these cases are reviewed in hopes of developing some general concepts of the clinicopathological course of benign tumors of the outer ear.

Materials and Methods: The charts were reviewed for age, sex, symptoms, treatment, final diagnosis, and follow-up where possible; some representative histologic slides also were available.

Case Reports: *Case 1:* A 12-year-old Latin American boy had bloody otorrhea, left ear, for one month. A violaceous polypoid mass filled his external auditory canal. His ear drum was normal. At surgery, we saw that the mass arose from the anterior aspect of the tympanic bone. An endaural incision allowed easy access for excision with an adequate margin of normal tissue. Pathologic study of a tissue section (Fig 1) showed hemangioendothelioma. There were large numbers of endothelial cells as well as multiple capillary formations; the giant cells were an unusual finding. The patient was free of disease 18 months postoperatively.

Case 2: A 41-year-old Negro woman had a heavily pigmented mass nearly occluding her external ear for about one year. The histopathology of the excised tumor was consistent with compound nevus (Fig 2), with nevus cells in the dermis and the epidermal-dermal junction. The patient had an uneventful recovery.

Case 3: A 54-year-old Negro woman had a painful mass filling her left external ear canal for many years. The pathologist reported the tumor to be a ceruminoma. Several years later the tumor recurred, and again the histopathologic diagnosis was ceruminoma. Two years later, a third recurrence developed. It was necessary to do a mastoidectomy at this time for adequate exposure and removal. The pathologist interpreted this third specimen as an adenoid cystic carcinoma, and thought that the earlier lesions were a variant of the same. A section of the third tumor (Fig 3) showed the typical features of this neoplasm: nests of epithelial cells with scattered spaces filled with a pink precipitate. The tumor recurred again and eventually led to the death of the patient.

Case 4: A 15-year-old white girl complained of excessive cerumen for several years. A bony tumor occluded about one-half of her ear canal. Cerumen and debris were medial to the mass. An endaural incision allowed easy access for removal. The histopathology (Fig 4) showed fragments of bony tissue from the body of the tumor.

Case 5: A 16-year-old white girl described a two-year history of unilateral purulent otorrhea and a mass in her outer ear canal. Granulations and cholesteatoma debris filled the medial one-half of her external auditory canal. A biopsy section (Fig 5) showed an inflammatory infiltrate under the squamous epithelium of the bony canal wall and a plug of the desquamated debris. The patient does well with local cleansing of the debris two to three times a year in the clinic.

Case 6: A 62-year-old white woman had a 30-year history of unilateral otorrhea; recently, a mass filling her ear canal developed. The pathologic diagnosis of the excised mass was inflammatory polyp. A section of her tumor (Fig 6) contained acute and chronic inflammatory cells and proliferating capillaries.

LINDELL B. ENTZMINGER, JR, MD

external auditory canal

Case 7: A 16-month-old Latin American boy had a polypoid mass occluding his external ear. He had active tuberculosis. The excised specimen demonstrated an acute inflammatory infiltrate (Fig 7), but cultures of the mass were positive for acid-fast bacilli. The diagnosis was tuberculous polyp.

Case 8: A 74-year-old white man was referred for evaluation of an infected sebaceous cyst of his external auditory meatus. During the next week the infection subsided with conservative treatment, but the mass persisted and thus required excision. No pathologic specimen was available.

Cases 9 and 10: These two cases were similar. In both, a warty mass could be seen to arise from the outer aspect of the external auditory canal. One patient declined surgery. The pathologic diagnosis in the second case was papilloma. No pathologic specimens were available.

Discussion: A search of the pertinent literature disclosed many isolated cases of various tumors of the external auditory canal. There did seem to be, however, a conspicuous absence of general reviews of benign neoplasms in this area. Other benign tumors reported included teratoma,[1,2] xanthoma,[3] mixed tumors,[4] von Recklinghausen's disease,[5] fibroma,[6] and keratosis.[7] There are several well-documented reports on ceruminoma,[8-10] osteoma,[11,12] and external auditory canal cholesteatoma.[13]

The most frequent benign tumor of the outer ear is osteoma.[12] In its general sense, "osteoma" refers to any benign bony tumor. In the ear, however, it signifies a specific bony neoplasm arising from the lateral aspect of one of the tympanic sutures. Thus, osteomas usually are found lateral to the isthmus. The other frequent bony tumor in the ear canal is the exostosis. These bony tumors, in contrast to osteomas, are sessile and arise at the superior aspect of the tympanic sutures; thus, the exostoses lie medial to the isthmus and tend to be multiple and bilateral.[11,12]

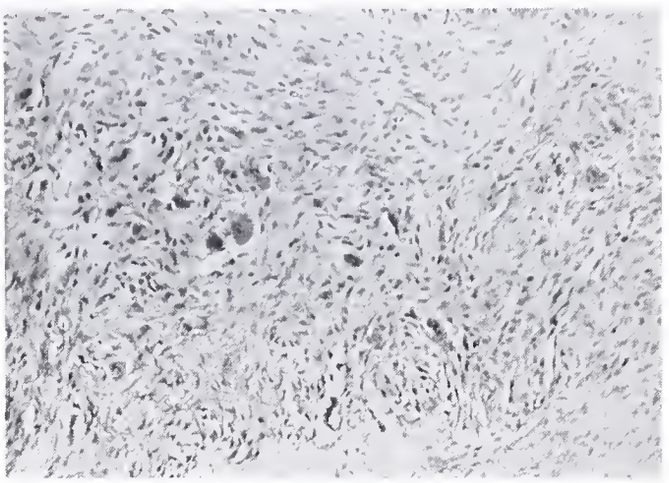


Fig 1. Case 1. Hemangioendothelioma with large numbers of endothelial cells, giant cells, and multiple capillary formation.

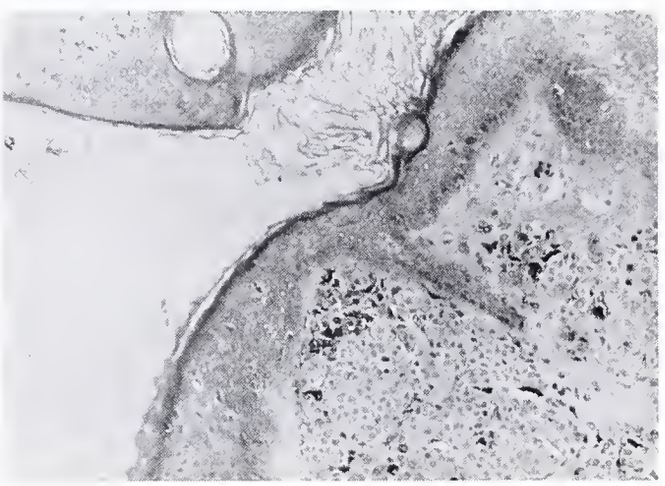


Fig 2. Case 2. Compound nevus with nevus cells in the dermis and the epidermal-dermal junction.

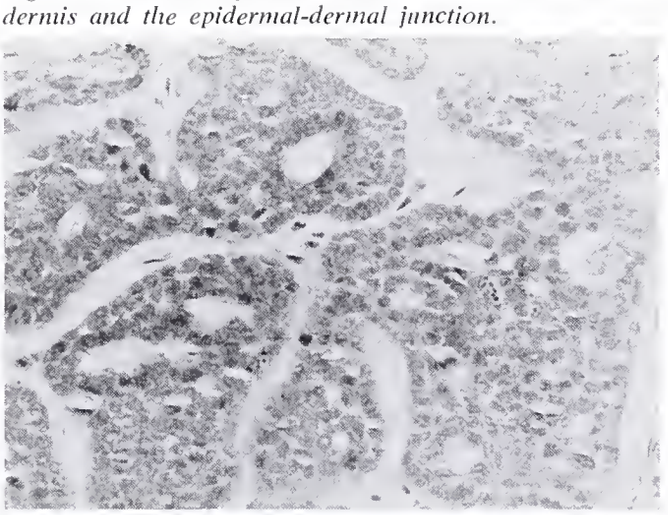


Fig 3. Case 3. Adenoid cystic carcinoma was mistakenly diagnosed earlier as a ceruminoma. The nests of epithelial cells and cystic spaces are characteristic of adenoid cystic carcinoma.

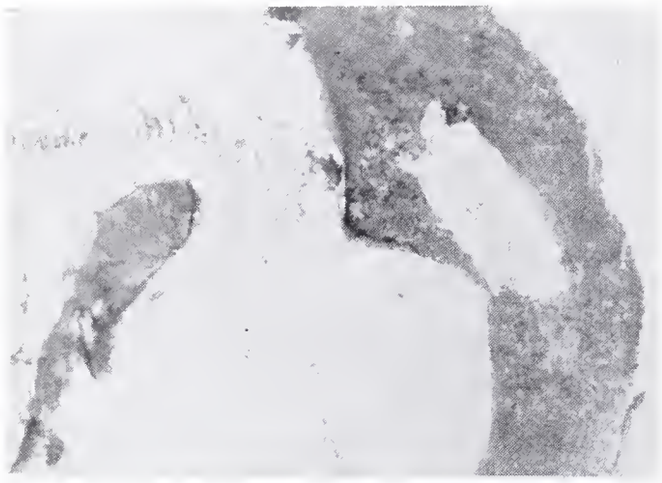


Fig 4. Case 4. Fragments of bone from osteoma.

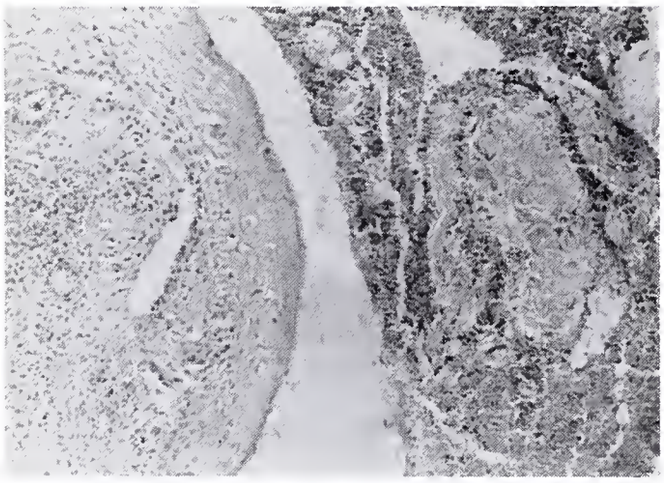


Fig 5. Case 5. Biopsy specimen from ear with external canal cholesteatoma shows an inflammatory infiltrate under the squamous epithelium of the bony canal wall and a plug of the desquamated debris.

Fig 6. Case 6. Inflammatory polyp with acute and chronic inflammatory cells and proliferating capillaries.

Fortunately, osteomas usually are asymptomatic. In some cases they obstruct the normal egress of the cerumen and epithelial debris. Case 5 is typical of the lateral-lying osteoma that eventually occludes the canal and produces symptoms. Only when this happens is surgery necessary. One theory of the etiology is frequent exposure to cold water.[14] The frequent occurrence of these lesions in North European swimmers who presumably swim in colder water seems to support this hypothesis. Osteoma has been produced experimentally in guinea pigs by douching the ears with cold water.[15]

Cholesteatoma of the external canal refers to the abnormal accumulation of desquamated epithelium in the inner one-third to one-half of the canal. As the disease progresses, there is a slow erosion of bone. In some cases the fibrous annulus lies unsupported due to the erosion of the bony annulus. The etiology probably is a disturbance of the normal epithelial migratory pathways as a result of fibrosis following earlier infections. In case 5 the course followed this general pattern. The only treatment necessary in most cases is frequent cleansing.[13]

Hemangiomas are rather unusual in the external ear. The histological classification includes the capillary, cavernous, and hemangioendotheliomatous types. The last type, in the opinion of some authorities, may be premalignant.[16] Treatment thus must include excision with a wide margin of normal tissue. The patient in case 1 had such a lesion and did well following this treatment.

Ceruminoma is the term applied to benign neoplasms arising from the aprocrine glands of the outer one-third of the ear canal. Usually the only symptom is a polypoid mass. Pathologically there are glandular structures with an inner row of columnar cells and an outer row of myoepithelial cells. No histologic capsule is present, which possibly explains the unusually high incidence of recurrences.[10,16] Treatment necessarily must be on the radical side. Case 3 illustrates how a low-grade malignancy may

be confused with this tumor. The prognosis of ceruminomas is generally favorable.[8-10]

Nevi occasionally arise within the outer ear canal. Grossly they are raised, pigmented, and may contain hairs. There are three types: the junctional, intradermal, and compound. The junctional type in adults may be premalignant.[16] Case 2 is an example of the compound type. Local excision is generally satisfactory.

Sebaceous cysts may arise from the sebaceous glands found in the outer one-third of the external auditory canal. When infection occurs the pus may destroy the sac or cyst wall.[16] In such cases, the cyst may not require any further treatment. The cyst in case 8, however, persisted and required excision.

Inflammatory tumors may present as benign neoplasms. Cases 5, 6, and 7 are examples of such inflammatory tumors. The treatment in each case depends on the basic inflammatory disease. The case of the tuberculous polyp is a good example of a systemic disease presenting with a mass in the ear. Treatment must be directed at the local and systemic problem before resolution can be expected.

In conclusion, we see that benign neoplasms of the external auditory canal vary considerably in their symptoms, pathology, and treatment. True neoplasms require excision with an adequate margin of normal tissue. Inflammatory neoplasms, in addition, require treatment of the primary infectious disease. We did not find it necessary in any case to do a graft to cover the defect left by the removal of the tumor. Maintaining canal patency with antibiotic-impregnated packing until epithelialization was complete proved satisfactory in each instance. Case 3, the adenoid cystic carcinoma, demonstrates the necessity for pathologic examination of the excised mass.

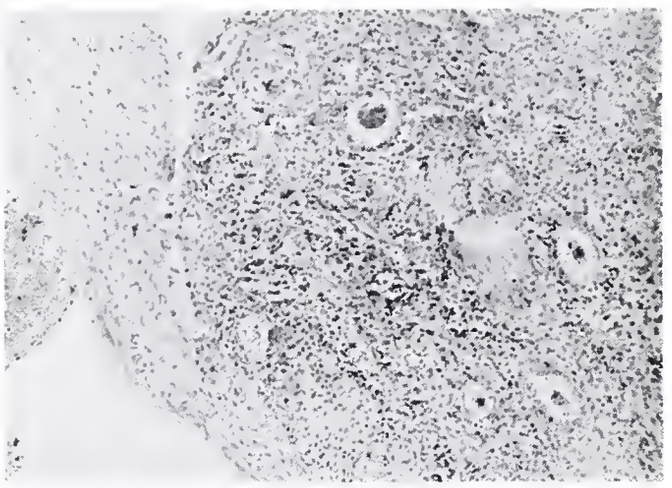


Fig 7. Case 7. Tuberculous polyp showed an acute inflammatory infiltrate, but cultures of the mass were positive for acid-fast bacilli.

REFERENCES

1. Becco R: Pseudo exostosis del conducto auditivo. Rev de Especialid 4:580-588, 1929.

2. Marshall GG: Dermoid teeth in the external auditory canal, with comments on teratomas and dermoids in general. New Eng J Med 214:202-204, 1936.

3. Rosenberger HC: Solitary xanthoma of the external auditory canal. Arch Otolaryng 26:395-399, 1937.

4. Smith HW, Duarte I: Mixed tumors of the external auditory canal. Arch Otolaryng 75:108-113, 1962.

5. Wieder HS: Von Recklinghausen's disease, with a report of case involving the external auditory canal. Laryngoscope 42:364-370, 1932.

6. Bryant WS: Report of a case of fibroma of the external auditory canal, with serious reflex symptoms. Tr Am Otol Soc, New Bedford, 8:305-307, 1903.

7. Deutsch HJ: Tumor of the ear canal; seborrheic keratosis. Arch Otolaryng 91:80-81, 1970.

8. Naessen R: Sweat gland adenoma of the external auditory canal—ceruminoma. J Laryng 79:637-643, 1965.

9. Batsakis JG, Hardy GC, Hishiyama RH: Ceruminous gland tumors. Arch Otolaryng 88:66-69, 1967.

10. Cankar V, Crowley H: Tumors of ceruminous glands: a clinicopathological study of 7 cases. Cancer 17:67-75, 1964.

11. Sheehy, JL: Osteoma of the external auditory canal. Laryngoscope 68:1667-1673, 1958.

12. Mitchell HE: Tumors of the external auditory canal with report of 11 cases. Arch Otolaryng 32:831-844, 1940.

13. Bunting AP: Ear canal cholesteatoma and bone absorption. Trans Amer Acad Ophthal Otolaryng 72:161-172, 1968.

14. Ash JE, Raum M: An Atlas of Otolaryngic Pathology. AAOO, AFIP, Amer Reg Path 1956, p 469.

15. Fowler EP Jr, Osmun PM: New bone growth due to cold water in ears. Arch Otolaryng 36:455-466, 1942.

16. Robbins SL: Pathology, ed 3. Philadelphia, W B Saunders Co, 1967, pp 610-614, 1293.

Dr. Kosoy, Department of Otolaryngology, The University of Texas Medical Branch, Galveston, Tex 77550.

Dr. Entzminger, 2800 Amherst, Dallas, Tex 75225.

EXPERIMENTAL OBSERVATIONS IN TRACHEAL TRANSPLANTATION

BYRON J. BAILEY, MD

JEROME KOSOY, MD

SURGICAL REPLACEMENT of extensive soft tissue defects and stenotic segments of the cervical trachea is an uncommon clinical problem. However, the incidence of severe tracheal injuries has increased recently, and has been related to the increase of high-velocity vehicular accidents and the widespread use of long-term tracheal intubation. There has been a concomitant increase in efforts to solve this problem.

This article reviews our preliminary experimental observations in tracheal transplantation in 46 dogs, and brings up to date a previous report on this work.[1]

Method: During the past two years, 46 mongrel dogs, each weighing between 15 and 37 kg, were used in experimental tracheal transplant procedures.

The general features of these procedures were: (1) random selection of animals (no siblings); (2) intravenous sodium Pentothal anesthesia; (3) sterile operative technique; (4) resection and transplantation of 10 tracheal rings (6 dogs) to 12 tracheal rings (40 dogs); (5) tracheotomy avoided; (6) intratracheal Teflon stent extending 1.0 to 1.5 cm beyond each anastomotic line; (7) no tissue typing; (8) no immunosuppressive drugs; (9) minimal postoperative bronchoscopy; and (10) postoperative antibiotic therapy with penicillin or ampicillin for seven to ten days.

The procedures have been grouped into two categories. In series 1, a defect of 10 to 12 tracheal rings was bridged by an allograft (homograft) of equal length.

In series 2, a tracheal segment 12 rings in length was excised and the proximal and distal tracheal ends were mobilized for a distance of 2 cm from each end. These defects were then bridged with a tracheal allograft only 6 rings in length.

Results: Table 1 shows that the results in se-

ries 1 were much more favorable than those in series 2. Even though the anastomotic suture lines in the series 2 animals seemed to be under very little more tension than those in series 1, this appears to be the basis for the poorer outcome in series 2.

The three dogs who survived longer than 12 months underwent stent removal through a tracheal incision made two rings away from the allograft segment. One dog died as a complication of the anesthetic. The other two dogs died one and two weeks later as a result of airway obstruction at the level of the allograft segment.

Histologic examination in long-term survivors reveals an abundant plasma cell infiltration (Fig 1) into the allograft segment with erosion of the tracheal cartilage (Fig 2) and a fibrotic response. A more detailed account of the histologic changes in the cartilage and the epithelial lining of the trachea is being prepared.

Discussion: The first successful tracheal reconstruction was accomplished in 1881 by Gluck and Zeller[2] when they performed segmental resection and reanastomosis in dogs. In 1884, Kuester employed the same technique successfully in a human patient.[3]

The next significant advance came in 1945 when Belsey succeeded in bridging a long, circumferential tracheal defect with a prosthesis composed of a steel spring covered with fascia lata.[4]

There have been many subsequent reports concerning clinical and experimental efforts to perfect a reliable, well-tolerated tracheal prosthesis. From a review of this work, one can formulate a list of features which would characterize the "ideal prosthesis."

Ideally, it would have to be resistant to compression, have mechanical and chemical stability, be capable of incorporation into host's tissues, and produce minimal granulation tissue

There is an increasing incidence of extensive tracheal injuries related to vehicular accidents and tracheal intubation. Described is a method of tracheal reconstruction using tracheal allografts; the procedure was performed experimentally in 46 dogs. A Teflon inner stent was left in situ. Histologic studies suggest a slow rejection process with replacement by a fibrocollagenous tube. Three dogs survived more than 12 months, offering a note of optimism that tracheal transplants may meet the criteria of an ideal prosthesis.

SURVIVAL (MONTHS)	NUMBER OF ANIMALS DIED OR KILLED (34) Series 1*	Series 2†	LIVING (12) Series 1	Series 2
0-1	3	7	2	
1-3	2	4	4	
3-6	8	3	3	
6-9	2	1	2	1
9-12	1			
12+	3			

*Series 1, 10- to 12-ring defect bridged by homograft of equal length.
†Series 2, 12-ring defect bridged by 6-ring homograft.

Table 1. Survival of tracheal homografts.

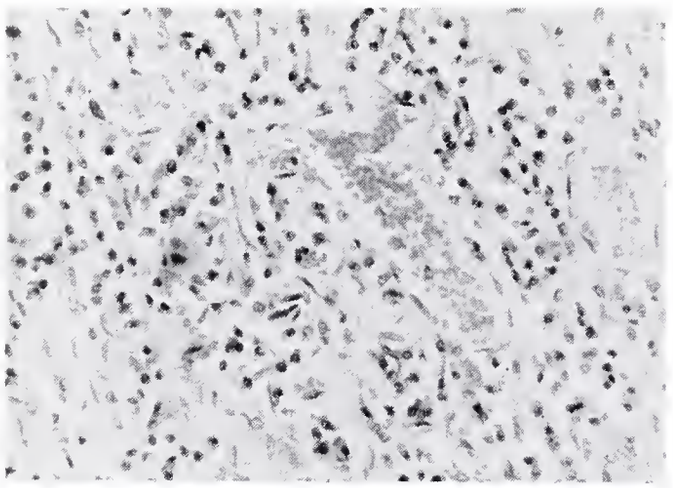


Fig 1. Dense plasma cell infiltration is seen in tracheal homograft from a dog that survived six months.

in the lumen. Also, it would have to be noncarcinogenic, flexible, nonporous, and have an epithelial inner lining.

However, if one peruses the clinical and experimental reports which have appeared during the past 20 years, he is left with some observations relative to trends in this area.

Between 1950 and 1960 there was considerable interest in the development of tracheal prostheses, and a wide variety of materials was studied. Most of them failed to perform with a degree of reliability which would invite their clinical use.

Subsequently, during the past decade, the emphasis has been shifted to the employment of tracheal "lengthening" procedures such as division of the right pulmonary ligament, mobilization of the tracheal ends, and resection and reimplantation of the left main bronchus into the intermediate bronchus. These have provided the surgeon with a greater percentage of patients in whom segmental resection and reanastomosis can be performed. There also have been several new advances in the use of local tissue flaps to reconstruct defects of the cervical trachea.

The first efforts at tracheal transplantation were reported by Jackson and associates[5] in 1950. They observed that the homograft trachea was not satisfactory for the replacement of segmental defects even as short as 1 inch. They were not using an inner stent, and the dogs died due to the loss of cartilaginous support and subsequent stenosis of the trachea.

In 1958, Greenberg[6] reported his observations in a series of 14 dogs in which tracheal homografts were employed. The homograft seg-

ments ranged from four to seven rings in length (approximately 2 to 3 cm). No inner stent was used, but the grafts were supported by an external sheet of tantalum mesh in 9 of the dogs. There was one long-term survival in this study, and the author suggested the need for further evaluation of this technique.

Our initial purpose in studying tracheal transplantation was to determine whether or not the use of an intratracheal stent for a prolonged period of time might maintain the patency of the airway while sufficient dense fibrocollagenous tissue was developed to provide long-term support. In the light of the plasma cell infiltrate, it appears that we may be dealing with a slow rejection phenomenon. Microscopically, one does not observe the dense proliferating granulation tissue which has caused collapse and stenosis in other phases of our investigations. Rather, one sees the gradual "melting away" of the tracheal cartilage during many months with a moderate amount of fibrocollagenous tissue developing in the allograft.

It continues to be our belief that tracheal transplants may provide the only material which can meet the criteria of the "ideal" prosthesis for the replacement of extensive portions of the cervical trachea.

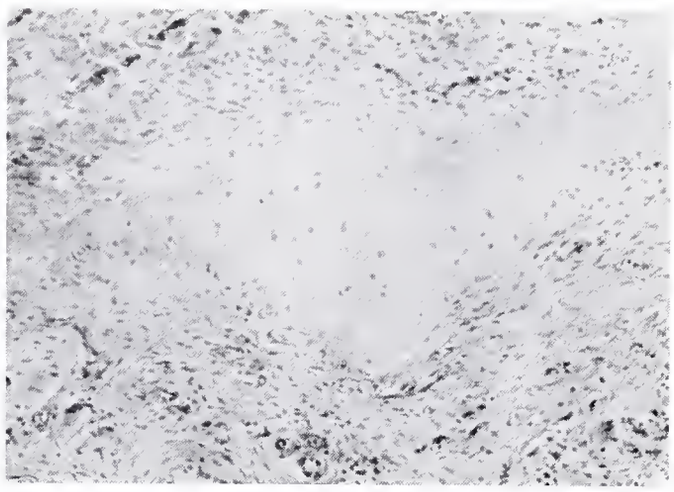


Fig 2. Plasma cell infiltration with dissolution of adjacent cartilage in a dog that survived eight months.

REFERENCES

1. Bailey BJ: Clinical and research aspects of reconstruction of the cervical trachea. Texas Med 66:52-55 (July) 1970.
2. Gluck T, Zeller A: Quoted by Michelson E, et al: Experiments in tracheal reconstruction. J Thorac Surg 41:748, 1961.
3. Kuester E: Vorstellung eines patienten bei welchen des halbe kenlkopf extirpirt worden ist. Verhandl Deutsch Gesellsch Chir 13:95, 1884.
4. Belsey R: Resection and reconstruction of the intrathoracic trachea. Brit J Surg 38:200-205, 1950.
5. Jackson TL, O'Brien EJ, Tuttle WM, et al: The experimental use of homogenous tracheal transplants in the restoration of continuity of the tracheobronchial tree. J Thorac Surg 20:598-612, 1950.
6. Greenberg SD: Tracheal homografts in dogs. Arch Otolaryng 67:577-586, 1958.

Drs. Bailey and Kosoy, Department of Otolaryngology, The University of Texas Medical Branch, Galveston, Tex 77550.

These studies were supported by grants from the American Cancer Society (Texas Division), the Texas Otolaryngological Association, and the United States Public Health Service (NB-05902).

The choice of an esophageal substitute

Among the many methods designed to replace the esophagus, the visceral substitutes—stomach and small and large intestines—have proven to be most satisfactory. A 25-year investigation was conducted to determine the performance and the long-term results of the visceral substitutes. The findings indicate that each substitute has certain advantages and is best suited for specific conditions. This study establishes a basis for the choice of a visceral substitute for the esophagus.

INTRODUCTION: After resection of the esophagus for various diseases, its substitution is a difficult problem and is a compromise at best. At the turn of the century, skin tubes were laboriously constructed to bridge the gap between the pharynx and the stomach. Subsequently, the stomach, small bowel and colon were interposed subcutaneously.[1] In 1934 Ohasawa reported transthoracic esophagogastrostomy and since then this operation has become popular.[2] In 1949 Harrison reported transthoracic small-bowel interposition, an operation later popularized by Merendino and Thomas.[3,4] In 1954 Mahoney and Sherman stimulated interest in intrathoracic colon-esophagoplasties.[5] During the past decade, various types of colonic interpositions have gained favor with several surgeons.[6-10]

With the increasing number of esophageal resections and replacements, the question as to which segment of the gastrointestinal tract is to be used, and for what condition, has become a pertinent one. So far there has been disagreement among surgeons as to their choice of an esophageal substitute. There has been no uniformity in the evaluation of patients or the functional qualities of each substitute. The difficulty arises when clinical values are based on symptoms which are largely subjective and are not substantiated by investigative studies.

In order to eliminate the inconsistencies in the clinical results, guidelines should be established and followed in conducting such an investigation. Clinical and physiological criteria are introduced and are followed in this survey:

1. The pattern of the patient's swallowing should be compared to that of the normal esophagus. Swallowing t h r o u g h the normal esophagus is an activity free of symptoms and is usually performed in an unconscious manner. Only when a patient is free of symptoms related to swallowing at all times may the results of the esophageal substitution be considered excellent or good. Patients who can swallow fairly well to maintain their weight, but occasionally have minor symptoms of fullness, heartburn, regurgitation, foul breath, belching, nausea, diarrhea, or dysphagia are classified as having good to

EDWARD A. HANNA, MD
A. W. HARRISON, MD
JOHN R. DERRICK, MD
THOMAS KIRKSEY, MD
C. ROGER YOUMANS, MD
JAMES HOPKINS, MD

fair results. When these symptoms are severe enough to result in weight loss, or when a strict regimen or a surgical procedure is required to improve the performance of the substitute, the result is considered to be poor.

2. Correlative cinefluoroscopic studies should be performed on the majority of patients, and endoscopy and biopsy should be carried out whenever indicated. The radiographic qualities of each substitute are compared to those of the normal esophagus and should explain the patient's symptoms. The motor activity of the esophagus consists of primary and secondary peristalsis which propel the bolus of food toward the esophageal ampulla. The resting tone of the cardiac segment of the esophagus prevents gastroesophageal regurgitation. The transit time through the esophagus is 3 to 12 seconds. There is no food retention in the normal esophagus. Also, the esophagus has the ability to distend with the introduction of food and to collapse when empty, a quality attributed to its plasticity.

3. An important factor that influences the results of esophageal substitution is the interval of time between the surgical procedure and the evaluation of patients. In esophagogastrostomy the immediate results are excellent, but in time pyrosis and fullness become noticeable. On the other hand, with colon interposition procedures, patients require a period of adjustment until a comfortable eating pattern develops. Long-term results are more significant than immediate or short-term results, yet in conditions with poor prognosis such as carcinoma of the esophagus, many patients will be lost to long-term follow-up. With these facts in mind, we have elected to evaluate patients at six months postoperatively or longer.

Investigation and Results: The experience at the University of Texas Medical Branch at Galveston during 25 years was reviewed. Of 146 patients who underwent esophageal resection

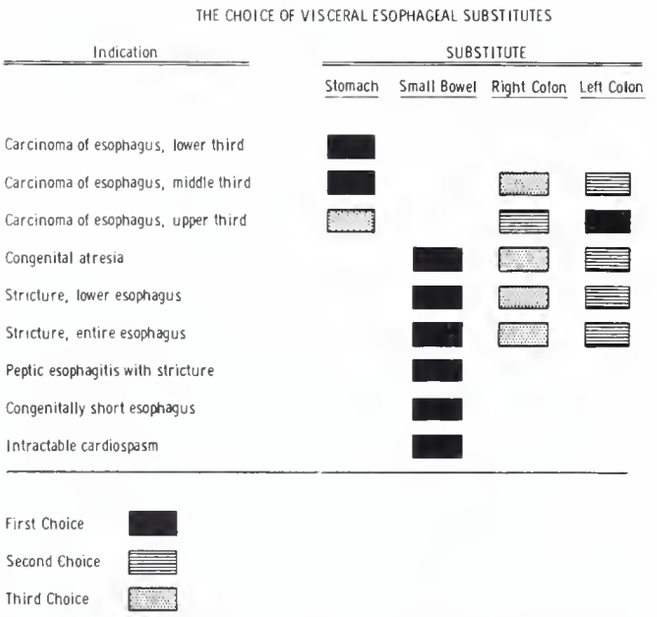


Fig 1. The choice of visceral esophageal substitutes (recommended policy.)

Table 1. Statistical results of esophageal resection and visceral substitutes.

RESULT	NO. PATIENTS
Operative death	11
Death within 6 months of surgery	14
Procedure failure	5
Lost to follow-up at 6 months after surgery	14
Alive < 6 months after surgery, not evaluated	5
Alive > 6 months after surgery, evaluated	97
Total	146

Table 2. Indications for esophageal resection and type of substitutes in 97 patients (1946-1969).

	NO. PATIENTS	SUBSTITUTIONS				
		STOMACH	SMALL BOWEL	RIGHT COLON	LEFT COLON (Antiperistaltic)	LEFT COLON (Isoperistaltic)
Carcinoma of esophagus	40	34	4	1	1	
Carcinoma of stomach and esophagus	9	7				2
Corrosive stricture	28	1	12	8	6	1
Congenital stricture	2		2			
Peptic esophagitis with stricture	4	2	2			
Benign stricture, undetermined etiology	6	2	4			
Congenital atresia	3		1	1	1	
Intractable cardiospasm	2		2			
Gastroesophageal reflux	2		2			
Totals	97	46	30	10	8	3

and substitution, 97 were alive and were evaluated six months or more postoperatively (Table 1). Indications for the esophageal resection and type of substitute utilized are outlined in Table 2. Carcinoma of the esophagus and stomach were the indications for the procedure in 49 patients. These patients were evaluated at intervals ranging from 6 to 51 months with an average follow-up of 15 months. Various benign esophageal conditions were the reason for the procedure in 48 patients. These patients were evaluated at periods ranging from 7 months to 23 years postoperatively, with an average follow-up of 10 years and 3 months. The overall average follow-up in this series of 97 patients was 5 years and 9 months postoperatively. The contrast between the length of follow-up of patients with carcinoma and those with benign conditions is quite obvious as the greater number of patients with carcinoma were lost to long-term follow-up.

At the time of evaluation, each patient and his relatives were questioned concerning symptoms related to swallowing and eating. Direct observation was made of his ability to ingest various types of food. Sixty-one of 97 patients evaluated underwent cinefluoroscopy and 22 patients had endoscopic examinations. From the accumulated data it was possible to delineate the functional results of each esophageal substitute as being good, fair, or poor. When the findings were tabulated (Table 3); comparison could be made with regard to the performance of various substitutes. Cases with small-bowel substitute had the best results, being satisfactory (good and fair) in 90% of patients. Small bowel is the only visceral substitute that provides true peristaltic activity and a degree of plasticity.[11] Satisfactory results were achieved in 80% of patients with right colon substitutes, and with left colon substitutes the results were slightly better. It was noticed, however, that in these cases there was an increase in the transit time with food retention.[11] Regurgitation was not uncommon with antiperistaltic left colon interposition. The stomach was a satisfactory substitute in 72% of cases. It should be noted, however, that the average follow-up of these cases was only 19 months, as 41 of 46 patients in this group had carcinoma of the esophagus or stomach. One-half of patients with esophagogastrostomy had symptoms of esophagitis when evaluated two years postoperatively, and at later years the majority developed a stricture at the site of anastomosis. High esophagogastric anastomosis, when combined with a drainage procedure, uniformly resulted in dumping symptoms.[12]

Recommendations: Despite the satisfactory outcome of esophageal substitution by a segment of the gastrointestinal tract, results still can be improved and postoperative problems reduced by the proper choice of a substitute in each case. When personal preferences of the surgeon are put aside, this study provides a scientific method to predetermine the adequacy of a substitute in a patient. Besides the functional results of each substitute, other factors con-

Table 3. Long-term results of esophageal substitutes (97 patients).

ESOPHAGEAL SUBSTITUTES	TOTAL NO. PATIENTS	RESULTS					
		GOOD		FAIR		POOR	
		NO.	%	NO.	%	NO.	%
Stomach	46	21	44	13	28	13	28
Small bowel interposition	30	20	73	5	17	3	10
Right colon interposition (isoperistaltic)	10	5	50	3	30	2	20
Left colon interposition (antiperistaltic)	8	3	37.5	3	37.5	2	25
Left colon interposition (isoperistaltic)	3	1	34	2	66		

sidered in its choice include: (1) the prognosis of the condition for which the esophageal resection and substitution is performed; (2) the level and length of the esophagus to be replaced; (3) the age and general condition of the patient; (4) technical problems inherent in each operation; and (5) the experience of the surgeon.

Based upon the previous factors, we have adopted a policy in selecting esophageal substitutes which is outlined in Fig. 1. Three possibilities are considered—a first, a second, and a third choice, depending upon the summation of various factors in each case.

In cases of carcinoma of the lower and middle esophagus, the primary choice is the stomach. In carcinoma of the upper esophagus, or if radical radiotherapy or total resection of the esophagus is the preferred procedure of management, then the substitute of choice is the left colon (isoperistaltic), followed by the right colon and lastly the stomach.

Patients with benign conditions, such as esophageal atresia and stricture of the esophagus, can be restored to normalcy if an adequate substitute is employed. In these patients the small bowel is the first choice, followed by the left colon (isoperistaltic) and by the right colon.

In benign conditions in which the esophagogastric junction has to be replaced, best results are obtained by small-bowel interposition. It is considered the choice substitute in cases of peptic esophagitis with stricture, congenitally short esophagus, and intractable cardiospasm.

REFERENCES

1. Gossett: Cited by Meade RH, in: A History of Thoracic Surgery, Springfield, Ill, Charles C Thomas, 1961.
2. Ohasawa T: The Surgical Clinics of Prof R Torikata and Prof K Isobe, Kyoto Imperial University, 1934.
3. Harrison AW: Transthoracic small bowel substitution in high stricture of the esophagus. J Thorac Surg 18:316-326, 1949.
4. Merendino KA, Thomas GI: The jejunal interposition operation for substitution of the esophagogastric sphincter; present status. Surgery 44:1112-1115, 1958.
5. Mahoney EB, Sherman CD Jr: Total esophagoplasty using intrathoracic right colon. Surgery 35:937-946, 1954.
6. Hopkins WA, Zwiren GT: Colon replacement of the esophagus in children. J Thorac Cardiov Surg 46:346-358, 1963.
7. Pellett JR: Colon interposition for esophageal bypass or replacement. Indications, limitations, and complications. Arch Surg 89:169-179, 1964.
8. Belsey R: Reconstruction of the esophagus with the left colon. J Thorac Cardiov Surg 49:33-55, 1965.
9. Othersen HB Jr, Clatworthy HR Jr: Functional evaluation of esophageal replacement in children. J Thorac Cardiov Surg 53:55-63, 1967.
10. Gross RE, Firestone FN: Colonic reconstruction of the esophagus in infants and children. Surgery 61:955-964, 1967.
11. Hanna EA, Harrison AW, Derrick JR: Comparative function of visceral esophageal substitutes by cinefluoroscopy. Ann Thorac Surg 3:173-176, 1967.
12. Hanna EA, Harrison AW, Derrick JR: Long-term results of visceral esophageal substitutes. Ann Thorac Surg 3:111-118, 1967.

Dr. Hanna, 6303 South Park Blvd, Houston, Tex 77021.

Dr. Harrison, 3155 Stagg Drive, Suite 313, Beaumont, Tex 77701.

Dr. Derrick, Department of Surgery, Division of Thoracic Surgery, The University of Texas Medical Branch, Galveston, Tex 77550.

Dr. Youmans, 622 Highway 3, La Marque, Tex 77568.

Dr. Kirksey, 3100 Red River, Austin, Tex 78705.

Dr. Hopkins, 1419 Woodland Ave, Des Moines, Iowa 50309.

His makeup is unique by tradition.
His ulcer treatment is unique by tradition, too.

In the world of entertainment, a clown's makeup remains the exclusive property of its originator. Time has established that tradition. In the treatment of ulcers and other gastrointestinal complaints, time has established Pro-Banthine as a tradition too.

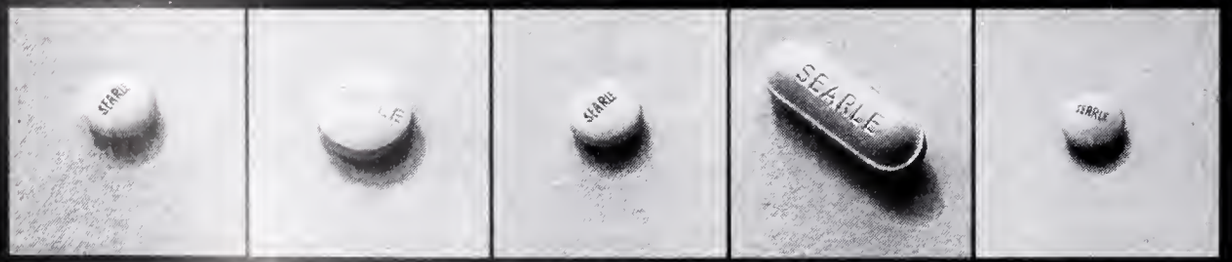
Few drugs can boast a longer successful run. Introduced 17 years ago, this drug is a veteran gastrointestinal performer.

Pro-Banthine stars in the treatment of peptic ulcer, functional gastrointestinal disturbances, ulcerative colitis, hypertrophic gastritis, pylorospasm, acute and chronic pancreatitis, diverticulitis, biliary dyskinesia, hyperhidrosis, ileostomies, and colonic, ureteral or urinary bladder spasm. Its fame as an anticholinergic is worldwide.

When you want a performer you can count on . . . remember Pro-Banthine. Tradition does.

SEARLE Research in the service of medicine.
G. D. Searle & Co., Chicago, Ill. 60680

Pro·Banthine®
(propantheline bromide)
the traditional ulcer treatment



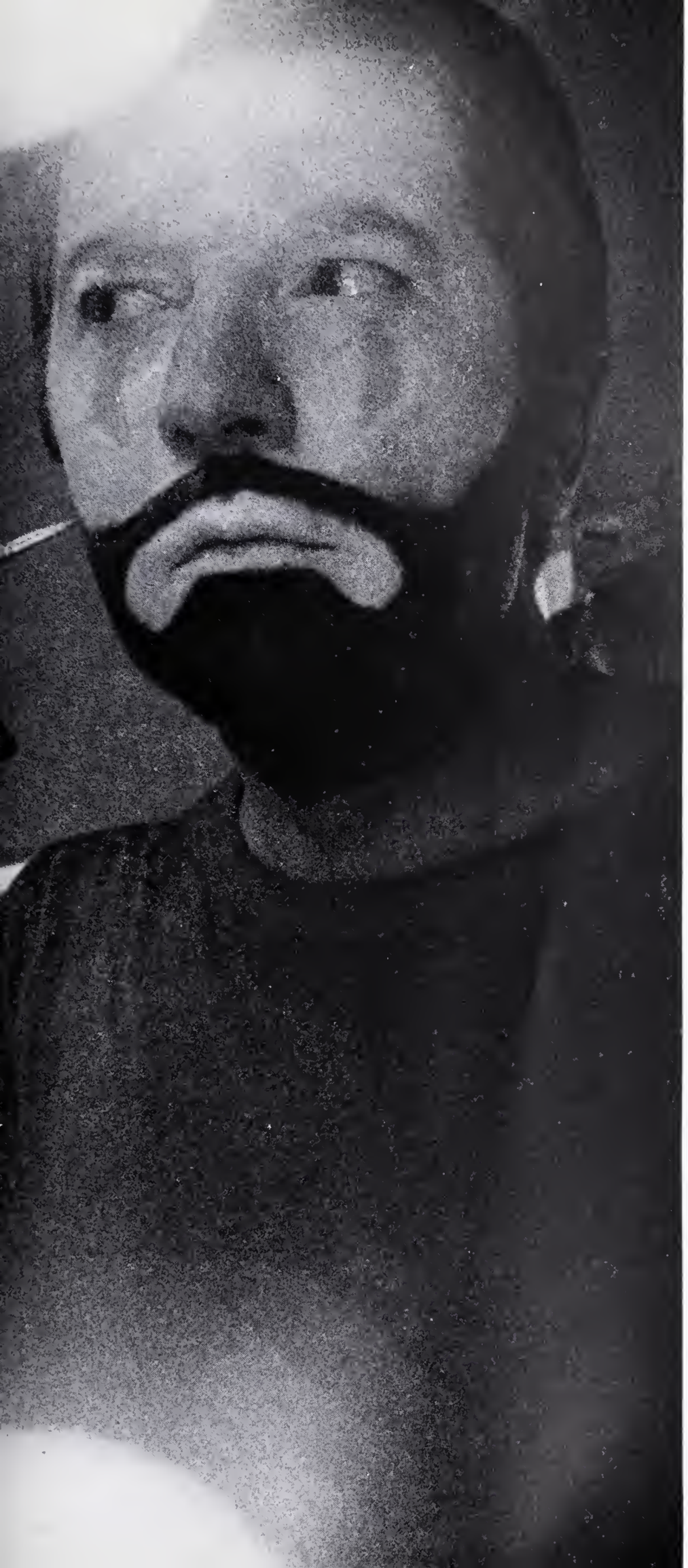
Pro-Banthine 15 mg. propantheline bromide

Pro-Banthine 15 mg. propantheline bromide with Dartal 5 mg. thiopropazate dihydrochloride

Pro-Banthine 15 mg. propantheline bromide with Phenobarbital 15 mg. warning: may be habit forming

Pro-Banthine P.A. 30 mg. propantheline bromide in time-release form

Pro-Banthine 7½ mg. propantheline bromide Half Strength



Pro·Banthine®
(propantheline bromide)

Indications: Peptic ulcer, gastroenteritis, pylorospasm, biliary dyskinesia, functional hypermotility and irritable colon.

Contraindications: Glaucoma, severe cardiac disease.

Precautions: Since varying degrees of urinary hesitancy may occur in elderly men with prostatic hypertrophy, this should be watched for in such patients until they have gained some experience with the drug. Although never reported, theoretically a curare-like action may occur with possible loss of voluntary muscle control. Such patients should receive prompt and continuing artificial respiration until the drug effect has been exhausted.

Side Effects: The more common side effects, in order of incidence, are xerostomia, mydriasis, hesitancy of urination and gastric fullness.

Dosage: The maximal tolerated dosage is usually the most effective. For most adult patients this will be four to six 15-mg. tablets daily in divided doses. In severe conditions as many as two tablets four to six times daily may be required. Pro-Banthine is supplied as tablets of 15 mg., as prolonged-acting tablets of 30 mg. and, for parenteral use, as serum-type vials of 30 mg. The parenteral dose should be adjusted to the patient's requirement and may be up to 30 mg. or more every six hours, intramuscularly or intravenously.

Pro-Banthine® 15 mg.
(propantheline bromide)
with
Dartal® 5 mg.
(thiopropazate dihydrochloride)

Indications: Peptic ulcer, spastic constipation, nonspecific gastritis, functional gastrointestinal disorders, pylorospasm, hyperhidrosis, irritable bowel syndrome, mucous or ulcerative colitis, functional diarrhea.

Contraindications: Glaucoma, severe cardiac disease.

Warnings: Pro-Banthine with Dartal should not be administered to patients who are under the influence of barbiturates, alcohol or narcotics. The drug should be administered cautiously to epileptic patients or those in depressed states, patients with liver disease and to pregnant women. Hypersensitivity to Dartal may occur rarely in patients with known sensitivity to similar drugs.

Side Effects: Dryness of the mouth, mydriasis, hesitancy of urination; less commonly extrapyramidal (restlessness, dystonia and signs of pseudoparkinsonism such as muscular rigidity, fixed facies, tremor, ataxia, festinant gait and drooling), parasympatholytic (blurred vision, xerostomia, hypotension, nasal congestion and constipation) and curare-like (loss of control of voluntary muscles, particularly the muscles of respiration) reactions. Rarely, leukopenia or allergic purpura. A generalized erythematous skin reaction may occur. Side effects characteristic of phenothiazines such as grand mal convulsions, altered cerebrospinal proteins, cerebral edema, potentiation of the effects of atropine, heat or phosphorus insecticides, autonomic reactions, endocrine disturbances, reversed epinephrine effect, hyperpyrexia or pigmentary retinopathy may theoretically occur but have not been reported with Dartal. Severe hypotension following recommended doses occurs more commonly in patients who are also afflicted by other medical disorders such as mitral insufficiency or pheochromocytoma, and particular attention should be paid to such a possibility although this has not been observed with Dartal.

Adult Dosage: One tablet three times a day.

Pro-Banthine® 15 mg.
(propantheline bromide)
with
Phenobarbital 15 mg.

Warning: May be habit-forming.

For *Indications, Contraindications, Precautions, Side Effects* and *Dosage* see Pro-Banthine. In addition, phenobarbital should be administered with caution to patients with liver disease, mental disturbances or a significant degree of hypoxia.

Pro-Banthine P.A.®
prolonged acting brand of propantheline bromide

For *Indications, Contraindications, Precautions* and *Side Effects* see Pro-Banthine.

Dosage Form: Capsule-shaped, compression-coated, peach tablets of 30 mg. for oral use.

Dosage: The recommended initial dosage is one tablet in the morning and one at night.

084

SEARLE

Research in the service of medicine.
G. D. Searle & Co., Chicago, Ill. 60680

Transcutaneous cutting needle biopsy of pulmonary coin lesions

Of 225 cutting needle transcutaneous biopsies for diagnosis of lung disorders, 151 have shown diffuse disease and 74 have revealed mass lesions. In the latter group, 26 patients presented radiographically demonstrable coin lesions less than 1 inch in diameter. Technical protocol included biopsy under fluoroscopy and a post-biopsy insertion of a chest tube for any degree of pneumothorax. Comparison of the results of aspiration and cutting needle biopsy suggests that in our hands, the latter is more productive and has an equivalent complication rate.

IN 1883, LEYDEN[1] REPORTED percutaneous needle aspiration of the lung to demonstrate the "parasitic cocci" responsible for pneumonias. Three years later Menetriere[2] diagnosed a large lung tumor by needle aspiration. Since that time numerous reports have confirmed the efficacy of this technique.[3-12] Unfortunately, possibly because of technical inadequacies, many centers have had difficulty establishing diagnoses on the basis of an aspirational biopsy which frequently consists of a cell block.

Dutra and Geraci[13] in 1954, and Sarin and Bhatnagar[14] in 1959, first reported the use of a cutting biopsy needle for diagnosis of lung disorders. Since this type of needle produces a larger piece of tissue for easier diagnosis, one would expect that the associated risk also would be higher. By 1966, however, more than 400 such biopsies had been reported without a death.[15]

Subsequently a study was begun to analyze the risks and results of the cutting needle, to be compared with the best available reports of aspiration biopsy in the diagnosis of pulmonary coin lesions. For purposes of this evaluation, a coin lesion is described radiographically as a spherical pulmonary opacity, surrounded by lung parenchyma, and less than 1 inch in diameter.

Clinical Material: We have performed biopsies on 225 patients with a Franklin-Silvermann cutting biopsy needle (Table 1). These patients, seen during a four-year period, ranged in age from 17 to 86 years, with an average of 53 years. Indications for biopsy were diffuse disease in 151 cases and localized lesions in 74. Of the latter group, 26 had coin lesions undiagnosed by routine chest-medical work-up. Five lesions were less than 1 cm in diameter. All coin lesion biopsies were performed under local anesthesia in the Radiology Department; the technique was similar to that used for diffuse disease, previously reported.[16,17]

Under fluoroscopy and image intensification when available, each patient was positioned to allow a point on the chest wall closest to the lesion to be in direct line with the x-ray beam, or as nearly aligned as possible before losing contrast in the shadows of the mediastinum. Single-plane fluoroscopy does not reveal the dimension of depth. With direct alignment however, the needle could be advanced until displacement of the opacity was noted by needle contact. Optimum position was assured by precise contiguous movement of the lesion and the needle tip with manipulation. X-ray equipment that permits adequate visualization is absolutely essential. A coin lesion must be seen before it can be biopsied. Occasionally it was necessary to perform a biopsy with the needle at an angle to the x-ray beam; the dimension of depth was less controllable and good results correspondingly more difficult.

All biopsies were performed with the patient in a horizontal position after instructions to resist coughing in order to lessen the eventuality of an air embolus. The possibility of a post-biopsy pneumothorax was evaluated by imme-

C. ROGER YOUMANS, JR, MD
WILLIAM J. deGROOT, MD
RICHARD MARSHALL, MD
LUIS B. MORETTIN, MD
JOHN R. DERRICK, MD

Lesion	No. Biopsies	Adequate Spec. No.	%	Inadequate Spec. No.	%	Major Complications No.	%	Minor Complications No.	%	Deaths No.	%
Generalized	117	101	87	16	13	2	1.7	54	45	1	0.85
Lobar Diffuse	34	34	100	0	0	0	0	6	17.6	0	0
Mass	48	47	98	1	2	0	0	6	13	0	0
Coin Lesions	26	25	96	1	4	0	0	7	27	0	0
Total	225	207	92	18	8	2	0.9	73	32	1	0.44

Table 1. Needle biopsy of lung, 225 cases.

	Pneumothorax or Air Leak	Hemoptysis Trace	Hemoptysis 1+	Hemoptysis 2+	Hematoma (Radiographic)	Air Emboli	Liver Biopsy	Vagovagal
Generalized	43	19	4	2	3	2	1	1
(117 cases)	36%	15%	3%	1.7%	2.5%	1.7%	0.9%	0.9%
Lobar Diffuse	5	3		1	2	0	0	0
(34 cases)	15%	9%		3%	6%			
Mass	5		1		1	0	0	0
(48 cases)	10%		2%		2%			
Coin Lesion	5		2		0	0	0	0
(26 cases)	19%		8%					

Table 2. Needle biopsy of lung, complications.

diate fluoroscopy and roentgenogram of the chest. If no pneumothorax was noted, another roentgenogram was made three to four hours later, and vital signs were monitored frequently during the interim. A number 16 chest tube was inserted for any degree of radiographically demonstrable pleural air. The rationale for this technique, expressed in more detail in previous publications,[16,17] involves the consideration that once a free pleural space has been demonstrated, proper chest tube insertion is far safer than to risk the possibility of a subsequent tension pneumothorax.

Results: The results of all cases are recorded in Tables 1 and 2. Of 225 cases, an adequate specimen was obtained in 207 (92%), with 2 serious complications (0.9%, both in the generalized disease category) and 73 minor complications (32%). One fatal endobronchial hemorrhage occurred in an 86-year-old man with generalized disease, an overall mortality of 0.44%.

In the 26 coin lesion cases, adequate specimens were obtained in 25 (96%). In one case the lesion could not be penetrated because of calcification. Specific diagnoses were recorded

Diagnosis	No.
Malignant	16
Primary	6
Squamous	3
Scar cancer	2
Adenocarcinoma	1
Metastatic	10
Adenocarcinoma	3
Poorly differentiated	3
Sarcoma	2
Leiomyosarcoma	1
Hypernephroma	1
Nonmalignant	9
Tuberculosis granuloma	2
Granuloma	3
Calcified granuloma	1
Fibrosis	3
Total	25

Table 3. Needle biopsy of lung, coin lesions, diagnoses.

	Total No. Diagnoses	No. False-Negative	% of Diagnoses
Generalized	101	4	4
Lobar diffuse	34	0	0
Hilar mass	16	4	25
Non-hilar mass	32	0	0
Coin lesion	25	1	4

Table 4. Needle biopsy of lung, proven false negatives.

in all but three of the remaining cases (92% of all diagnoses, or 90% of all cases, Table 3). One diagnosis of fibrosis was found to be a false-negative result at subsequent thoracotomy.

No deaths or serious complications occurred in this group of patients. Seven minor complications were recorded, an incidence of 27%. Two patients had minor hemoptysis (8%) and five patients (19%) required chest tube insertion. Three of these five patients had air leaks in excess of two hours (12%). In the coin lesion biopsies, neither air emboli, significant parenchymal hematoma, hemothorax, nor tumor cell implantation were noted.

Case Reports: *Case 1:* A chest x-ray of a 47-year-old woman showed multiple coin lesions (Fig 1). A pelvic mass was found on physical examination and results of the chest medical work-up were normal. Laminograms showed a lesion in the right sixth intercostal space, located posteriorly (Fig 2). Needle biopsy was accomplished through a posterior approach with the patient in a slight oblique position. Following chest tube insertion for a small pneumothorax following the first insertion of the needle, the biopsy was successfully repeated (Fig 3). Microscopic examination of the biopsy specimen revealed a poorly differentiated sarcoma (Figs 4 and 5). Subsequent exploratory laparotomy confirmed a primary leiomyosarcoma of the uterus.

Case 2: A 54-year-old woman with moderately severe emphysema had a mass in the right upper quadrant. A chest x-ray revealed a coin lesion in the left lateral lung field (Fig 6). The decision to perform abdominal surgery was dependent upon the diagnosis of the lung lesion in a patient who was considered a high risk for open biopsy. Anterolateral needle biopsy was effected without incident (Fig 7) and confirmed the diagnosis of calcified granuloma (Fig 8). Cholecystectomy was subsequently performed for chronic hydrops of the gallbladder secondary to cholelithiasis and chronic cholecystitis.

Discussion: Dahlgren and Nordenstrom[9] reported the largest series of biopsy of lung tumors with the aspiration needle. With a combined experience of large tumors as well as coin lesions, they recorded a diagnosis in 86.6% of all cases, with a 20% incidence of pneumothorax. In the present series, which has excluded the larger and more easily biopsied mass lesions, biopsy with a cutting needle appeared to be superior in productivity (92% specific diagnoses) with an equivalent complication rate. (It is still reasonable to assume that the aspiration needle should be less traumatic than the cutting needle; however, this difference apparently is not greatly significant.) In a recent review of four cutting needle biopsy series, each consisting of a mixture of local and diffuse disease with a combined experience of 766 cases, six deaths were recorded (an incidence of 0.78%).[18] All deaths were of patients with diffuse lung disease, and none resulted from biopsy of mass lesions.

Limitations and Contraindications to Needle Biopsy of Coin Lesions: Needle biopsy of coin lesions is a productive procedure; but as in any other biopsy technique, only a positive diagnosis is significant. As seen in Table 4, out of 25 coin lesion tissue specimens, 1 was found subsequently to be a false negative (4%).

Implantation of tumor cells along the needle tract is seen frequently after pleural biopsy of malignant effusion, as cell-laden fluid escapes via the biopsy defect in the pleura. This complication after biopsy of parenchymal lesions, however, must be extremely rare. Although hundreds of biopsies of malignant lesions have been done, only three cases of this complication

Fig 1. Chest x-ray; multiple coin lesions.

Fig 2. Laminogram of right upper lung field; lesion biopsied is seen in sixth intercostal space.

Fig 3. Left anterior oblique chest x-ray; needle tip in contact with coin lesion. Note chest tube at right apex.

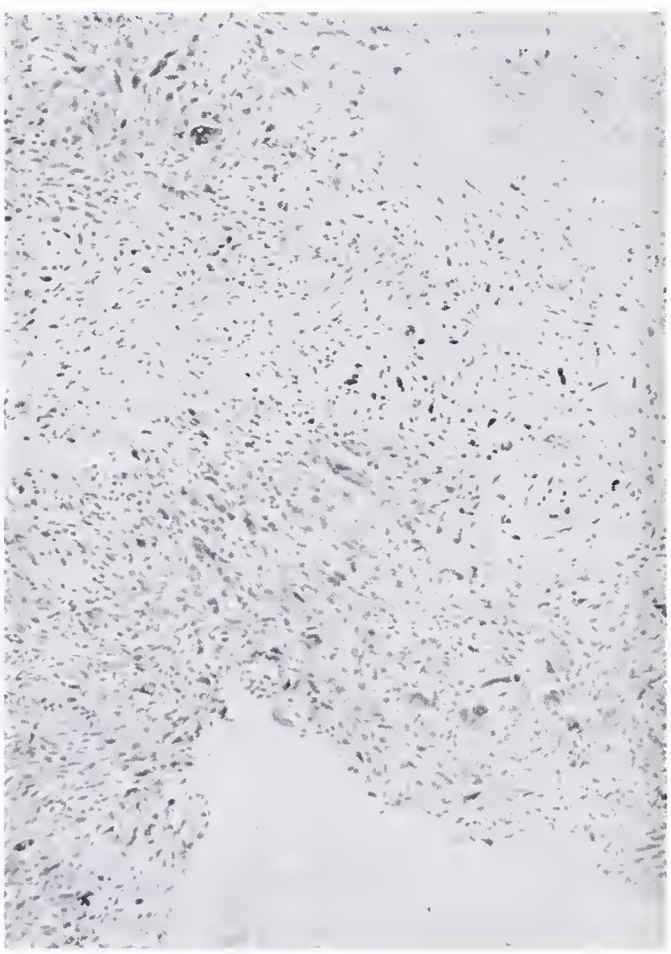


Fig 4. Photomicrograph of needle biopsy specimen, poorly differentiated sarcoma. X 154.44.

have been clearly reported.[13,19,20] It is reasonable that such an implant could be successfully excised subsequently.

It is well known that biopsy of any malignant lesion by any means releases neoplastic cells into the bloodstream. Although it is difficult to correlate this occurrence with subsequent metastases, there is likewise no method to prove that metastases do not result. In addition, in these cases a negative biopsy result is meaningless and a positive result requires subsequent excision. Therefore, even though the chance of making a curable lesion incurable by needle biopsy is unlikely when the patient is a good surgical risk and possibly has a curable lesion, percutaneous needle biopsy is absolutely contraindicated. If one refuses percutaneous biopsy for fear of blood-borne tumor cell dissemination, for consistency, an open incisional or needle biopsy should be equally avoided. An excisional biopsy is preferable unless a central location necessitates removal of excessive lung tissue.

Exceptions to the contraindication of the potentially curable lesion may include the patient who will not accept surgery without a diagnosis, the poorer risk patient in whom risk of thoracotomy exceeds the risk of tumor cell dissemination, and the lesion that has been selected for serial follow-up evaluation. In the latter case, the chance of metastasis during several weeks' delay may well exceed the incidence of metastasis or implantation with biopsy.

Under the present protocol, lung abscess, cystic lung change, and pulmonary hypertension are all considered factors of increased risk, but not absolute contraindications, to needle biopsy.

Indications for Percutaneous Needle Biopsy of Coin Lesion: Transcutaneous needle biopsy of a pulmonary coin lesion is indicated, therefore, for any patient in whom the etiology is not apparent from routine chest-medical work-up,

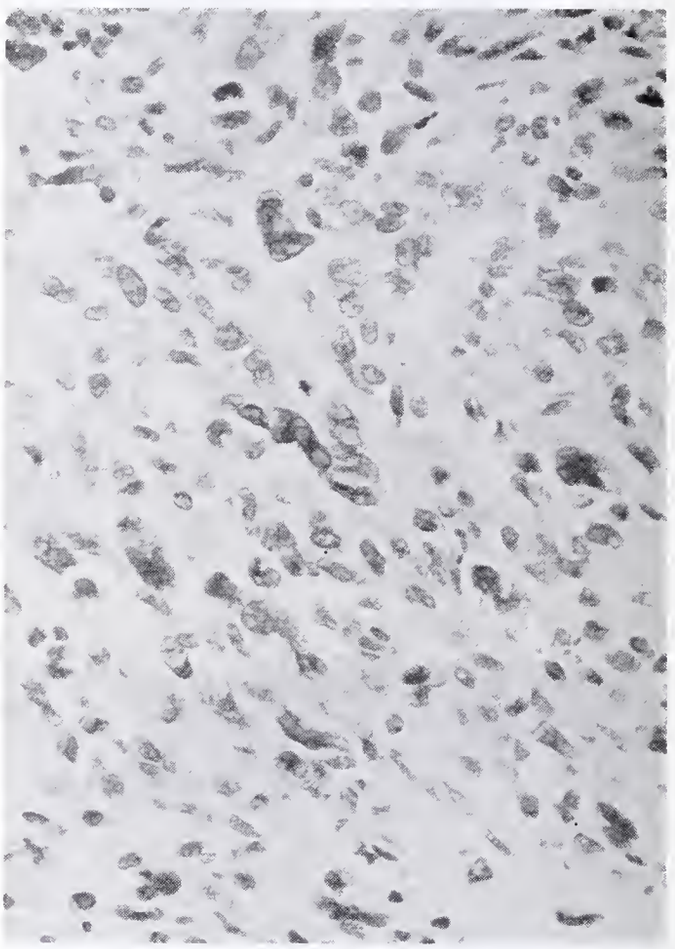


Fig 5. Photomicrograph, X 475.2.

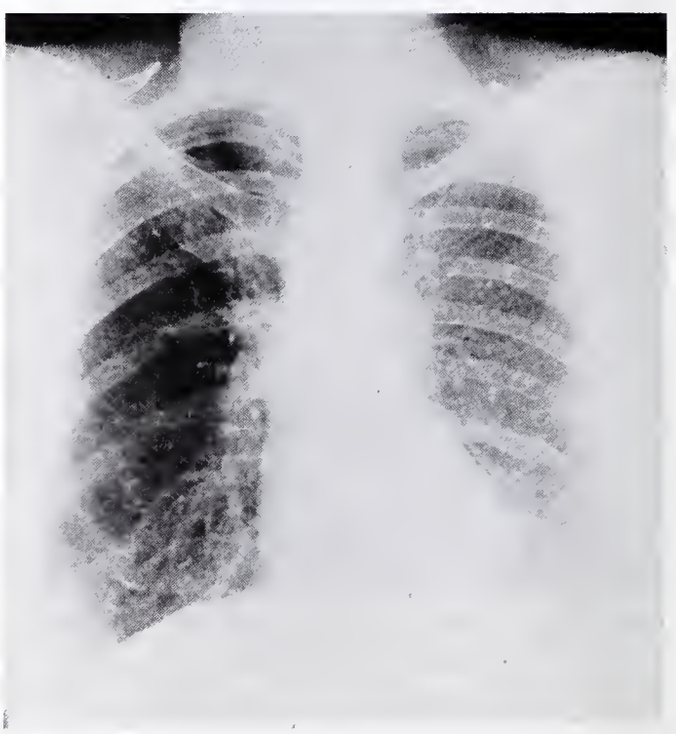


Fig 6. Chest x-ray; note coin lesion adjacent to left chest wall and moderately severe emphysema and fibrosis.

Fig 7. Chest x-ray, slight right posterior oblique; needle tip in center of coin lesion.

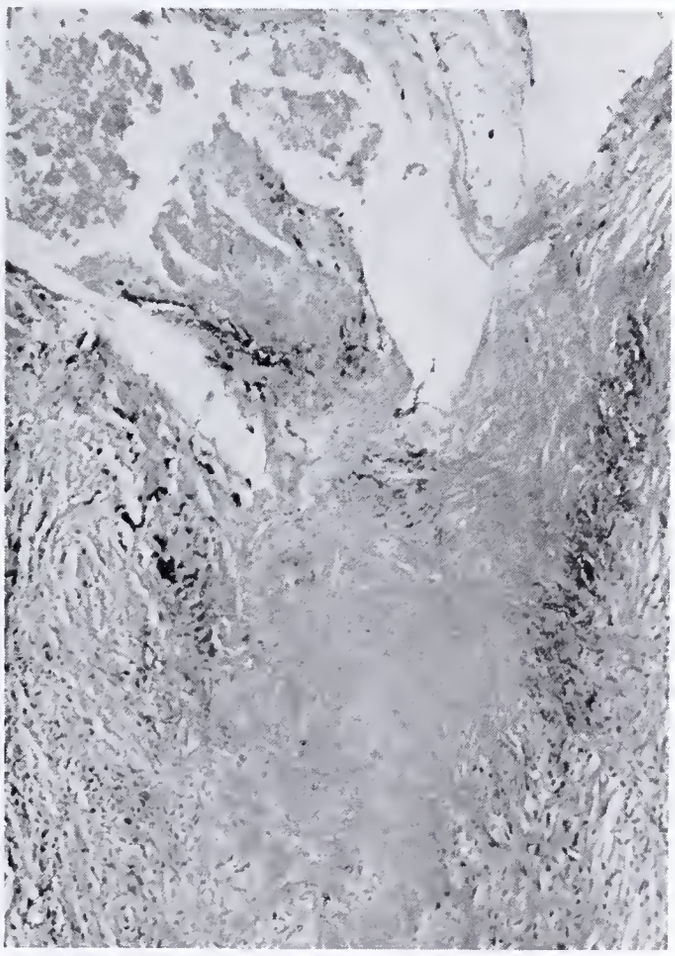


Fig 8. Photomicrography, calcified granuloma. X 154.44.

and who satisfies one of the following criteria: (1) known incurability—tissue diagnosis desired; (2) multiple coin lesion (incurable); (3) known primary malignancy elsewhere; (4) lesion for which a "follow and see" decision has been selected; (5) patient has refused surgery but may be convinced by positive tissue diagnosis; and (6) poor-risk patient.

REFERENCES

1. Leyden OO: Ueber infectiose pneumonie. Deutsche Med Wchnschr 9:52, 1883.

2. Menetrier P: Cancer primitif du poumon. Bull Soc Anat DeBaras 4:643, 1886.

3. Hardner TJ: Lung puncture: a new application of clinical pathology. Lancet 2:1345, 1909.

4. Martin HE, Ellis EB: Biopsy by needle puncture and aspiration. Ann Surg 92:169-181, 1930.

5. Sharp GS: The diagnosis of primary carcinoma of the lung by aspiration. Amer J Cancer 15:863-870, 1931.

6. Martin HE, Ellis EB: Aspiration biopsy. Surg Gynec Obstet 59:578-589, 1934.

7. Craver LF, Binkley JS: Aspiration biopsy of tumors of the lung. J Thorac Surg 8:436-463, 1939.

8. Woolf CR: Applications of aspiration lung biopsy with a review of the literature. Dis Chest 25:286-300, 1954.

9. Dahlgren S, Nordenstrom B: Transthoracic Needle Biopsy. Chicago, Year Book Medical Publishers, Inc, 1966.

10. Nordenstrom B: A new technique for transthoracic biopsy of lung changes. Brit J Radiol 38:550-553, 1965.

11. Rosemond GP, Burnett WE, Hall JH: Value and limitations of aspiration biopsy for lung lesions. Radiology 52:506-510, 1949.

12. Craver LF: Diagnosis of malignant lung tumors by aspiration biopsy and by sputum examination. Surgery 8:947-960, 1940.

13. Dutra FR, Geraci CL: Needle biopsy of the lung. JAMA 155:21-24, 1954.

14. Sarin LR, Bhatnagar L: Needle biopsy of the lung: case reports. Indian J Med Sci 13:901-904, 1959.

15. Manfredi F, Krumholz R: Percutaneous needle biopsy of the lung in evaluation of pulmonary disorders. JAMA 198:1198-1202, 1966.

16. Youmans CR Jr, Middleton JM, Derrick JR, et al: Percutaneous needle biopsy of the lung for diffuse parenchymal disease. Dis Chest 54:25-31, 1968.

17. Youmans CR Jr, Middleton JW, Derrick JR, et al: The technic of percutaneous needle biopsy for diffuse lung disease. Southern Med J 61:1023, 1028, 1968.

18. Youmans CR Jr, deGroot WJ, Marshall R, et al: Needle biopsy of the lung in diffuse parenchymal disease; an analysis of 151 cases. Unpublished data.

19. Adamson JS, Bates JH: Percutaneous needle biopsy of the lung. Arch Intern Med 119:164-169, 1967.

20. Wolinsky H, Lischner MW: Needle track implantation of tumor after percutaneous lung biopsy. Ann Intern Med 71:359-362, 1969.

Dr. Youmans, 622 Highway 3, La Marque, Tex 77568.

Drs. deGroot, Marshall, Morettin, Derrick, The University of Texas Medical Branch, Galveston, Tex 77550.

BREAKUP—symbol of the impact of emotional stres
But when the stress exceeds transient rage or
depression—and settles into a chronic mixed anxiety
depression state—combined tranquilizer-
antidepressant therapy could be indicated.

FOR MODERATE TO SEVERE ANXIETY WITH COEXISTING DEPRESSION

TRIAVIL®

TRANQUILIZER-ANTIDEPRESSANT

Containing perphenazine and amitriptyline HCl

For prescribing information, including indications, contraindications, warnings, precautions, and side effects, please see following page.

FOR MODERATE TO SEVERE ANXIETY WITH COEXISTING DEPRESSION

TRIAVIL®

TRANQUILIZER-ANTIDEPRESSANT

Containing perphenazine and amitriptyline HCl

TRIAVIL®2-10: Each tablet contains 2 mg. of perphenazine and 10 mg. of amitriptyline hydrochloride.

TRIAVIL®2-25: Each tablet contains 2 mg. of perphenazine and 25 mg. of amitriptyline hydrochloride.

TRIAVIL®4-10: Each tablet contains 4 mg. of perphenazine and 10 mg. of amitriptyline hydrochloride.

TRIAVIL®4-25: Each tablet contains 4 mg. of perphenazine and 25 mg. of amitriptyline hydrochloride.

INDICATIONS: Patients with moderate to severe anxiety and/or agitation and depressed mood; patients with depression in whom anxiety and/or agitation are severe; patients with depression and anxiety in association with chronic physical disease; schizophrenics with associated depressive symptoms.

CONTRAINDICATIONS: Central nervous system depression from drugs (barbiturates, alcohol, narcotics, analgesics, antihistamines); bone marrow depression; pregnancy; and in patients with known hypersensitivity to phenothiazines or amitriptyline. Do not give in combination with MAOI drugs because of possible potentiation that may even cause death. Allow at least two weeks between therapies. In such patients therapy with TRIAVIL should be initiated cautiously, with gradual increase in the dosage required to obtain a satisfactory response. Do not give concomitantly with guanethidine or similarly acting compounds since it may block the antihypertensive effect.

WARNINGS: Patients should be warned against driving a car or operating machinery or apparatus requiring alert attention, and that response to alcohol may be increased.

PRECAUTIONS: Suicide is always a possibility in mental depression and may remain until significant remission occurs. Supervise patients closely in case they may require hospitalization or concomitant electroshock therapy. Untoward reactions have been reported after the combined use of antidepressant agents having various modes of activity. Accordingly, consider possibility of potentiation in combined use of antidepressants. Use with caution in patients with glaucoma and those with problems of urinary retention. Perphenazine can lower the convulsive threshold in susceptible individuals. It should be given with caution to patients with convulsive disorders. Dosage of the anticonvulsive agent may have to be increased. Not recommended for use in children. Mania or hypomania may be precipitated in manic-depressives (perphenazine in TRIAVIL seems to reduce likelihood of this effect). If hypotension develops, epinephrine should not be employed, as its action is blocked and partially reversed by perphenazine. Caution patients about errors of judgment due to change in mood.

ADVERSE REACTIONS: Similar to those reported with either constituent alone.

Perphenazine: Should not be used indiscriminately. Use caution in patients who have previously exhibited severe reactions to other phenothiazines. Likelihood of untoward actions greater with high doses. Closely supervise with any dosage. Side effects may be any of those reported with phenothiazine drugs: extrapyramidal symptoms (opisthotonos, oculogyric crisis, hyperreflexia, dystonia, akathisia, dyskinesia, parkinsonism) usually controlled by the concomitant use of effective antiparkinsonian drugs and/or by reduction in dosage, but sometimes persist after discontinuation of the phenothiazine; skin disorders (photosensitivity, itching, erythema, urticaria, eczema, up to exfoliative dermatitis); other allergic reactions (asthma, laryngeal edema, angioneurotic edema, anaphylactoid reactions); peripheral edema; reversed epinephrine effect; hyperglycemia; endocrine disturbances (lactation, galactorrhea, disturbances of menstrual cycle); altered cerebrospinal fluid proteins; paradoxical excitement; EKG abnormalities (quinidine-like effect); reactivation of psychotic processes; catatonic-like states; autonomic reactions, such as dryness of the mouth, headache, nausea, vomiting, constipation, obstipation, urinary frequency, blurred vision, nasal congestion, and a change in the pulse rate; hypnotic effects; pigmentary retinopathy; corneal and lenticular pigmentation; occasional lassitude; muscle weakness; mild insomnia. Other adverse reactions reported with various phenothiazine compounds, but not with perphenazine, include blood dyscrasias (pancytopenia, thrombocytopenic purpura, leukopenia, agranulocytosis, eosinophilia); liver damage (jaundice, biliary stasis); grand mal convulsions; cerebral edema; polyphagia; photophobia; skin pigmentation; and failure of ejaculation. Significant unexplained rise in body temperature may suggest intolerance to perphenazine, in which case discontinue. Antiemetic effect may obscure signs of toxicity due to overdosage of other drugs or make diagnosis of other disorders such as brain tumors or intestinal obstruction difficult. May potentiate the action of central nervous system depressants (opiates, analgesics, antihistamines, barbiturates, alcohol) and atropine. In concurrent therapy with any of these, TRIAVIL should be given in reduced dosage. May also potentiate the action of heat and phosphorous insecticides.

Amitriptyline: Careful observation of all patients recommended. Side effects include drowsiness (may occur within the first few days of therapy); dizziness; nausea; excitement; hypertension; fainting; fine tremor; jitteriness; weakness; headache; heartburn; anorexia; increased perspiration; incoordination; impotence; increased appetite and weight gain; allergic-type reactions manifested by skin rash, swelling of face and tongue, itching; numbness and tingling of limbs, including peripheral neuropathy; activation of latent schizophrenia (however, the perphenazine content may prevent this reaction in some cases); epileptiform seizures; temporary confusion, disturbed concentration, or transient visual hallucinations on high doses; evidence of anticholinergic activity, such as tachycardia, dryness of mouth, stomatitis, blurring of vision, reversible dilatation of the urinary tract, urinary retention, constipation, paralytic ileus; agranulocytosis; jaundice. Elderly patients and adolescents can often be managed on lower dosage levels.

For more detailed information, consult your MSD Representative or see the package circular. Merck Sharp & Dohme, Division of Merck & Co., Inc., West Point, Pa. 19486.

MSD MERCK SHARP & DOHME

A
BUILDING BLOCK
TO RECOVERY

Orenzyme® Bitabs

Trypsin: 100,000 N.F. Units, Chymotrypsin: 8,000 N.F. Units; equivalent in tryptic activity to 40 mg. of N.F. trypsin

The causes of vaginitis are multiple

Trichomonads... monilia... bacteria
You can depend on AVC—comprehensive therapy that combats all three major vaginal pathogens, alone or in combination.

AVC
Cream (aminacrine hydrochloride 0.2%, sulfanilamide 15.0%, allantoin 2.0%)

Suppositories (aminacrine hydrochloride 0.014 Gm., sulfanilamide 1.05 Gm., allantoin 0.14 Gm.)

Contraindications: Known sensitivity to sulfonamides.
Precautions/Adverse Reactions: The usual precoutians far topical and systemic sulfonamides should be observed because of the possibility af absorption. Burning, increased lacol discomfort, skin rash, urticaria or ather manifestotions of sulfonamide toxicity are reasans ta discontinue treatment.
Dosage: One applicotorful or ane suppositary introvaginally ance ar twice daily.
Supplied: Cream – Faur-ounce tube with or without applicatar. Suppositories – Box of 12 with applicator.

TRADEMARK: AVÇ AV-007A 7/70 Y-149

THE NATIONAL DRUG COMPANY
DIVISION OF RICHARDSON-MERRELL INC
PHILADELPHIA, PENNSYLVANIA 19144

AVC
The treatment is singular

SECRAN® Vitamin B Complex Elixir

each teaspoonful contains 25 mcg. Crystalline Vitamin B_{12}

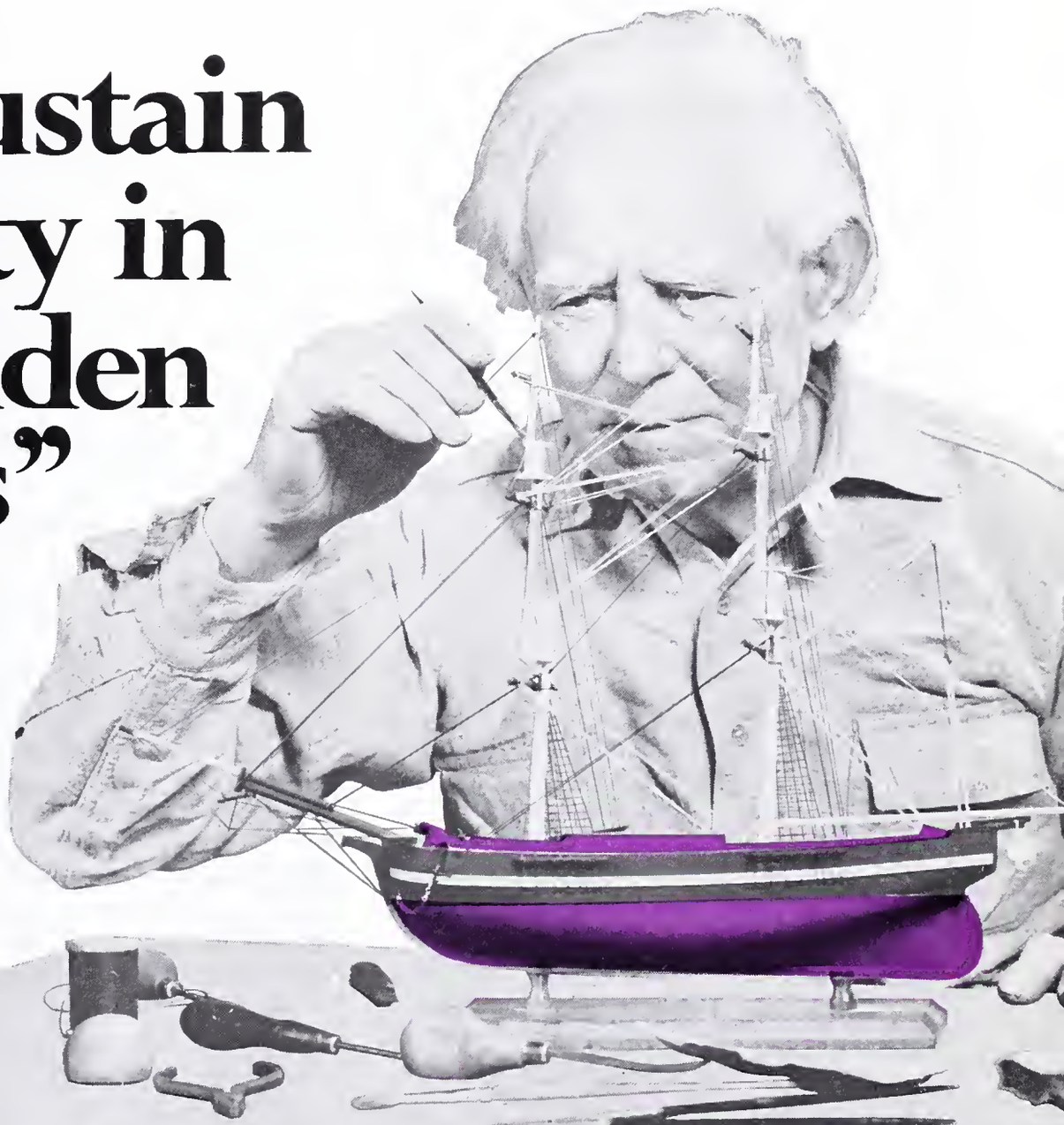
The aging or convalescent patient may develop nutritional deficiency. In such cases, SECRAN speeds the "comeback" with its B complex formula. Helps the active person *stay* active . . . an important factor in the "golden years."

Thanks to the sherry wine base, SECRAN is pleasant to take and provides a comforting sense of warmth to the geriatric or convalescent patient.

So when lack of appetite or other factors cause nutritional deficiency, suggest SECRAN.

Also available in SECRAN/FE, fortified with iron, in liquid and convenient capsules.

To help sustain activity in the "golden years"



SECRAN® Vitamin B Complex Elixir
Each average teaspoontul (5 cc) contains: Vitamin B_{12} Crystalline* (Cyanocobalimin), 25 mcg; Thiamine Mononitrate (B_1), 10 mg.; Nicotinamide Hydrochloride, 13 mg.; Pyridoxine, Hydrochloride* (B_6), 1 mg.; Alcohol, 17%. Multiples of Minimum Daily Requirements in each teaspoon (5 cc.): Thiamine Mononitrate (B_1) 10, Nicotinamide 1.3.
*The Minimum Daily Requirement has not been established.
USES: B-Vitamin deficiencies. **AVERAGE ADULT DOSE:** 2 to 4 teaspoonfuls daily, or as directed by physician. **AVAILABLE:** 8 ounces, pint, gallon.

First Texas Pharmaceuticals, Inc. Dallas, Texas 75222
the Concern for Care

SECRAN® is formulated in a delicious sherry wine base.

INTRAVENOUS HYPEROSMOLAR ALIMENTATION

Advantages and Complications

MAJ WALTER J. WYRICK, JR, MC, USA

THE VALUE OF NUTRITION in medicine has been well appreciated for the past two decades, and although it has become increasingly obvious that protein metabolism often is a decisive factor in the outcome of many critical cases, it has rarely been possible to achieve positive nitrogen balance in patients following major medical or surgical illnesses. In the late 1950s, Moore showed that approximately 150 nonprotein calories are required to spare a single gram of nitrogen for protein synthesis and tissue healing.[1] No one was able to devise a means of delivering this large number of calories intravenously as high-concentration glucose solutions, and later the protein hydrolysates, resulted in swelling, phlebitis, and other complications when given through peripheral veins for any significant length of time. Rhoads approached this problem in the early 1960s by infusing 5 to 6 liters of 10% glucose solution a day along with diuretics to provide urinary excretion of the excess fluid.[2] Although this increased the daily caloric intake from 500 to 2,500 calories per day, often it was still calorically inadequate for protein synthesis, cumbersome, dangerous, and obviously contraindicated in most seriously ill patients.

Because gram for gram fat contains more than twice the calories of carbohydrates, intravenous fat emulsions (Lipomal) were developed for intravenous alimentation. After a period of initial enthusiasm, numerous reports of liver dysfunction, coagulation defects, and frank anaphylactic reactions resulted in its being withdrawn from the market in this country.

In 1967 Dudrick and associates reported raising six beagle puppies to full growth using only intravenous alimentation.[3,4] This was followed by an in-depth report (July 1968) on the puppies, as well as on six patients with serious gastrointestinal disease.[5] These patients were fed intravenously for an average of four weeks with the establishment of positive nitrogen balance in each. Since then, others have been able to confirm these results and effect a considerable reduction in the morbidity and mortality rates in certain critically ill patients.[6-10]

Methods and Materials: From September 1968 through January 1970, more than 100 critically ill patients at The University of Texas (Southwestern) Medical School Hospitals have been treated with intravenous hyperosmolar alimentation according to the methods established by Dudrick and associates. The solution was prepared by taking a liter of 5% protein hydrolysate and discarding 250 cc of the solution. The following solutions were then added to the protein hydrolysate: 350 cc 50% dextrose, 40 mEq potassium chloride, and 20 cc of 5% sodium chloride (Table 1). It is recommended that the solution be mixed aseptically in the hospital pharmacy under a laminar airflow hood using specially made mixing burettes; however, most of these solutions were mixed by hand on the ward by the nursing personnel using careful aseptic techniques. One ampule, 10 cc, of multiple fat- and water-soluble vitamins was added to one bottle each day; calcium, phosphorus, magnesium, and zinc were added when indicated by serum deficiencies. Iron and vitamin K were given twice weekly, folic acid every two weeks, and vitamin B_{12} each month intramus-

Hyperosmolar alimentation entirely by the intravenous route has resulted in positive nitrogen balance enabling many patients to survive illnesses and complications that would have been fatal otherwise. It has been used both before and after surgery to supply the energy and substrate requirements for combating infection and healing tissues. The technique of this therapy is reviewed, along with some specific indications for its use as well as possible complications and their management.

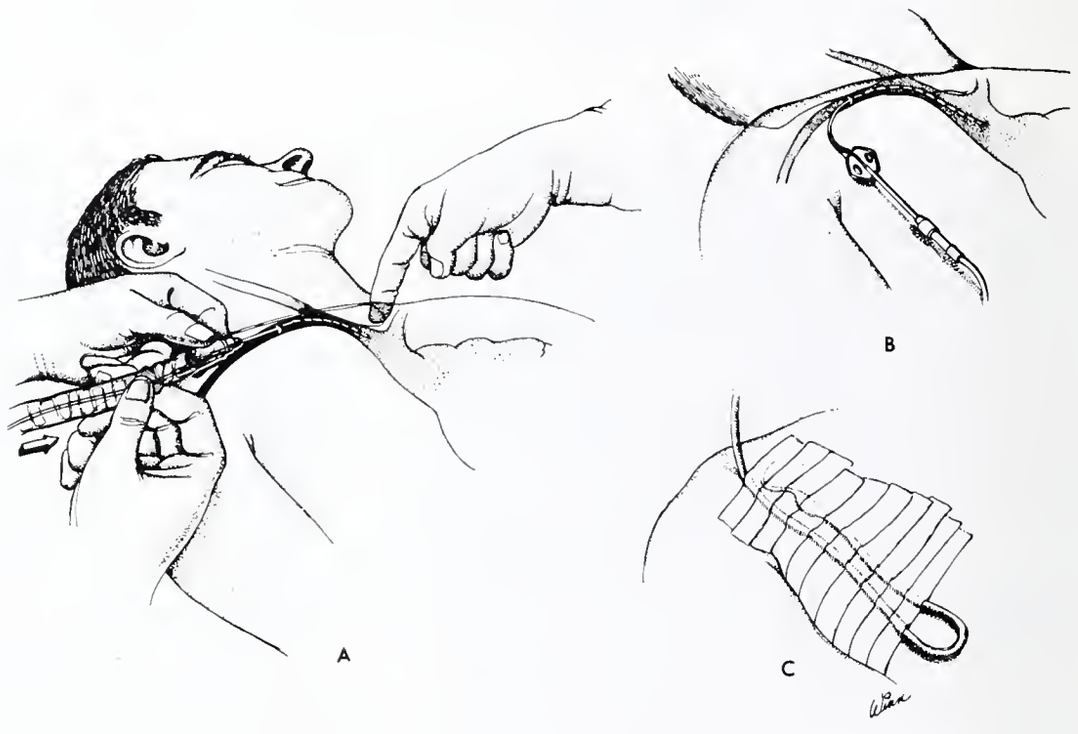
cularly. Microminerals and trace elements were supplied in type-specific plasma or whole-blood transfusions given weekly after one month of alimentation entirely by the intravenous route. A single 1,150 cc bottle of solution contained approximately 1,100 calories, 6 gm of nitrogen, and 37 gm of protein. The solution was administered continuously at a steady rate and slowly increased to as large a volume as the individual patient could tolerate. One patient tolerated 5,400 cc a day, although the average was 3,300 cc a day—that is 3,300 calories and 18 gm of nitrogen a day by the intravenous route. The urine was checked every four hours for glucose; if the reaction was 3+ or 4+, the patient received 10 or 15 units, respectively, of regular insulin subcutaneously.

The hyperosmolar solution was administered through a central venous catheter placed in the subclavian vein by percutaneous puncture, with the patient in slight Trendelenburg position, after defatting the skin with acetone and sterilizing with iodine as described by Wilmore and Dudrick[11,12] (Fig 1). The entry site was treated with an antibiotic ointment and covered with a sterile occlusive dressing. The catheter site was dressed and the intravenous tubing changed every Monday, Wednesday, and Friday. A plain chest film determined that the radiopaque catheter was in the proper position before administration of the solution was begun. The catheter should never be used for withdrawing blood or administering other medications if long-term aseptic catheterization is to be maintained.

Advantages: Surgery, trauma, fever, infection, and fractures result in a hypermetabolic state at a time when food intake is reduced or nonexistent. Body protein is broken down to supply the energy requirements necessary to carry on vital functions with a resultant impairment of wound healing, reduced resistance to infection, and an apathetic attitude towards recovery. A vicious cycle is often created in cachectic or critically ill patients who are too apathetic or too ill to ingest and retain sufficient nourishment to combat their illness and heal their wounds; the resultant downhill plight is obvious. The supplementation or complete maintenance with intravenous hyperosmolar alimentation during this critical period will enable many of these patients to survive illnesses and complications that previously would have been fatal.

Preoperative hyperosmolar alimentation has been used in patients who, because of other diseases, have been in a state of "chronic starvation." It has been used to reverse the metabolic status of patients with benign esophageal stricture, steatorrhea, malabsorption syndromes, anorexia nervosa, and alcoholism before undertaking major surgical procedures. It may help achieve positive balance in emaciated patients with obstructed duodenal ulcer preoperatively while suction is maintained as long as is necessary to restore gastric tone. Postoperative gastric atony following vagotomy, and prolonged ileus after small-bowel obstruction, may be tolerated with only minor inconvenience. It has been of great benefit in preparing patients with esophageal carcinoma, gastric carcinoma, and periampullary lesions for major surgery and is continued into the postoperative period. Where-

Fig 1. A. Venipuncture is begun at the inferior border of the midpoint of the clavicle with the needle point directed at a fingertip in the suprasternal notch. B. The catheter is secured with a suture, and antibiotic ointment applied. C. A sterile occlusive dressing is applied.



as previously patients with these lesions underwent surgery in a state of negative nitrogen balance, they may now be placed in positive nitrogen balance preoperatively and kept in an anabolic state throughout the postoperative period, with sufficient energy and amino acids for wound healing and resisting infection. Many patients with malignant disease could have further palliation if they were better surgical risks. By preoperative intravenous alimentation, many palliative procedures such as oophorectomy and adrenalectomy in breast carcinoma, and any number of bypass procedures for obstruction (esophageal, stomach, common duct, pancreas, small-bowel lesions, etc) could be performed more safely.

Most septic patients or those with an active chronic infection are reluctant to eat heartily, and yet these patients' caloric requirements may be as high as 6,000 calories a day. Even high-caloric, high-protein tube feedings frequently are insufficient in themselves to supply adquate nutrition for patients with infected burns, empyemas, multiple liver abscesses, peritonitis, and lung abscesses, among others. In any febrile patient, sufficient nutritional materials to combat the infection and heal the wounds must be supplied, and the intravenous route may be used to great advantage in these patients.

High intestinal fistulas, whether resulting from external or surgical trauma, have carried a 60 to 70% mortality for years. Previous success has centered around early operative closure of the fistulas before the patient's condition underwent further deterioration, even though this meant operating when severe catabolism decreased the patient's ability to heal wounds,

5% Casein hydrolysate	750 cc
50% Dextrose	350 cc
5% Sodium chloride	20 cc
Potassium chloride	40 mEq
MVI-Vitamins	1/3 ampule
Supplemental minerals added as needed (calcium, phosphorus, magnesium, etc)	
Total	Approximately 1,100 cc per bottle (1,100 calories)

Table 1. Hyperosmolar solution.

and dealing with very friable tissues. We have been able to maintain our patients with high intestinal fistula in positive nitrogen balance solely by intravenous hyperosmolar alimentation with resultant spontaneous closure of many of the fistulas, and are approaching a reversal of the exorbitantly high mortality rate for this complication. Patients with broncho-pleural-cutaneous fistulas and fistulas between the colon and other organs also may be benefited by the additional building blocks supplied by this therapy, as these fistulas almost always are associated with an infectious process.

Inflammatory disease of the gastrointestinal tract is one of the major areas where intravenous alimentation has been used, and perhaps with the most success. In pancreatitis, regional enteritis, granulomatous colitis, and ulcerative colitis the entire gastrointestinal tract may be put at rest with a cessation of cramps, nausea, and diarrhea. In some cases of ulcerative colitis, alimentation only by the intravenous route has resulted in a cessation of the acute symptoms and permitted definitive reparative surgery under much better conditions.

Intravenous hyperosmolar therapy has been used successfully in patients with renal failure, liver decompensation, and following massive small-bowel resection.[6,8,13] Previous treatment of patients in acute renal failure centered around low-protein, high-carbohydrate diets, but usually was nutritionally insufficient to prevent a catabolic state. Intravenous alimentation causes an initial rise in the level of blood urea nitrogen (BUN), but this usually is followed by a drop in the level as the availability of certain amino acids and adequate calories result in utilization of the retained urea into protein synthesis.[13] This subsequently may result in a decrease of the azotemic symptoms and certainly provides for better resistance to infection,

Fig 2. Ambulatory patient receiving hyperosmolar alimentation via subclavian catheterization.

which often is the fatal component of this disease. Blood sugars, instead of glycosuria, of course, must be monitored at appropriate intervals. In patients with liver dysfunction, the amount of nitrogen given per day should be restricted and that amount given slowly over each 24 hours; additional 50% dextrose and other necessary fluids and electrolytes are supplied in the place of the restricted nitrogen. The injured liver parenchyma appears to benefit from a large carbohydrate caloric load which supports hepatic cellular rejuvenation. A gradual increase in the subsequent intravenous nitrogen load frequently is possible.

Massive small-bowel resection following midgut volvulus, mesenteric artery or venous thrombosis, embolus, inflammatory disease, or trauma often is followed by overwhelming diarrhea with immediate fluid, electrolyte, and nutritional problems. Kinney and others have shown that given time, the residual intestine develops considerable hypertrophy, elongation, and increased absorptive capacity.[14] This critical interval is where intravenous alimentation may allow the patient to survive, and provide a background for a gradual return to oral foods according to the patient's tolerance.

The use of intravenous hyperosmolar alimentation in pediatrics has centered around congenital gastrointestinal anomalies since Dudrick first supported an infant with only 3 cm of small intestine for 400 days with normal growth and development.[2,15] These results were confirmed by Filler and associates reporting on 14 infants,[7] and Kaplan and others reporting on 7 infants.[9] These infants had a variety of diseases including various atresias, stenosis, and volvulus as well as tracheo-esophageal fistulas, perforations, and diaphragmatic hernias. It has been most useful, however, in enabling infants to survive the long periods of ileus associated with gastroschisis, ruptured omphalocele, and meconium ileus.

Complications: *Catheters:* Long-term safe venous catherizations can be accomplished by catheter placement under aseptic conditions and proper maintenance. Although a thorough search of the literature will disclose numerous different complications of percutaneous subclavian venous catherization, in practice these complications are rare and usually easily managed when encountered. Our experience, as well as that of others, has led us to abandon cut-down procedures in adults, although external jugular vein cut-down is the procedure of choice in infants with the catheter subsequently tunneled subcutaneously and brought out a small incision in the posterior scalp.[12] In adults, cut-downs have resulted in several incidences of thrombosis including one episode of superior vena cava thrombosis from a jugular vein cut-down. In our experience, the only complications of percutaneous subclavian puncture have been simple pneumothorax and subclavian artery puncture without hemorrhage. A review of the literature reveals isolated cases of catheter embolism, sepsis, clot embolism, tension pneumothorax, brachial plexus injury, chylothorax, subcutaneous emphysema, hematoma, and subclavian vein tear with hemothorax.[16,17] Intracardiac perforation with or without cardiac tamponade has been described,[18,19] although

only a few drops of water should be administered until the chest roentgenogram has established proper placement of the catheter in the superior vena cava. One case of air embolism has been reported following subclavian puncture with a 14-gauge needle with the patient in the semi-Fowler position.[20] However, if one follows the techniques as described by Davidson, Dudrick, Wilmore and others, subclavian puncture will become a simple and safe means of large-vein catheterization.[2,15,21]

Solution: The administration of this hypertonic solution must be at a continuous and steady rate in order to prevent overloading the circulation. Diabetics require closer monitoring and may require large supplemental doses of insulin. Aseptic technique must be used in preparing the solution to prevent bacterial contamination and resultant septic shock. We have had one patient who developed an acute hypersensitivity reaction to the 5% protein hydrolysate solution. In these patients Freamine, which contains purified L-amino acids, may be substituted for the protein hydrolysate solution and perhaps will entirely replace it in the near future as it becomes more available. Following a head injury, one patient developed hypernatremia, hyperchloremia, and acidosis along with profound diuresis and volume depletion when given the solution. This was thought to be the result of a combination of inadequate antidiuretic hormone secretion along with a low renal threshold for glucose with resultant severe osmotic diuresis. He was managed successfully by slowing the rate of infusion and providing additional amounts of 5% dextrose in water. Most blood

ADVANTAGES	COMPLICATIONS
Preoperative:	Catheters:
Chronically ill	Sepsis
Cancer patients	Pneumothorax
Chronic infection, sepsis, burns	Hemorrhage
Fistulas	Cardiac tamponade
Prolonged ileus	Vein thrombosis
Inflammatory diseases of the gastrointestinal tract	Chylothorax
Liver dysfunction	Subcutaneous emphysema
Renal failure	Embolism
Short-bowel syndromes	Nerve injury
Congenital gastrointestinal anomalies	Solution:
	Sepsis
	Fluid overload
	Excessive diuresis
	Hypersensitivity
	Hyperosmolar coma
	Diabetics
	Adjustments and Omissions:
	Failure to monitor
	Failure to supplement:
	The solution
	Intramuscularly

Table 2. Intravenous hyperosmolar alimentation.

sugar determinations remained in the 100 to 350 mg/100 ml range, although three patients had blood glucose levels between 350 and 500 mg/100 ml. Two patients, whose blood sugar levels rose to 1,780 and 2,100 mg/100 ml, respectively, within the first 60 hours of therapy, became lethargic and obtunded. These patients with hyperosmolar coma were treated by stopping the therapy and administering the appropriate fluids, electrolytes, and intravenous insulin as if they were in diabetic ketoacidosis, although ketosis was never present. They promptly recovered from the hyperosmotic coma.

Adjustments and Omissions: Unfortunately, the basic mixture described cannot be expected to maintain every patient. As the patient's condition and specific requirements change, so must the supplemental therapy change to meet these requirements. A patient who develops some degree of cardiac decompensation may require less sodium; a patient in renal failure may need little potassium whereas a patient with an infected burn may require 200-300 mEq of potassium a day. Not only must the solution be changed as the requirements change, but one must not overlook the other nutrients to be given parenterally—vitamins K and B_{12}, calcium, phosphorus, magnesium, zinc, iron, folic acid, and the trace elements in the form of plasma or whole blood.

Results: More than 200 patients treated with intravenous hyperosmolar alimentation have now been reported in the literature.[5,7-10,15] More than 100 patients have been treated with this mode of therapy at the University of Texas (Southwestern) Medical School affiliated hospitals. The first 54 cases were studied in detail and have been reported previously.[10] Of the 45 critically ill patients in that group who received the therapy for a significant time, 82% survived. This is a remarkable increase in the survival rate, considering that there were 21 fistulas and 35 abscesses in these patients. In the surviving patients, therapy was started an average of 19 days earlier than in those who died. Age was no contraindication to intravenous hyperosmolar alimentation, nor was abnormal hepatic function or renal failure. It is evident that given adequate nitrogen and calories, critically ill patients can attain a positive nitrogen balance, better combat infection, heal wounds, and better tolerate fistulas with a resultant decrease in mortality.

Summary: Intravenous hyperosmolar alimentation is a means of supplying adequate nitrogen and calories to furnish the necessary energy and substrate requirements to combat infection and heal the wounds of many disease processes. Patients will no longer be required to resist their disease processes or undergo major surgical procedures in a catabolic state for prolonged periods. This therapy may be used preoperatively in chronically ill and emaciated patients or in patients with carcinoma to improve their surgical risk. It has been used with great success in chronic infections, acute sepsis, burns, fistulas, and especially in inflammatory diseases of the gastrointestinal tract. It may be used to decrease susceptibility or combat infection in many patients including those with severe liver dysfunction or renal failure. Intravenous hyperosmolar alimentation has been successful in

carrying patients over critical periods such as following massive small-bowel resection, gastroschisis, ruptured omphalocele, and meconium ileus, to emphasize a few.

As with many major modes of therapy, intravenous hyperosmolar alimentation has been associated with a few complications. However, with proper placement and maintenance of the catheter, tubing, and solution, along with close monitoring of the patient's clinical and laboratory status, this mode of therapy should prove to be rewarding. A significant reduction in the morbidity and mortality rates in certain critically ill patients should accompany widespread knowledge and correct use of this exciting new method of treatment.

REFERENCES

1. Moore FD: Metabolic Care of the Surgical Patient. Philadelphia and London, W B Saunders Co, 1959.

2. Dudrick SJ, Wilmore DW: Long-term parenteral feeding. Hospital Practice 3:65-78, 1969.

3. Dudrick SJ, Rhoads JE, Vars HM: Growth of puppies receiving all nutritional requirements by vein. Fortschritteden Perenteralen Ernabrung 2:16, 1967.

4. Dudrick SJ, Wilmore DW, Vars HM: Long-term total parenteral nutrition with growth in puppies and positive nitrogen balance in patients. Surg Forum 18:356-357, 1967.

5. Dudrick SJ, Wilmore DW, Vars HM, et al: Long-term total parenteral nutrition with growth, development, and positive nitrogen balance. Surgery 64:134-142, 1968.

6. Thompson WR, Stephens RV, Randall HT, et al: Use of the "space diet" in the management of a patient with extreme short bowel syndrome. Amer J Surg 117:449-459, 1969.

7. Filler RM, Eraklis AJ, Rubin VG, et al: Long-term total parenteral nutrition in infants. New Eng J Med 281:589-594, 1969.

8. Stephens RV, Randall HT: Use of a concentrated, balanced, liquid elemental diet for nutritional management of catabolic states. Ann Surg 170:642-667, 1969.

9. Kaplan MS, Mares A, Quintana P, et al: High caloric glucose-nitrogen infusions. Arch Surg 99:567-571, 1969.

10. Rea WJ, Wyrick WJ Jr, McClelland RN, et al: Intravenous hyperosmolar alimentation. Arch Surg 100:393-398, 1970.

11. Wilmore DW, Dudrick SJ: Safe long-term venous catheterization. Arch Surg 98:256-258, 1969.

12. Dudrick SJ, Groff DB, Wilmore DW: Long term venous catheterization in infants. Surg Gynec Obstet 129:805-808, 1969.

13. Wilmore DW, Dudrick SJ: Treatment of acute renal failure with intravenous essential L-amino acids. Arch Surg 99:669-673, 1969.

14. Kinney JM, Goldwyn RM, Barr JS Jr, et al: Loss of entire jejunum and ileum, and the ascending colon. Management of a patient. JAMA 179:529-532, 1962.

15. Dudrick SJ, Wilmore DW, Vars HM, et al: Can intravenous feeding as the sole means of nutrition support growth in the child and restore weight loss in an adult? An affirmative answer. Ann Surg 169:974-984, 1969.

16. Smith BE, Modell JH, Gaub ML, et al: Complications of subclavian vein catheterization. Arch Surg 90:228-229, 1965.

17. Hinckley ME: Thoracic-duct thrombosis with fatal chylothorax caused by a long venous catheter. New Eng J Med 280:95-96, 1969.

18. Lawton RL, Rossi NP, Funk DC: Intracardiac perforation. Arch Surg 98:213-216, 1969.

19. Thomas CS Jr, Carter JW, Lowder SC: Pericardial tamponade from central venous catheters. Arch Surg 98:217-218, 1969.

20. Flanagan JP, Gradisar IA, Gross RJ, et al: Air embolus—a lethal complication of subclavian venipuncture. New Eng J Med 281:488-489, 1969.

21. Davidson JT, Ben-Hur N, Nathen H: Subclavian venepuncture. Lancet 2:1139-1140, 1963.

Dr. Wyrick, 56th General Hospital, APO 09252, New York, NY.

YE GADS!!

FORGET TO ENROLL FOR THE NEW Texas Medical Association GROUP PLAN?

There Is Still Time To Apply For The Texas Medical Association's Level Benefit Group Life Plan. This Plan Provides A Level $50,000 Of Group Life Coverage For Physicians Until Age 70, When The Amount Reduces To $5,000. Lesser Amounts Are Provided For Employees. Employees Can Contribute Toward The Cost Of Their Coverage Under This New Plan.

For Full Details Contact

TEXAS MEDICAL ASSOCIATION SERVICE OFFICE AT 1230 WEST 19TH, AUSTIN, TEXAS 78701

Underwritten By

Prudential

NEWS

TMA Conference Speakers Offer Ideas Regarding Future of Organized Medicine, MDs and Hospitals

Participants in the Texas Medical Association's fall Conference on Medical Practice were treated to the ideas of five outstanding speakers at the early morning conference session on Sept. 19 in the Sam Thompson Room of the TMA Headquarters Building in Austin.

Leading off the presentations was TMA President Dr. Walter Walthall of San Antonio who addressed conference participants on the "Goals and Challenges for Medicine." Dr. Walthall also presided over the proceedings of the conference.

Dr. John R. Kernodle of Burlington, N.C., vice-chairman of the American Medical Association Board of Trustees, addressed himself to the topic, "Medicine's Positive Response to Public Criticism Against Physicians." The title of his talk was "Communicating in the Seventies." As chairman of the Communications Committee of the AMA Board of Trustees, Dr. Kernodle pointed out the urgent need for positive medical communications to the public. Dr. Kernodle also predicted that within the next 10 years there will be more change in the financing and direction of health care in America than in any previous decade.

He then proceeded to explain the details of the major Communications Program of the AMA, which includes use of television, educational advertising, audiovisual aids for the doctor's office and home, and strengthening and expanding of media relations to meet the increased challenges being hurled today at America's health care system.

He concluded by saying, "We at the AMA believe that with all its versatility, our program for the 70's will do much to improve the climate of public opinion toward organized medicine. But the ultimate test will only come when people who are more favorably inclined look to their own communities—to see what their hometown physicians are doing.

"Therefore, I propose that we come together in a rededicated partnership . . . Let us continue to be the best physicians we know how to be. And let us then—in the language of the day—'tell it like it is.'

"That, I submit, is the only way to effectively communicate in the 1970's."

Dr. Michael J. Halberstam, a practicing physician in Washington, D. C., spoke on the individual physician's response to "America's 'Non-System' of Medical Care."

Dr. George J. Lawrence, Jr., of Flushing, N. Y., is chairman of the Board of Directors of the American Medical Political Action Committee. Speaking on "AMPAC—A Potent Force in 1970," Dr. Lawrence related some of the complicated—and somewhat amusing—political situations found in his home state of New York. He then delved into the pressing issues of 1970—redistricting and national health insurance, which could very well mean a complete restructuring of the health care system in America.

He noted, "When we support a candidate, we are not out to buy him, lock, stock, and barrel. We are not out to purchase his slavish obedience to our every wish. We are not out to extract from him an oath signed in blood.

"We are out to win the right to a dialogue with a man of conscience. We are out to help men of conscience, intelligence, and integrity win office.

"On this basis, the PAC movement has been extraordinarily successful in its relatively short span of existence."

Dr. Lawrence ended with the plea that all concerned physicians become involved, personally and financially, in the PAC movements—especially since the stakes are so high this year—and with the hope that AMPAC will indeed be a potent force in this politically critical year.

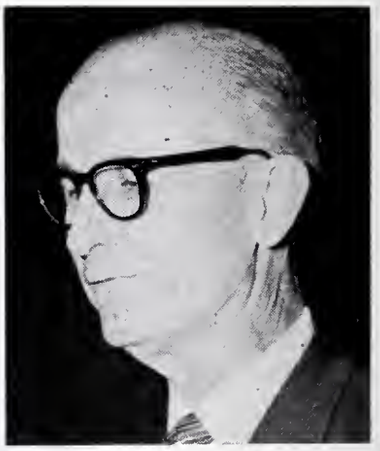
Max Wildman of Chicago, Ill., senior partner in the law firm of Wildman, Harrold, Allen & Dixon, closed the early morning session with his presentation on "Medical Trials and Tribulations," in which he discussed various legal aspects involved in the practice of medicine.

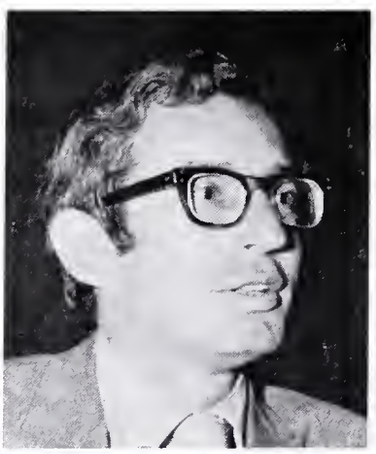
Presiding over a panel on "The Physician and the Hospital; Current Issues and Interests" at the second morning session was Dr. G. V. Brindley, Jr., of Temple, a past president of TMA. Dr. Robert Mayo Tenery of Waxahachie, chairman of the TMA Council on Constitution and By-Laws, spoke on the staffing patterns in hospital emergency rooms. He discussed the commonly used rotating system and the problems encountered in the operation of an emergency room.

In concluding, Dr. Tenery remarked, "The problems encountered in providing good emergency room care are but one sign of the revolutionary changes in the daily practice of medicine that are arising from the changing pattern of modern society and the progress of medical science. Our profession must meet this challenge within the framework of ethical principles which have traditionally insured the freedom for scientific advancement, the highest quality of professional service, and the utmost regard for the dignity of man."

Philip R. Overton, TMA general counsel, spoke on the "Consideration

TMA Conference on Medical Practice





Success was the by-word of the fall TMA Conference on Medical Practice, held Sept. 18 and 19 in Austin. Dr. Walter Walthall of San Antonio, TMA President, upper right, presided over the conference. Guest speakers included, from left to right, Max Wildman of Chicago, Ill., senior partner in the law firm of Wildman, Harrold, Allen & Dixon; Dr. Michael J. Halberstam, practicing physician of Washington, D.C.; Dr. George J. Lawrence, Jr., of Flushing, N.Y., chairman of the Board of Directors of the American Medical Political Action Committee; and Dr. John R. Kernodle of Burlington, N.C., vice-chairman of the AMA Board of Trustees. At left, TMA members congregate outside the Sam Thompson Room in the TMA Headquarters Building, awaiting the start of the second morning session of the conference.

Above, Dr. Robert Mayo Tenery of Waxahachie discusses staffing patterns in hospital emergency rooms at conference panel discussion. Other panel members were Philip R. Overton of Austin, Dr. Charles Max Cole of Dallas, and Dr. William F. Ross of San Benito. Past TMA President Dr. G. V. Brindley, Jr., of Temple presided over the panel. Upper right, Dr. R. A. Stevenson, Jr., right, chairman of the TEXPAC Board of Directors, presents the TEXPAC Meritorious Service Award to Dr. James H. Sammons, immediate past chairman of the AMPAC Board of Directors, in recognition of his leadership of AMPAC in 1969-1970. The award was presented at the Sept. 19 meeting of the TEXPAC Board of Directors. At right, the Riverboat Commodore capped off the conference entertainment with an evening cruise for MDs and their friends down Lake Austin to Greenshores for a sumptuous dinner. Also included in the entertainment was the Texas-University of California football game.

of Osteopaths for Hospital Staff Privileges." Mr. Overton explored the historical background of osteopaths and other similiar groups and considered the status of the MD-DO relationship today.

He explained to his audience the new policies of the AMA and TMA regarding osteopaths and pointed out the similarities between the MD and the DO, "primarily, the mutual aim of both of you is to render the best medical care possible to the people of Texas."

He proposed that doctors of osteopathy be allowed the privilege of engaging in activities similar to those engaged in by the practicing MD and concluded with the statement: "I believe that the fair-minded members of each group can work out this problem to the benefit of all concerned."

Dr. Charles Max Cole of Dallas, another panel member, discussed "Physician Representation on Hospital Governing Boards; Medical Staff Rights and Responsibilities." Dr. Cole is immediate past president of TMA.

The fifth member of the panel was Dr. William F. Ross of San Benito, chairman of the TMA Committee on Hospital Accreditation. His topic was "The Revised Standards of Hospital Accreditation; Their Impact upon Practicing Physicians and Medical Staffs of Hospitals."

At the same time the panel was under way, approximately 170 new TMA members were learning about the operations and opportunities of TMA. Dr. James A. Hallmark of Fort Worth, member of the TMA Board of Trustees, addressed the orientees on "An Accounting of Stewardship; What Happens to Your Dues." Dr. Charles B. Dryden, Jr., of Wichita Falls, chairman of the TMA Board of Councilors, spoke on "Medical Ethics—Obligations of the Physicians to His Colleagues and to the Medical Profession."

Two TMA Headquarters staff members also addressed the group. C. Lincoln Williston, TMA executive secretary, presented a talk on "The Role of the Texas Medical Association in Representing the Physicians of the State," and Donald M. Anderson, TMA assistant executive secretary, spoke on "Serving the Doctors of Texas."

At the conclusion of the orientation session and the panel discussion, the more than 700 conference registrants were treated to a barbeque luncheon in the basement of the Headquarters Building. After lunch, it was off to see the Texas Longhorns whip the University of California and to the evening cruise down Lake Austin on the Riverboat Commodore to Greenshores for dinner and then back to the dock to end a successful conference day.

Educational, Fun-Filled 1971 Annual Session Awaits TMA Participants May 5-9 In Houston

A new format for the scientific section meetings, extended Continental Breakfast Round Table presentations, 11 special programs, and numerous social and sports events will highlight the 1971 Texas Medical Association Annual Session scheduled for Wednesday, May 5, to Sunday, May 9, in Houston.

Scientific sections: Developed after careful review of the basic Annual Session format by the Council on Annual Session and members of the TMA Headquarters staff, the new format involves dividing the 13 scientific section meetings over a 2-day period. With this scheduling, registrants may hear more scientific presentations if they wish.

Meetings scheduled for Friday include the Section on General Practice, Section on Internal Medicine, Section on Ophthalmology, Section on Physical Medicine and Rehabilitation, Section on Nervous and Mental Diseases, Section on Radiology, and Section on Surgery.

On Saturday, registrants may attend the meetings of the Section on Digestive Diseases, Section on Obstetrics and Gynecology, Section on Otolaryngology, Section on Pathology, Section on Pediatrics, or Section on Public Health-Conference of City and County Health Officers.

Both Friday and Saturday meetings will be held from 10 a.m. to noon and from 2:30 p.m. to 5 p.m., allowing each section program to be completed in 1 day.

Other format changes include the deletion of all general meetings, which have been poorly attended in the past; all-day scheduling of films on Thursday; extension of the Continental Breakfast Round Table presentations from one to two mornings; and continuation of Curbstone Consultations at a new time.

The informal Continental Breakfast Round Table discussions will begin at 8:15 a.m. on Friday and Saturday and will last 1 hour 15 minutes, with 20 minutes allotted for a light breakfast, 20 for lecture by an out-of-state speaker, and 35 for open forum.

For the ninth consecutive year, the Annual Session will include the popular Curbstone Consultations. The sessions are scheduled for Friday and Saturday from 5 p.m. to 6 p.m. in the Emerald Room of the Shamrock Hilton Hotel, immediately following the conclusion of the scientific section programs.

A moderator and four or five participants will be seated at each table. A standard will be placed on each table to indicate the Curbstone Consultation topic at that table. Physicians may move freely from one table to another to participate in various discussions, while enjoying free beer, coffee, or soft drinks.

Topics for Friday Curbstone Consultations include: "Orthopedic Foot Problems in Children," "Antepartum Diagnosis of Congenital Anomalies," "You and the Law," "The Drug Abuse Problem," "Physical Therapy Modalities in Your Office," "Combining Immunizing Agents in Infancy," "What's New in the Treatment of Venereal Disease," "The Differential Diagnosis of Jaundice," "Surgery in The Aged," and "Common Skin Problems."

On Saturday, physicians will be able to discuss such topics as: "The Intrauterine Contraceptive Device," "Youthful Dissent—Politics or Psychopathology," "Rehabilitation of the Stroke Patient," "Diagnosis and Treatment of Recurrent Abdominal Pain in Children," "Management of Rheumatoid Arthritis," "Unplanned Pregnancy: (a)

Overseas Aid Program Offered By Foundation

Overseas adventure awaits the physician who participates in the new program established by the Direct Relief Foundation of California.

The foundation has set up the program, called Aesculapian International, to provide rural hospitals or those located in almost inaccessible areas of Central and South America, the Far East, South Asia, and Africa with medical aid and assistance.

Short-term assignments of 1 to 2 months are available, or if a physician prefers, he may accept a long-term assignment of one year or more.

Applicants and hospitals are carefully screened by the foundation to insure that the physician's tour of duty will be fruitful and pleasant—for the doctor, for the hospital, and for his new patients. In most cases, the physician's family may accompany him.

Like other foundation programs, the A. I. program is a low-budget operation, with its success depending heavily upon the time and funds donated by physicians and other interested persons.

Those interested in participating in the A. I. program may contact the Direct Relief Foundation, 27 East Canon Perdido Street, Santa Barbara, Calif. 83101, for further information.

In Public Schools, (b) In College," "Air Conservation," "Learning Disabilities in Children," "Psychiatric Drugs in Medical Practice," and "Antibiotics and Surgery."

Special programs: Proposed special programs have been scheduled as follows:

1. Symposium on Alcoholism, Thursday, 8 p.m., cosponsored by the Texas Commission on Alcoholism and The University of Texas Division of Extension.

2. Symposium on Cardiovascular Diseases, Thursday, 9 a.m. to 5 p.m., cosponsored by the TMA Committee on Cardiovascular Diseases and the American Heart Association, Texas Affiliate, Inc.

3. Conference on the Rehabilitation Potential of the Cardiac Patient, Saturday, 9 a.m. to 5 p.m., cosponsored by the TMA Committee on Workmen's Compensation and Industrial Health, TMA Committee on Rehabilitation, and the American Heart Association Rehabilitation Subcommittee.

4. Conference on Student Unrest, Thursday, 8 a.m. to 4:30 p.m., sponsored by the TMA Committee on School Health.

5. Symposium on the Practice of Medicine and the Whole Man, Thursday, 2 p.m. to 4 p.m., sponsored by the TMA Committee on Medicine and Religion.

6. Session on trauma, details to be announced, sponsored by the TMA Committee on Disaster Medical Care.

7. Symposium on automotive safety, Thursday, time to be announced, sponsored by the TMA Committee on Transportation Safety. Col. John P. Stapp of the National Highway Safety Bureau has been invited to speak on "Progress in Automotive Safety (1965-)."

8. Dinner meeting presentation by Dr. Denton Cooley, Houston heart surgeon, on the development of cardiovascular surgery, Thursday, 7 p.m., sponsored by the TMA Committee on Medical History.

9. Forum of Original Research, Thursday, 9 a.m. to 4:30 p.m., sponsored by the TMA Council on Annual Session. Dr. Thomas M. Runge of Austin, who initiated the idea of the forum, will serve as coordinator.

10. A seminar on Thursday from 12:30 p.m. to 6 p.m. will be sponsored by the Texas Academy of General Practice.

11. A symposium on Sunday from 8:30 a.m. to 4 p.m. will be sponsored by the United Cerebral Palsy Association of Texas, Inc.

Speakers: To date, 20 outstanding out-of-state speakers have accepted invitations to participate in the various activities of the 1971 Annual Session. Included are Dr. Alston Callahan, president of The Eye Foundation, Inc., Birmingham, Ala., guest of Texas Ophthalmological Association and TMA; Dr. William H. Crosby of the New England Medical Center Hospitals, Boston, Mass., guest of Section on Internal Medicine; Dr. Z. Z. Godlowski, director of the Immuno-Endocrinological Research Center, Chicago, Ill., guest of Texas Otolaryngological Association; Dr. Robert Goltz, professor and head of the division of dermatology at the University of Colorado Medical Center, Denver, guest of Texas Dermatological Society and TMA; Dr. C. Paul Hodgkinson, chairman of the department of gynecology-obstetrics of Henry Ford Hospital, Detroit, Mich., guest of Section on Obstetrics and Gynecology.

Also, Dr. James F. Holland, chief of medicine at Roswell Park Memorial Institute, Buffalo, N. Y., guest of the Texas Division, American Cancer Society; Dr. William F. House of the Otologic Medical Group, Los Angeles, Calif., guest of Texas Otolaryngological Association and TMA; Dr. Philip Kramer, associate professor of medicine at Boston University Medical Center, Boston, Mass., guest of Section on Digestive Diseases; Dr. Edward J. Kowalewski, president of the American Academy of General Practice, Akron, Penn., guest of Section on General Practice; and Dr. Alfred Edward Maumenee, professor of ophthalmology at Johns Hopkins University School of Medicine, Baltimore, Md., guest of Texas Ophthalmological Association and TMA.

Other out-of-state guest speakers are Dr. Lloyd M. Nyhus, Warren H. Cole professor and head of the department of surgery of the Abraham Lincoln School of Medicine, University of Illinois College of Medicine, Chicago, guest of Section on Surgery; Dr. Joseph H. Ogura, professor and chairman of the department of otolaryngology at Washington University School of Medicine, St. Louis, Mo., guest of Texas Otolaryngological Association and TMA; Dr. Peter Randall, professor of plastic surgery at the University of Pennsylvania Medical Center, Philadelphia, guest of Texas Society of Plastic Surgeons and TMA; Dr. Sylvia O. Richardson of the Children's Neuromuscular Diagnostic Clinic, Cincinnati, Ohio, guest of Section on Pediatrics; and Dr. Wendell G. Scott, professor of clinical radiology at Washington University School of Medicine, St. Louis, Mo., guest of Texas Division, American Cancer Society.

Completing the list are Dr. William S. Smith, professor and head of the section of orthopaedic surgery at the University of Michigan Medical School, Ann Arbor, guest of Texas Orthopaedic Association and TMA; Col. John P. Stapp, US Air Force, science adviser for the National Highway Safety Bureau, US Department of Transportation, Washington, D. C., guest of TMA Committee on Transportation Safety; Dr. Henry N. Wagner, Jr., of the department of radiological science at Johns Hopkins Medical Institutions, Baltimore, Md., guest of Texas Association of Physicians in Nuclear Medicine and TMA; and Dr. Morton M. Ziskind, professor of medicine at Tulane University School of Medicine, New Orleans, La., guest of Texas Industrial Medical Association and TMA.

Entertainment: Annual Session participants can look forward to exciting entertainment, too. Negotiations are under way with the Astroworld Hotel to arrange a package cocktail party, dinner, and dance for Saturday. This entertainment would be similar to the arrangements made with the Fairmont Hotel in Dallas at last year's Annual Session.

Class reunions and fraternity parties have been scheduled for Thursday at 6:30 p.m. Alumni functions will begin on Friday evening.

For the active doctor, sports events are scheduled for Friday. Activities include a golf tournament, a skeet and trap shoot, and a tennis tournament. Those wishing to participate in sports competition should contact Dr. Fred P. Thomas, Hermann Hospital, Houston 77025, sports events chairman.

A shuttle bus service is planned between the headquarters hotels for the convenience of registrants. The Shamrock Hilton Hotel will serve as the headquarters for the scientific sections, with business sessions scheduled in the Astroworld Hotel/Motels. Woman's Auxiliary meetings are scheduled in the Marriott Motor Hotel.

Tentative times and places for registration have been set: in the Grand Ballroom foyer of the Shamrock Hilton, May 5—1:30 p.m. to 5:30 p.m., May 6—7:30 a.m. to 5:30 p.m., May 7—7:30 a.m. to 5:30 p.m., and May 8—7:30 a.m. to 5 p.m.; in the lobby of the Shamrock Hilton, May 9—7:30 a.m. to noon; in the Ballroom cloak room of the Astroworld Motor Hotel, May 6—7:30 a.m. to 5:30 p.m., May 7—7:30 a.m. to 5:30 p.m., and May 8—7:30 a.m. to 5 p.m.

More complete information on programs and housing will be carried in later issues of *Texas Medicine*.

All TMA members are encouraged to attend this year's Annual Session, which promises to be one of the most fun-filled and educational sessions ever.

Annual Writing Contest Announced by Journal

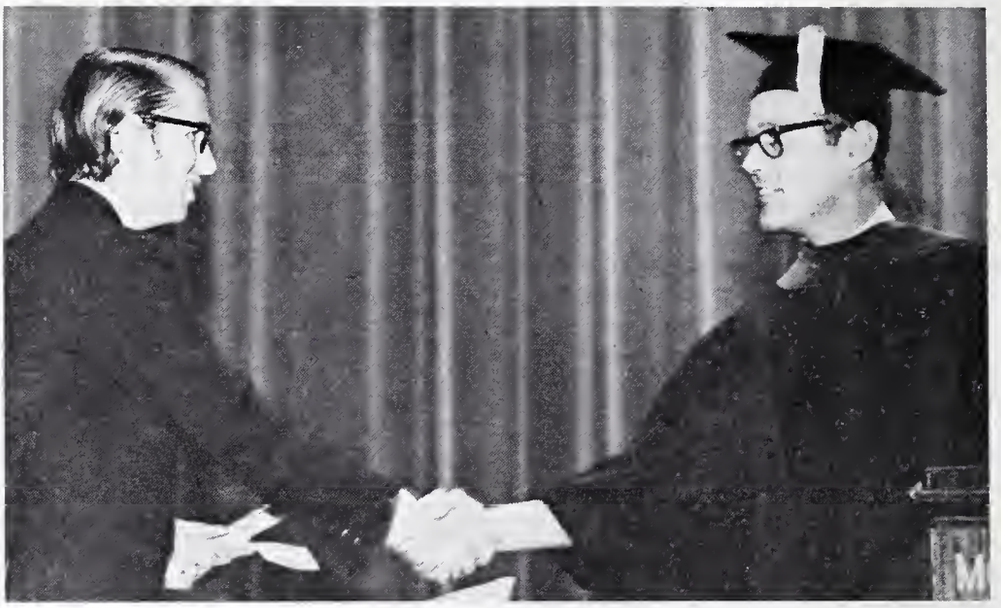
The Scientific Publication Committee for *Texas Medicine* announces its sixth annual contest to recognize a Texas medical student for excellence in medical and scientific writing. Deadline for entries is April 1, 1971.

The award, which was established in 1966 by the Board of Publication and the Scientific Publication Committee to encourage excellence in medical and scientific writing, is given to a student who has prepared his entry while enrolled in a Texas medical school. Articles must deal with a subject within the realm of the basic sciences or medicine and must be original and unpublished. There is no minimum nor maximum word length for entries. In addition to being presented a certificate, the award winner receives $300, and his article is published in *Texas Medicine.*

Criteria for judging entries are excellence of scientific work and competence of writing. Each entry submitted will be reviewed by the Scientific Publication Committee.

All entries must be in the editorial offices of *Texas Medicine,* 1801 North Lamar Boulevard, Austin 78701, by the April 1 deadline. In the near future, students at Texas medical schools will receive brochures listing manuscript requirements for contest entries.

Douglas V. Horbelt, a second-year student at The University of Texas Medical Branch in Galveston, was the winner of last year's award. His article, entitled "The Ultrastructural Changes in Fallopian Tube Epithelium at Term Gestation and During the Post-Partum Period," was published in the September, 1970, issue of *Texas Medicine.*



Douglas V. Horbelt, left, winner of the fifth annual TEXAS MEDICINE Award for excellence in scientific writing by a Texas medical student, in June received a certificate and a $300 check from Dr. William J. McGanity at the Honors and Awards Convocation at The University of Texas Medical Branch, Galveston.

Article Notes Animals As Disease Carriers

In a recent issue of the *Journal of the American Medical Association,* Dr. John S. Chapman of The University of Texas (Southwestern) Medical School in Dallas explores some of the lesser known facts and problems associated with animal-to-human infection.

Dr. Chapman points out that "Man shares a significant part of his niche in the biosphere with animals," some of which are household pets, others of which are undomesticated.

In the case of household pets, he notes that the relationship between the animal and its owner (or owners) is often intimate and prolonged. Because of this type of relationship, pets—both indoor and outdoor varieties—may serve as reservoirs of disease which can be transmitted to their unsuspecting owners. The fact that animals can carry diseases that may be transmissible to humans has been recognized for some time. Some diseases commonly transmitted by pets are *Toxocara canis* from dogs, cat scratch fever from cats, and psittacosis from household birds.

On diseases carried by fowls, Dr. Chapman continues, "But it is not so well known that birds such as turkeys, raised on a commercial basis, may also have psittacosis. Houses and pens used for bird-raising characteristically are sources of human histoplasmosis." He reports that a recent small epidemic of human histoplasmosis occurred among courthouse employees when a band of pigeons nested on the window sills of the structure.

Avian tuberculosis, he notes, is a less familiar disease which may infect swine and, at times, man.

Cattle may also pass on diseases such as atypical mycobacteria and bovine tuberculosis.

In addition to pets and domesticated animals acting as diseases carriers, nondomesticated animals are a potential source of such vicious epidemic diseases as plague, typhus, and rabies.

Dr. Chapman concludes, "It follows that in the face of serious infectious disease one needs to question in a most searching fashion habits—hunting, fishing, camping—occupation in specific terms, and all accidental or intentional contact with either domesticated or wild animals, including rodents and birds."

Consultation Offered On Radiology Facilities

Consulting services provided by the American College of Radiology are now available to hospitals and their departments of radiology and to radiologists, community health leaders, and other health planners.

The consulting services are designed to assist in planning for the regional availability of high-quality radiation therapy facilities for the treatment of cancer patients. Dr. Robert B. Moreton, chairman of the Committee on Cancer Management of the college, announced that the services are made available as a result of support provided under a grant awarded to the college by the Regional Medical Programs Service of the Health Services and Mental Health Administration.

Dr. Moreton explained that the contract provides funds to support the cost of this new service through which qualified radiologists, donating their time to the college, will be assigned to consult with those individuals and institutions calling for their professional opinion and recommendations regarding the regionalization and maximum use of existing radiation therapy resources and the development of new resources where necessary.

Radiologists, hospital officials, and other community health leaders interested in using this consultation service should direct their inquiries to the Committee on Cancer Management, American College of Radiology, 20 North Wacker Drive, Chicago, Ill. 60606.

CALORIES / 7 oz. Serving*

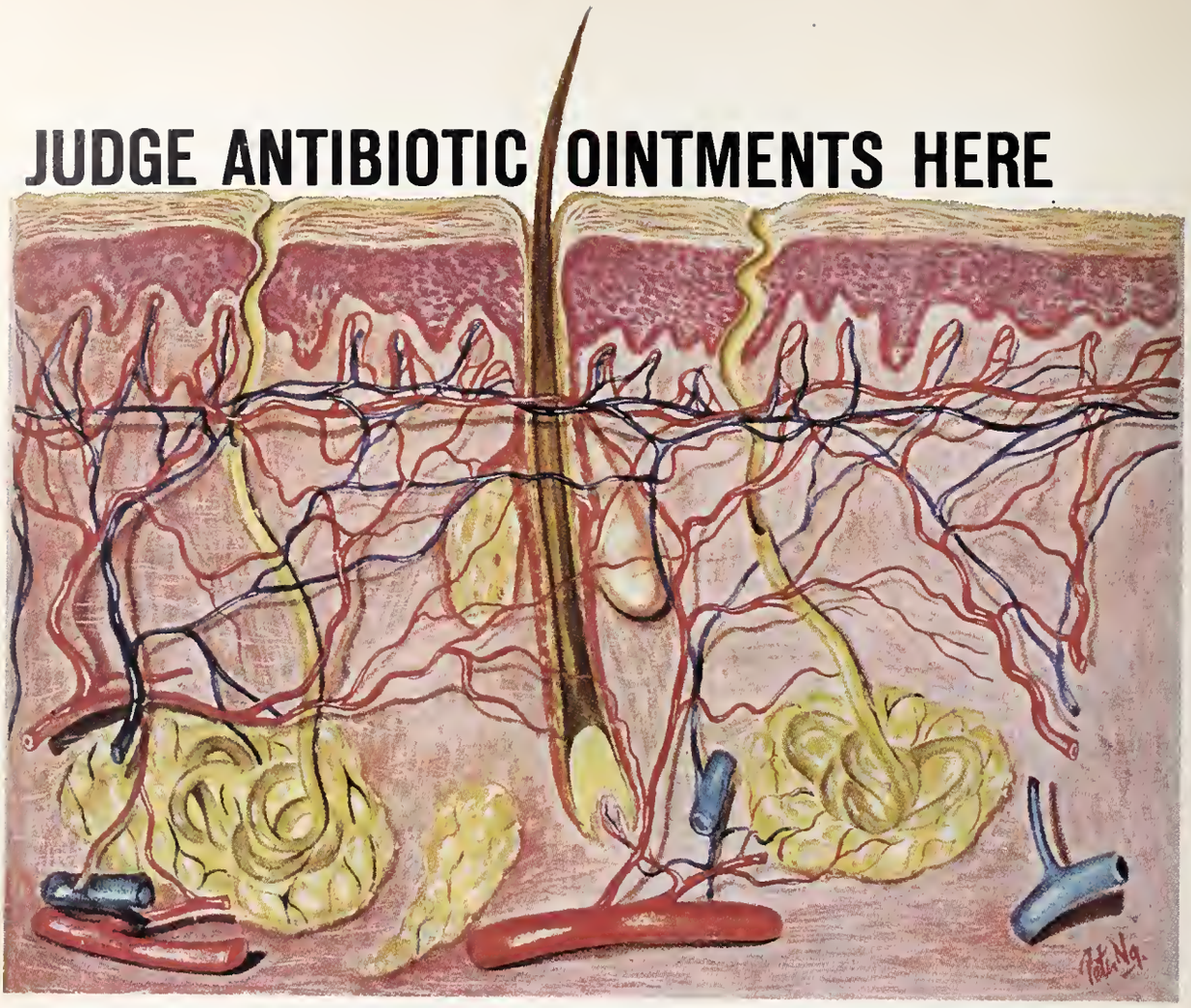
Beef Broth	22	Vegetable	68
Consommé	29	Tomato	69
Chicken with Rice	43	Cream of Asparagus	70
Chicken Gumbo	48	Cream of Chicken	76
Chicken Noodle	54	Cream of Mushroom	115
Cream of Potato	58	Green Pea	116
Chicken Vegetable	60	Cream of Shrimp (Frozen)	132
Vegetable Beef	66	Bean with Bacon	133

In planning high or low calorie diets, Campbell's more than 50 different soups offer you a wide choice. And, most of Campbell's Soups contain a wide variety of ingredients that can serve as supplementary sources of many essential nutrients.

* From "Nutritive Composition of Campbell's Products" which gives values of important nutritive constituents of all Campbell's Products. For your copy, write to Campbell Soup Company, Dept. 536, Camden, New Jersey 08101.

There's a soup for almost every patient and diet ...for every meal and, it's made by Campbell

JUDGE ANTIBIOTIC OINTMENTS HERE



Results on skin are final proof of any topical antibiotic's effectiveness

No in vitro test can duplicate a clinical situation on living skin. 'Neosporin' (polymyxin B—bacitracin—neomycin) Ointment has consistently proven its effectiveness in thousands of cases of bacterial skin infection. The spectra of the three antibiotics overlap in such a way as to provide bactericidal action against most pathogenic bacteria likely to be found topically. Diffusion of the antibiotics from the special petrolatum base is rapid since they are insoluble in the petrolatum, but readily soluble in tissue fluids. The Ointment is bland and nonirritating.

Caution: As with other antibiotic preparations, prolonged use may result in overgrowth of nonsusceptible organisms and/or fungi. Appropriate measures should be taken if this occurs. Articles in the current medical literature indicate an increase in the prevalence of persons allergic to neomycin. The possibility of such a reaction should be borne in mind.

Contraindications: This product is contraindicated in those individuals who have shown hypersensitivity to any of its components.

Supplied: Tubes of 1 oz., ½ oz. with applicator tip, and ⅛ oz. with ophthalmic tip.

Complete literature available on request from Professional Services Dept. PML.

'NEOSPORIN'®

brand

POLYMYXIN B-BACITRACIN-NEOMYCIN OINTMENT

BURROUGHS WELLCOME & CO. (U.S.A.) INC., Tuckahoe, N.Y.

Join us on our South Pacific Adventure.

We leave Feb. 15

We leave from Houston and Dallas

Come with us on our exciting two week adventure to the colorful lands Down Under . . . New Zealand . . . Australia . . . Tahiti.

All for only $998

Our two week South Pacific Adventure includes:

- Direct flights via chartered Pan Am 707 jet
- First class hotels with superb views
- Complete American breakfasts at your hotel
- Gourmet dinners at a choice of the finest restaurants
- Escort and five hosts always available to assist you
- Optional sightseeing tours each day
- No regimentation. Do as you please—when you please!

All this is yours for much less than the round trip regular air fare . . . truly a value you can't match anywhere.

Space is strictly limited on this exciting adventure. To confirm your reservations now, complete the coupon and mail it today!

SEND TO:

Texas Medical Association
South Pacific Adventure
1801 North Lamar Blvd.
Austin, Texas 78701

Enclosed is my check for $_____
($100 per person as deposit)

NAME_____

ADDRESS_____

CITY_____

STATE_____

ZIP_____ PHONE_____

THE CHANGING FACE OF TEXAS MEDICINE

Fifty years ago, *Texas Medicine* (then the *Texas State Journal of Medicine*) was as active as now in promoting the advancement of medical knowledge and keeping TMA members informed of current happenings. The October, 1920, issue carried the following items of note.

**Section and committee appointments by TMA President Dr. I. C. Chase.

**An editorial—in answer to an irate reader of a previous editorial—reiterating criticism of medical laboratories that falsely advertised their services as infallible.

**An original article entitled "Go On and Forget It" about neuro-exhaustion, in which the author noted that when some physicians saw persons suffering from neuro-exhaustion, the doctors displayed the attitude, "Here is another one of those cussed neurasthenics and I haven't got time to fool with him." The author also remarked that telling such a patient to "go on and forget it" was not sufficient medical treatment because the patients were honestly ill. "They are no more able to 'go on and forget it' than they would be able to forget a furuncle the size of a dollar and a half, on the gluteus maximus."

**Other original articles on vertigo, epilepsy, hydrophobia, the bubonic plague in Beaumont and Galveston, myotonia, and radical excision and sterilization of some local and glandular infections, with the latter article including color plate illustrations.

**In the Miscellaneous section—

*News of "The recent session of the Washington legislature, in its orgy of legislative enactment . . ."

**In the News section—

*News of the "gastro-enterologists" at the Jefferson College in Philadelphia who came to the "defense of pie," which at this time was thought to be indigestible. "Ye gods! What will the dyspeptics do for an alibi now that pie, the great American desert, has been pronounced thoroughly digestive and less objectionable as an article of diet than many other things that never have been placed under the ban." From the *Journal of the Indiana State Medical Association.*

*Construction to begin soon on the Fort Worth Protestant Hospital. From the *Dallas News.*

*A committee of seven was named by Gov. W. P. Hobby to investigate physical conditions at The University of Texas Medical College in Galveston. The University had been concerned about the difficulty in obtaining enough human bodies for laboratory work and the uncooperativeness of the Galveston City Commission. In the Society News section, the Dallas County and the Tarrant County Medical Societies went on record as supporting a move of the school from Galveston to Dallas and Fort Worth, respectively. From the *Dallas News.*

*Reported that from $15,000,000 to $25,000,000 is wasted each year by the public on worthless "cures" for tuberculosis.

**A review of *The Sympathetic Nervous System in Disease,* an Oxford publication, in which the reviewer critically appraises the book; then adds, "This little volume is well written, well printed and bound in the usual substantial Oxford way; but the price would seem exorbitant, as books sell. Being 'printed in Great Britain,' where labor and materials are so much cheaper than in this country, where publishers would not think of asking such prices as are charged for Oxford publications lately, they ought to sell for less. True, the texts are excellent, but hardly better than are written and published by American authors and publishers for less money." The cost of the book was $4.25.

Dr. David Wade Named MHMR Commissioner

Dr. David Wade, a psychiatrist and past president of Texas Medical Association, was named commissioner of the State Department of Mental Health and Mental Retardation on Aug. 29, 1970. Ward Burke of Diboll, chairman of the Board of Mental Health and Mental Retardation, announced the hiring of Dr. Wade.

Dr. Wade, 59, is the third man to hold the post. He follows Dr. John Kinross-Wright. Earl Scott, board lawyer, has been acting commissioner since Dr. Kinross-Wright's resignation.

Dr. Wade had been director of the governor's Office of Comprehensive Health Planning since May, 1969.

Dr. Wade, a native of Arkansas, received his BS and MD degrees from the University of Arkansas. He was a resident in psychiatry at the State Psychopathic Hospital in Galveston from 1939 to 1942 and later served as hospital superintendent. He also held a visiting residency for 6 months at New York Psychiatric Institute in 1944. During World War II, he was superintendent of the Austin State School and the Rusk State Hospital.

DR. WADE

From 1945 to 1967, Dr. Wade was in private practice in Austin. He was elected president of TMA in 1965. He is also a past president of Seventh District Medical Society, Texas Rehabilitation Association, and Texas Neuropsychiatric Association.

In 1967, he was selected assistant commissioner for medical administration for the Texas Department of Public Welfare, with one of his major duties being the supervision of the then new Medicaid program. He joined Gov. Preston Smith's staff on May 1, 1969.

During the Korean War, Dr. Wade served as psychiatric consultant for the Fourth US Army Headquarters in San Antonio, where he attained the rank of major.

TEXAS MEDICINE Plans Education Directory

To aid Texas physicians in deciding how, when, and where to continue their education, *Texas Medicine* is planning to publish a composite directory of all continuing education courses to be offered in the state during 1971.

As reported in last month's issue of the journal, a recent survey showed that physicians agreed that they would like to participate more in such courses and that they were not always aware of the various programs available.

The course directory is to appear in the January, 1971, issue of *Texas Medicine*. It will be reproduced after its initial publication in the journal by the Regional Medical Program and sent to all physicians in the state. Publication of the directory will be a "first" in the state.

Hopefully, the listing will encourage greater participation in courses and more careful planning of programs by medical organizations, institutions, and

medical schools. In the past, physicians usually have had only a short time to decide and plan to attend a course after they receive a promotional information brochure on the program.

Too, the listings will point up duplications or voids in subject areas and conflicts in scheduling of courses. This information could be extremely useful to sponsors of courses in the selection of topics and planning of their continuing education courses. Such better programming is an objective of Texas Medical Association's Committee on Continuing Education and the Regional Medical Program's Task Force on Communications and Continuing Education.

Various sponsoring medical organizations have already received questionnaires, which they have been asked to complete and return to *Texas Medicine* in order for their courses to be listed in the 1971 directory.

Courses will be listed by category with the title of the course, starting and ending dates, time, place, and fee (if applicable) given. The listings will also include information as to the type of course, organization, and educational methods to be used. A contact from whom physicians may obtain additional information will also be included.

Any medical organization planning to sponsor a continuing education course during 1971 that has not received a questionnaire is invited to submit information on their course (or courses) for publication in the directory by requesting a questionnaire from *Texas Medicine,* 1801 North Lamar Boulevard, Austin 78701.

PERSONALS

Dr. Marvin C. Schlecte, previously the assistant commissioner for medical administration of the state Department of Public Welfare, was appointed state medical consultant for the Texas Rehabilitation Commission. His appointment was effective Oct. 1, 1970.

For the past 15 months, Dr. Schlecte has worked with the Medicaid program for the Department of Public Welfare.

Dr. Owen C. Berg, urologist at Wichita Falls Clinic Hospital, was one of 11 photographers to be awarded a fellowship in the Photographic Society of America (PSA). He was also elected chairman of the Nature Division of the PSA at the society's recent international convention in Los Angeles, Calif.

Dr. Berg, a past president of the Texas Urological Association and the Wichita County Medical Society, is the first to win a PSA fellowship while living and working in Texas.

Acting as a visiting professor at the recent meeting of the Columbia Medical Society in Bogota, **Dr. William F. Miller,** professor of medicine at The University of Texas (Southwestern) Medical School and co-director of the Cardiopulmonary Institute at Methodist Hospital in Dallas, spoke on "Bronchial Obstruction and Obstructive Lung Disease."

Dr. C. Harold Beasley of Fort Worth has been named chairman of the state Medical Advisory Committee of the Texas Society for the Prevention of Blindness. Serving with Dr. Beasley will be **Dr. James H. Scruggs, Jr.,** of Waco, who will act as vice-chairman.

Chairmen and vice-chairmen of local Medical Advisory Committees of the society include: in Dallas, **Dr. Edwin G. Grafton,** chairman, and **Dr. Jerome L. Byers,** vice-chairman; in Fort Worth, **Dr. Earl Maxwell,** chairman, and **Dr. Wiltie A. Creswell, Jr.,** vice-chairman; in Houston, **Dr. Percy E. Lowe,** chairman, and **Dr. Carey J. Hargrove,** vice-chairman; in San Antonio, **Dr. Joe R. McFarlane, Jr.,** chairman, and **Dr. Charles R. Leone, Jr.,** vice-chairman; in the Panhandle, **Dr. Coleman Taylor** of Amarillo, chairman, and no vice-chairman named.

Dr. Merton M. Minter, a past chairman of the TMA Board of Trustees, has been named a Distinguished Alumnus of The University of Texas. Dr. Minter was honored at a banquet sponsored by the UT Ex-Students' Association on Oct. 2, along with other Distinguished Alumni. He also was introduced as an award winner at the Oct. 3 Texas vs. UCLA football game.

PAMPHLETS

Although most people regard the first human heart transplant made only a few years ago as the "breakthrough" in human implantation, few know that the first transfer of a part from one human to another was recorded almost 200 years ago.

A new pamphlet by Irving Ladimer, *The Challenge of Transplantation,* outlines developments to date and discusses many of the medical, ethical, social, and financial questions posed by transplantation.

Projecting into the future, the author sees a need for continuing research on the medical and technical problems of transplantation, including the organization of services and resources.

The Challenge of Transplantation is available for 25 cents from the Public Affairs Committee, 381 Park Avenue South, New York 10016.

Jets, jackhammers, sirens, food blenders, electronic music—all contribute to making the sound of our cities almost unbearable. At home, at work, and at play, innumerable pieces of equipment add to efficiency and convenience, while threatening us with the jitters and with loss of hearing.

Noise—The Third Pollution, a new Public Affairs pamphlet, explains what noise is and what it does—physically and psychologically—and what can be done "to quiet our society."

The author of the pamphlet, Theodore Berland, notes that the United States lags behind other countries in control of noise because no anti-noise legislation exists on the national level and the state and local regulations that do exist are only weakly enforced. Berland reports that "health professionals, hearing experts, and sound specialists, aided by lawyers, public officials, and . . . private citizens, are leading the fight against noise. And they are winning small but significant battles."

The pamphlet is available for 25 cents from the Public Affairs Committee, 381 Park Avenue South, New York 10016.

Helping the alcoholic and his family is the subject of a new Public Affairs pamphlet, *How To Help The Alcoholic,* by Pauline Cohen.

Mrs. Cohen primarily offers guidance to wives who must deal with an alcoholic husband. Efforts at hiding the liquor, or trying to hide the fact that he has a drinking problem, or assuming the responsibilities of the alcoholic husband are not usually effective methods in combating the problem, she says.

The authoress also discusses the special needs of children with an alcoholic parent and the problem of alcoholic wives. Several pages deal with how employers can help employees who show signs of alcoholism. A summary of community and medical resources available for help to the alcoholic is also included.

The pamphlet is available from the Public Affairs Committee, 381 Park Avenue South, New York 10016, for 25 cents.

Menrium® treats the menopausal symptoms that bother him most.

Roche
LABORATORIES
Division of Hoffmann-La Roche Inc
Nutley, New Jersey 07110

His wife has a lot of different menopausal symptoms, but only a few really irritate *him.* Her hot flashes, her vertigo, her palpitations—that's *her* problem. What really bothers him is her nervousness, her irritability and her excessive anxiety, often expressed by endless "book-shuffling, chain-smoking, reading-lamp" insomnia!

Menrium takes care of hot flashes, vertigo, palpitations in most menopausal women. Menrium provides the well-known antianxiety action of chlordiazepoxide (Librium®) and water-soluble esterified estrogens. It therefore relieves more symptoms than either component separately. It takes care of the vasomotor symptoms as well as the emotional symptoms. This means the symptoms that bother his wife most. And the symptoms that irritate him most.

So, to help them both get through *her* menopause, remember Menrium.

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Management of manifestations generally associated with the menopausal syndrome—anxiety and tension, vasomotor complaints and hormonal deficiency states.

Contraindications: Women with cancer of breast or genitalia, except inoperable cases, and those with known hypersensitivity to chlordiazepoxide and/or esterified estrogens.

Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. As with all CNS-acting drugs, caution patients against hazardous occupations requiring complete mental alertness (*e.g.*, operating machinery, driving). Exclude other possible causes of menopausal syndrome manifestations, such as pregnancy. Though physical and psychological dependence have rarely been reported on recommended doses, use caution in administering to addiction-prone individuals or those who might increase dosage; withdrawal symptoms (including convulsions) similar to those seen with barbiturates have been reported following discontinuance of chlordiazepoxide HCl. Potential benefits of use in pregnancy, lactation or women of childbearing age should be weighed against possible hazards to mother and child. Clinical data inadequate on safety in pregnancy.

Precautions: In elderly and debilitated patients, limit dosage to smallest effective amount of chlordiazepoxide (initially 10 mg or less per day) to preclude ataxia or oversedation; increase gradually as needed and tolerated. Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider individual pharmacologic effects—particularly in use of potentiating drugs such as MAO inhibitors and phenothiazines. Observe usual precautions in patients with impaired renal or hepatic function. Paradoxical reactions to chlordiazepoxide (*e.g.*, excitement, stimulation and acute rage) have been reported in psychiatric patients. Employ usual precautions in the treatment of anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation very rarely reported in patients receiving Librium® (chlordiazepoxide) and oral anticoagulants.

Adverse Reactions: Untoward effects seen with either compound alone may occur with Menrium. With chlordiazepoxide, drowsiness, ataxia and confusion reported in some patients, particularly in the elderly and debilitated; while usually avoided by proper dosage adjustment, these are occasionally observed at lower dosage ranges. Also reported have been a few instances of syncope; isolated occurrences of skin eruptions, edema, minor menstrual irregularities, nausea and constipation, extrapyramidal symptoms, increased and decreased libido, and occasional reports of blood dyscrasias, including agranulocytosis, jaundice and hepatic dysfunction. Periodic blood counts and liver function tests advisable during protracted treatment. Changes in EEG patterns (low-voltage fast activity) observed during and after chlordiazepoxide treatment.

With estrogens, headache, nausea and vomiting, anorexia, gastrointestinal discomfort, dysuria and urinary frequency, jitteriness, breast engorgement, formation of breast cysts, skin rashes and pruritus occasionally seen. Administration may also be associated with uterine bleeding and/or followed by withdrawal bleeding.

Usual Dosage: One tablet t.i.d. for 21 days, followed by one-week rest periods.

Menrium® T.I.D.

5 mg chlordiazepoxide	5-2	0.2 mg water-soluble esterified estrogens
5 mg chlordiazepoxide	5-4	0.4 mg water-soluble esterified estrogens
10 mg chlordiazepoxide	10-4	0.4 mg water-soluble esterified estrogens

Library offers mailbag full of services

"They come in by mail, telephone, telegram, on lists, and even scribbled on prescription pads!" says Miss Pauline Duffield, librarian of the Texas Medical Association Memorial Library.

Most requests from doctors for material on every medical subject imaginable come by mail, however, in envelopes of every size and description. Library staff members filled 8,166 requests for information last year and so far this year, they have worked on 4,471 problems.

Miss Duffield, who says she "came with the building." assumed her position as librarian with TMA on Nov. 15, 1952. She had been in medical library work for 10 years before, previously holding a medical library internship at Tulane University in New Orleans and serving as assistant librarian at Vanderbilt University School of Medicine, Nashville, Tenn., and librarian of the state medical association of Maryland.

The Library staff also includes five permanent employees and four part-time employees. The permanent employees, who are in charge of filling requests or performing other Library functions, are Ferol Willbanks, assistant librarian; Betty Afflerbach, reference librarian; Benetta Lambert, secretary; Linda Moore, film librarian; and Lillian Vandermast, serials librarian. Two of the part-time employees are high school boys who reshelve the books and journals, and two are University of Texas coeds who perform secretarial duties.

Staff members generally follow an established procedure in filling a request. A staff member will begin

TMA librarian Pauline Duffield checks through *Index Medicus* in search of requested material.

searching either for the articles or books requested or for material on the subject matter listed on a request. The search begins with the various indexes and abstract publications available to staff members.

Probably the most well-known and used source is *Index Medicus*, produced by the US Department of Health, Education, and Welfare. The Library also has the forerunners of *Index Medicus*, with the first volume dating back to 1880 and containing listings of books published in 1880 and before. These early volumes include references to literature that was available in the Surgeon General's office at the time of publication. However, these older reference sources are seldom used since doctors usually limit their requests to 5 years.

The Library staff member may also check several other abstracting services such as *Excerpta Medica, Insta-Dex, Crime and Delinquency Abstracts, Abstracts of World Medicine, Endocrinology Index,* and *Nuclear Science Abstracts*. One especially useful source, Miss Duffield reports, is the *Abridged Index Medicus,* which is published monthly and lists articles from 100 English-language journals.

Some references are difficult to find, but, says Miss Duffield, "A request is always worked on until something is found, and we always let the doctor know of our progress."

If information on a journal reference is given in one of the abstract sources but the Library does not subscribe to that journal or if the issue of the journal that is required is missing, the Library will attempt to borrow a copy of the needed journal from another library in Texas.

If no library in Texas has the publication, the next step is to contact the Dallas headquarters of the five-state South Central Regional Library Program, of which the TMA Library is a member. Along with other Texas medical libraries in Galveston, Houston, San Antonio, and Dallas, the TMA Library has joined with medical libraries in Arkansas, Louisiana, New Mexico, and Oklahoma to form a cooperative "borrowing and lending" society.

The regional system is part of a federally funded, nationwide biomedical communications network centering around the National Library of Medicine in Bethesda, Md. Researchers in member libraries can forward requests for needed materials through rapid teletype transmission to the regional headquarters in Dallas, which will conduct a search and will relay the request to the proper source library.

The lending library will send the material to TMA where the article or reprint will be photographically reproduced; then, the borrowed material is returned.

In some cases, none of the member libraries will have the material needed. Then, the Library staff will check with the National Library of Medicine. "Very rarely do we have to go to the National Library of Medicine," says Miss Duffield. "One of the other libraries in Texas or in the five-state region will almost always have the material we need."

Member libraries of the regional group are currently planning to obtain all the different medical-oriented journals published. A poll of member libraries was made recently to see which journals members subscribed to and which they did not subscribe to.

After all the material requested is assembled, it is packaged and mailed to the doctor making the request. The materials are shipped in specially designed, vulcanized fiber boxes with metal corners that are bound with web straps and secured by safety latches. Doctors are requested to return the materials in the same boxes. A Dallas-based luggage firm manufactures the boxes in several sizes.

Use of these boxes for mailing materials was first suggested by Dr. Merton M. Minter of San Antonio, a past chairman of the Association's Board of Trustees, who recalled having seen students send their laundry home from college in similar boxes.

Because it was designed for the use of physicians all over the state and thus must be a library of circulating material, there are no special, noncirculating collections. However, three or four rare books that were gifts from Texas physicians are housed in the Library's Rare Books Room.

The loan period on journals and books is two weeks, but realizing that a doctor may not have time to completely review the information, the Library allows the book or journal to be kept for longer periods. However, if another TMA member requests a book or journal that is checked out, the Library will contact the physician who has the requested material and let him know that the material is needed by someone else, so that he will use the material and return it promptly for his colleagues to use. Notices for return of

Checking through the check-out cards is Benetta Lambert.

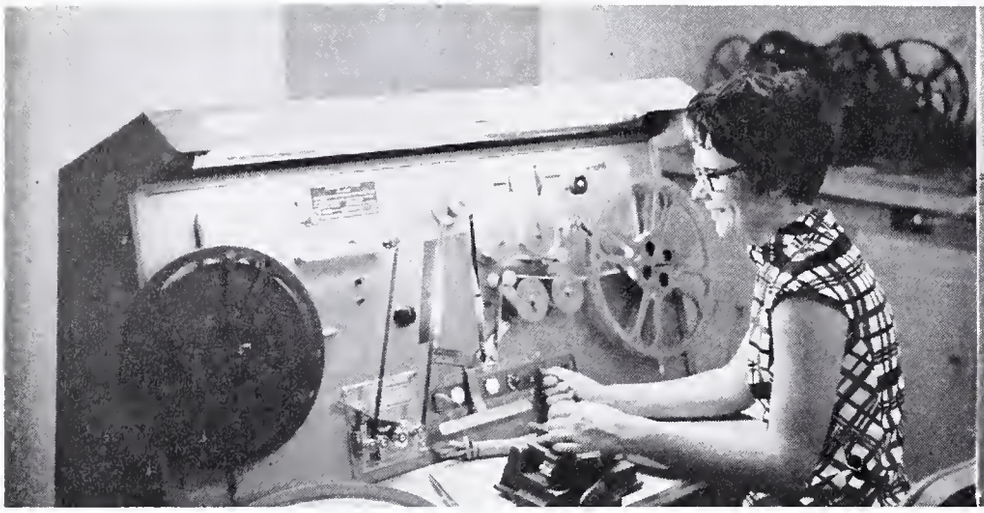
books or journals are sent out only when another doctor requests the material or when the Library needs to clear its files.

Loss of books and journals sent to doctors has been minimal, says Miss Duffield. "We do lose some things in the mail, though. We depend on the doctors to return the material."

Books and journals may be returned through the mail in the same manner in which they are sent, or if a doctor is near the TMA headquarters building, he may drop the book in the Auto-Page at the back of the building. As the prime users, Travis County physicians donated the Auto-Page, which operates like a mail drop, to the Library a few years ago. Material that has been reproduced from a borrowed journal is not required to be returned to Library files.

Usually, journals, rather than photocopies of the requested articles from the journals, are sent to doctors because the volume of material to photocopy would be too great. "Besides, it encourages doctors to read other articles if you send them the original journal," points out Miss Duffield.

The Library often receives requests for information from lay persons also. Adults frequently want to know where to find a good plastic surgeon, for instance. School children often write to



Working at the tape-cleaning machine is staff member Linda Moore.

Library staff member Betty Afflerbach checks the card catalog for the call number of a requested book.

the Library asking for "all the material you have" on heart disease, cancer, or another given subject. The Library staff tries to select appropriate lay material for the children to use.

In addition to their regular duties of filling requests, staff members also prepare bibliographies on "anything." The staff completed 170 bibliographies last year, and 92 have been prepared so far this year.

Any TMA member may make use of the Library services. Also, any "qualified user" is entitled to come to the Library to use its facilities. A "qualified user" is one who has a note from his doctor (a TMA member physician) or from a university or medical school professor stating that the user has a need for the information available in the Library.

"Many of the University of Texas pharmacy students come here to use our Library," says Miss Duffield, "but they must be classified as a qualified user, that is, they must have a note from their professor."

The Library currently has 1,298 journals on its shelves. Most are clinical publications on medical specialties, but a few are general health journals. Of the 1,298 journals available, 279 are received in exchange for *Texas Medicine*, and approximately 200 of these exchange journals are from foreign countries. The Library also receives a few other foreign journals as gifts. Some of these are now printing summaries of their articles in English for the convenience of their English-speaking readers. The Library also receives all state medical association journals and many other major American publications.

Current textbooks, usually general reference works on a subject, are also found on the Library shelves. The Library tries to stock the most up-to-date texts for the convenience of TMA members, but books other than reference-type textbooks and handbooks are seldom purchased since doctors usually require more current information than that found in books.

New books are purchased on request from a TMA member; however, some are gifts from publishers and Texas physicians. The books received as gifts from publishers are reviewed by a TMA member, and the review is published in *Texas Medicine*. Miss Duffield said that because of the current financial climate, however, publishers are having to reduce the number of books they give as gifts. She notes that in the past approximately half of the books received in the Library were gifts from publishers whereas, at present, only one-third are from that source.

Last year, the Library purchased 685 new titles, and 926 were received as gifts. So far this year, 165 books have been bought at a total of $3,000. Miss Duffield estimates that approximately 20 new books arrive each month, including both purchased books and those received as gifts. A list of new books available for use by TMA members is published each month in the "Medicine in Literature" section of *Texas Medicine*.

Housed in file cabinets in the first floor stack area is the TMA reprint collection. For convenience, reprints are divided by subject and filed alphabetically. In 1958, the Library received the reprint collection of the American College of Surgeons with more than 500,000 reprints and with the stipulation that members of the American College of Surgeons would pay no fee for use of the reprints. The staff is currently working to get only material from the past 10 years in the reprint files. In addition to the College of Surgeons collection, the Library plans to keep only 10-year-old and earlier reprints and those published before 1945, with the older reprints being placed in the basement stack area.

The Library also has a collection of films and tapes that may be requested by members for presentation to professional or lay audiences. Other responsible groups may also request use of films through any TMA member. Approximately 300 films made in the past 10 years, half of which are designed for professional and half for lay audiences, can be checked out of the Library. Other films that were made before 1960 are housed in the Library's film collection, but the use of these older films—especially for lay or child audiences—is discouraged since fashions, cars, and other items have changed so drastically in the past 10 years. Usually, children find these older styles amusing and, consequently, miss

Staff member Ferol Willbanks, left, consults with coworker Lillian Vandermast about the availability of a journal.

the point of the movie. The films run from 10-minute short subjects to 2-hour showings involving 2 reels of film (The CBS White Paper on Abortion).

Most films are bought; however, some are on long-term loan. A few are given as gifts from local pharmaceutical houses, insurance companies, or other groups. Sixteen new films, including scientific and lay subjects, have been purchased this year.

Medical-oriented tapes are lent only to qualified physicians for presentation before groups or for personal use. All tapes produced by the Audio-Digest Foundation in California are purchased by the Library. These tapes contain such recordings as reviews of medical literature and speeches given at various medical meetings around the world. Tapes on about eight or nine subjects are available on 5-inch reels, and the Library is now trying out cassettes in three subjects. Eventually, the Library may provide both reels and cassettes. Requests are running about half for cassettes and half for the 5-inch reels.

The Library is in charge of taping all proceedings of TMA meetings, and a 2- to 3-year backlog of tapes of TMA Annual Sessions are kept on file. The tapes of the TMA House of Delegates meetings concerning policy matters are kept in permanent storage.

Users of the tapes and films are expected to provide their own equipment for using the materials. However, the Library does supply equipment for any TMA meeting, and members of the Library staff are in charge of showing films to visitors in the TMA Headquarters building.

Even with this tremendous volume of medical information, the Library is still growing. "The Library was built to hold 100,000 volumes, and it now has well over 40,000. We expect it to hit 50,000 soon," Miss Duffield projects. "We are gradually moving older material into the basement because we're out of space on this floor."

Duplicate material is also being stored in the basement, and Miss Duffield says that Library staff must soon begin the tedious task of eliminating all duplicate material to make room for the new journals, reprints, and books arriving daily. Duplicate material will be given to doctors who request it or exchanged with other libraries for materials the Library does not have but can use.

The Library, bulging with medical information in the form of journals, reprints, textbooks and handbooks, films, and tapes, consists of stack areas on the first floor and in the basement of the TMA Headquarters building, a mezzanine, the Rare Books Room, and the Reading Room. Doctors may use the Library from 8:15 a.m. to 5:15 p.m. Monday through Friday and from 8:15 a.m. to noon on Saturday.

Today's Texas physician can indeed be thankful for the insight of the 35 TMA founders who, even in 1853, were aware of the need for a medical library. Establishment of the Library was not an easy task, however, and it was several years before the Library actually began to grow and develop.

In 1912, the Library was given to the Fort Worth University Medical Department, which six years later merged with Baylor College of Medicine. In 1924-1925, the Board of Trustees granted an appropriation of $500 to the Library, but little of this amount was used.

The assignment in 1927 of Dr. R. B. Anderson to be in charge of the operation of the Library was a major turning point in its development. Dr. Anderson spent several days in Chicago studying the operation of the AMA library. He then returned to Texas to establish a similar operation for the TMA Library with a library package service format.

The Texas Memorial Medical Library Association was established on May 13, 1940. The Library Association membership is limited to the Board of Trustees, and its function is to govern the financial operation of the library.

The Library is financed by income from endowments, with the first three endowments, each for $1,000, made in 1940 by Dr. and Mrs. S. E. Thompson of Kerrville, Dr. and Mrs. E. W. Bertner of Houston, and the Texas Pediatric Society. A portion of TMA annual dues is also used for Library expenses. The Woman's Auxiliary of TMA also usually donates some of its funds.

Old and new TMA members are encouraged to use the Library facilities in their search for the most up-to-date medical information.

Senior Consultants
Perry C. Talkington, M.D.
Charles L. Bloss, M.D.

Psychiatrist-In-Chief
Howard M. Burkett, M.D.

Medical Director
James K. Peden, M.D.

Associate Psychiatrists
Jerry M. Lewis, M.D.
Claude L. Jackson, M.D.
Dode Mae Hanke, M.D.
Thomas H. Allison, M.D.
Maurice S. Green, M.D.
Doyle I. Carson, M.D.
Stanley L. Seaton, M.D.
Keith H. Johansen, M.D.
Charles G. Markward, M.D.
Joe W. King, M.D.
Claude R. Nichols, M.D.
Larry E. Tripp, M.D.
Aretta J. Rathmell, M.D.
Donald N. Offutt, M.D.

Clinical Psychology
David H. Lipsher, Ph.D.
John T. Gossett, Ph.D.
Dale R. Turner, Ph.D.
Robert W. Hagebak, Ph.D.

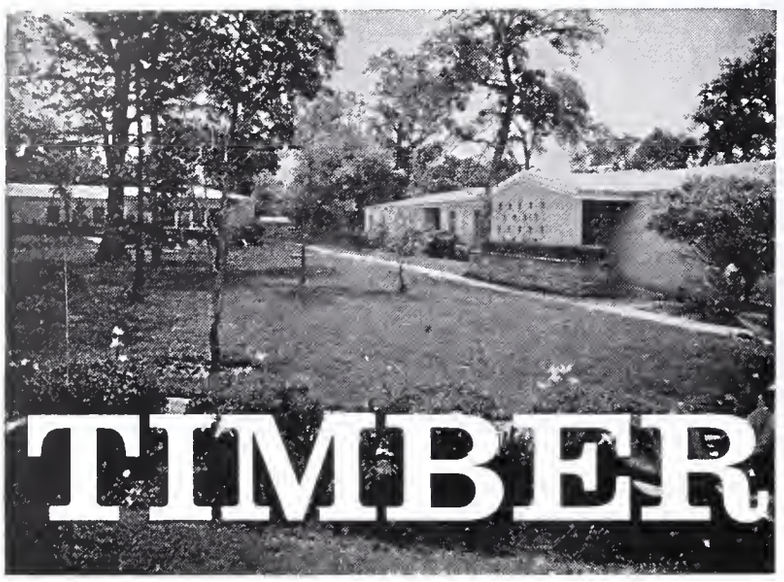
Social Work
Sally Stansfield, M.S.W.
Kathleen Wood, M.S.W.
Robert P. Stewart, M.S.S.W.
Margie W. Buell, M.S.S.W.
Cecilia Coffelt, M.S.S.W.
Lionel C. Landry, M.S.W.

Occupational Therapy
Geraldine Skinner, B.S., O.T.R., Director

Recreational Therapy
Lois Timmins, Ed.D., Director

Director of Nurses
Mae Belle James, R.N.

Administrator
Ralph M. Barnette, B.B.A.



PSYCHIATRIC HOSPITAL

DAY HOSPITAL

DEPARTMENT OF OUT PATIENT PSYCHIATRY

DEPARTMENT OF ADOLESCENT PSYCHIATRY

Narcotic Cases Not Admitted

TIMBERLAWN

PSYCHIATRIC HOSPITAL

381-7181 Dallas, Texas 75223 P. O. Box 11288

KELSEY-SEYBOLD CLINIC

6624 FANNIN STREET HOUSTON, TEXAS 77025

526-2671

INTERNAL MEDICINE

Endocrine and Metabolic Diseases
Mavis P. Kelsey, M.D., F.A.C.P.
Alfred E. Leiser, M.D., F.A.C.P.
Joy Mackay, M.D.

Pulmonary Diseases
Stanton P. Fischer, M.D., F.A.C.P.

Gastrointestinal Diseases, Gastroscopy
John R. Kelsey, M.D., F.A.C.P.
Philip S. Bentlif, M.D., F.A.C.P.
Ralph D. Eichhorn, M.D., F.A.C.P.
F. Scott O'Neil, M.D., F.A.C.P.
James W. McBee, M.D., F.A.C.P.

Heart Disease and Cardiac Catheterization
Earl F. Beard, M.D., F.A.C.P.
Efrain Garcia, M.D., F.A.C.P.

Arthritis and Rheumatic Diseases
James W. Kemper, M.D., F.A.C.P.
Martin S. Fischer, M.D.

Hypertension and Peripheral Vascular Diseases
Gene E. Burke, M.D.

*Military Service

Oncology
Carlos F. Taboada, M.D.

Nephrology
Francis X. Schloeder, M.D., F.A.C.P.

Hematology
Jerome B. Bart, M.D.

Infectious Diseases
Stuart Riggs, M.D., F.A.C.P.

Occupational Health Services
Paul E. Wright, M.D., M.P.H., F.A.C.P.
Maurice B. Johnston, M.D., F.A.C.Pr.M.
Richard M. Fenno, M.D., M.P.H., F.A.C.P.
Cannon A. Owen, M.D., F.A.C.S.
William E. Froemming, M.D., F.A.C.Pr.M.

GENERAL & THORACIC SURGERY
William D. Seybold, M.D., F.A.C.S.
James D. McMurrey, M.D., F.A.C.S.
Jerry L. Doggett, M.D., F.A.C.S.
Michael F. Appel, M.D.

OBSTETRICS & GYNECOLOGY
Melville L. Cody, M.D., F.A.C.O.G., F.A.C.S.
William A. Johnson, III, M.D., F.A.C.O.G.

PSYCHIATRY
Chester G. Cochran, M.D.
*Ricardo Daichman, M.D.
William H. Boylston, M.D.
Manuel C. Ramirez, M.D.

PEDIATRICS

Rheumatology
Earl J. Brewer, Jr., M.D., F.A.A.P.

Allergy
Charles W. Ewing, M.D., F.A.A.P.

Gastroenterology
George D. Ferry, M.D., F.A.A.P.

OTO-LARYNGOLOGY
J. Charles Dickson, M.D., F.A.C.S.
James L. Smith, M.D., F.A.C.S.

NEUROLOGY
Robert R. Pierce, M.D.

DERMATOLOGY
Wilson M. Fraser, M.D., F.A.A.D.
Donald W. Owens, M.D.

UROLOGY
Don W. Pranke, M.D., F.A.C.S.

ORTHOPEDIC SURGERY
W. Malcolm Granberry, M.D.
Jesse H. Dickson, M.D.

OPHTHALMOLOGY
Henry E. Wahlen, M.D., D.A.B.O.

RADIOLOGY
Robert J. Kurth, M.D., F.A.C.R.
David M. Rulfs, M.D.

PATHOLOGY
Robert A. Jordan, M.D.

DENTISTRY
Eugene W. Gray, D.D.S.

PSYCHOLOGY
Mrs. Ruth Blackman, M.A.
Cheryl Greathouse, M.A.

SPEECH PATHOLOGY AND AUDIOLOGY
Donna R. Fox Ph.D.
Carolyn C. Garcia, M.S.

CONSULTANTS

Maxillo Facial Surgery
Edward C. Hinds, M.D., D.D.S., F.A.C.S.
John N. Kent, D.D.S.

Psychiatry
Albert Owers, M.D.

Pulmonary Diseases
H. Irving Schweppe, Jr., M.D., F.A.C.P.

Nuclear Medicine
John A. Burdine, Jr., M.D.

Occupational Medicine
Valliant C. Baird, M.D., F.A.C.Pr.M.

Podiatry
Levitt A. Peters, D.P.M.

SPECIAL FACILITIES
Radioisotope Laboratory
Registered Dietitian
Electroencephalography
Electrocardiography
Vectorcardiography
Registered Physiotherapist
Pulmonary Function Laboratory
Regional Immunization Center
FAA Examinations
Complete Endoscopy
Audiology Laboratory
Electrolysis

ADMINISTRATOR
James A. Bakken

Recent Books Review Abdomen, Kidney, Eye Problems

The Abdomen, Max J. Ryan, vol. 1 of **Moments With Diagnostic Radiology,** part of series *Moments With Medicine,* P. Spencer Johnson, ed., 116 pp., 180 illus., Philadelphia, W. B. Saunders Co., 1969, $2.75.

THIS SMALL BOOK, the first of a series, has been written in response to a need for a simple introduction to diagnostic radiology. Its aim is to provide a working knowledge of the subject, its scope, various radiographic techniques, and the terminology employed in their interpretation. The format is designed for self-instruction, and each segment can be read in 2 to 5 minutes.

MEMORIAL LIBRARY STAFF.

Acute Renal Failure: Diagnosis and Management, Robert C. Muehrcke, 343 pp., 126 illus., St. Louis, The C. V. Mosby Co., 1969, $19.75.

THE FOREWORD of this book is written by Dr. Robert M. Kark, and he begins by saying that acute renal failure is a central theme of modern nephrology. In the preface, Dr. Muehrcke says that the book emphasizes the diagnosis of this well-established clinical syndrome, its meticulous treatment, and its dread consequences and the current medical progress in dialysis and transplantation.

The book is divided into five chapters: Introduction, Intrinsic Renal Disease, Clinical Features of Acute Oliguric Renal Failure, The Etiology and Pathogenesis of "Acute Tubular Necrosis," Management of the Patients With Acute Oliguric Renal Failure. The reference and index sections are exceptionally well prepared.

MEMORIAL LIBRARY STAFF.

Adler's Textbook of Ophthalmology, ed. 8, Harold G. Scheie and Daniel M. Albert, 509 pp., 565 illus., 38 color plates, Philadelphia, W. B. Saunders Co., 1969, $17.50.

THE AUTHORS have completely rewritten this well-known text. Their new approach leads the reader from the basic science to therapeutics. The value of the text is greatly enhanced by many color illustrations. The authors are to be commended for their logical arrangement of this excellent textbook.

MEMORIAL LIBRARY STAFF.

Current Diagnosis and Treatment, Henry Brainerd, Marcus A. Krupp, Milton J. Chatton, and Sheldon Margen, eds., 884 pp., Los Altos, Calif., Lange Medical Publications, 1970, $11.

THIS IS an excellent handbook. It is recommended and used by all the interns at Brackenridge Hospital in Austin, Texas.

ROBERT W. PAPE, M.D.,
Austin.

NEW BOOKS IN TMA LIBRARY

Attix, F. H., ed.: *Luminescence Dosimetry: Proceedings of International Conference on Luminescence Dosimetry, Stanford University, Stanford, California, June 21-23, 1965,* AFC Symposium Series no. 8, Oak Ridge, Tenn., Division of Technical Information, US Atomic Energy Commission, 1967.

Bach, G. R., and Wyden, P.: *The Intimate Enemy: How to Fight Fair in Love and Marriage,* New York, William Morrow & Co., Inc., 1969.

Barbeau, A., and Brunette, J. R., eds.: *Progress in Neuro-Genetics, Proceedings of the Second International Congress of Neuro-Genetics and Neuro-Ophthalmology of the World Federation of Neurology, Montreal, 17-22 September 1967,* International Congress Series No. 175, Amsterdam, Excerpta Medica Foundation, 1969.

Brunette, J. R., and Barbeau, A., eds.: *Progress in Neuro-Genetics,* vol. II of *Proceedings of the Second International Congress of Neuro-Genetics and Neuro-Ophthalmology of the World Federation of Neurology, Montreal, 17-22 September 1967,* International Congress Series No. 176, Amsterdam, Excerpta Medica Foundation, 1969.

Chabon, I.: *Awake and Aware, Participating in Childbirth Through Psychoprophylaxis,* New York, Delacorte Press, 1966.

Cooper, K. H.: *Aerobics,* New York, Bantam Books, Inc., 1968.

Deutsch, H.: *Selected Problems of Adolescence,* monograph no. 3 of *Psychoanalytic Study of the Child,* New York, International Universities Press 1967.

Faas, L. A., comp. and ed.: *The Emotionally Disturbed Child: A Book of Readings,* Springfield, Ill., Charles C Thomas Co., 1970.

Furlong, R., ed.: *Orthopaedics,* pt. 1 in vol. 8 of *Operative Surgery,* ed. 2; pt. 2 in vol. 9 of *Operative Surgery,* ed. 2, Philadelphia, J. B. Lippincott Co., 1969.

Gaver, J. R.: *The Complete Directory of Medical and Health Services,* New York, University Publishing and Distributing Corporation, 1970.

Horrobin, D., and Gunn, A.: *The International Handbook of Medical Science: A Concise Guide to Current Practice and Recent Advances,* New York, G. P. Putnam's Sons, 1970.

Huffman, J. W.: *The Gynecology of Childhood and Adolescence,* Philadelphia, W. B. Saunders Co., 1968.

Karmel, M.: *Thank You, Dr. Lamaze,* Garden City, N. Y., Dolphin Books, Doubleday & Co., Inc., 1965.

Kirklin, J. W., and Karp, R. B.: *The Tetralogy of Fallot from a Surgical Viewpoint,* Philadelphia, W. B. Saunders Co., 1970.

Laughlin, H. P.: *Mental Mechanisms,* Washington, Butterworth, Inc., 1963.

Lennox, W. G.: *Epilepsy and Related Disorders,* 2 vols., Boston, Little, Brown & Co., 1960.

Lidz, T.: *The Person: His Development Throughout the Life Cycle,* New York, Basic Books Inc., 1968.

Lindberg, D.: *The Computer and Medical Care,* Springfield, Ill., Charles C Thomas Co., 1968.

Marcus, S. L., and Marcus, C. C., eds.: *Advances in Obstetrics and Gynecology,* vol. 1, Baltimore, Williams & Wilkins Co., 1967.

Morton, L. T.: *A Medical Bibliography (Garrison and Morton),* ed. 3, Philadelphia, J. B. Lippincott Co., 1970.

Pulvertaft, R. G.: *The Hand,* vol. 11 of *Operative Surgery,* ed. 2., Philadelphia, J. B. Lippincott Co., 1970.

★

Specialized Service

IN

PROFESSIONAL LIABILITY INSURANCE

is a high mark of distinction

THE

MEDICAL PROTECTIVE COMPANY

FORT WAYNE, INDIANA

Professional Protection Exclusively since 1899

AUSTIN OFFICE: Robert F. Reiman, Representative
3201 Clearview, Austin 78703 Telephone: 512-472-9603
DALLAS OFFICE: Gayle Nelson and Arthur F. Ennis, Jr., Representatives
816 Medical Arts Building, Dallas 75201 Telephone: 214-742-4980
HOUSTON OFFICE: Richard B. Ross and William A. Orsburn, Representatives
1525 Hermann Professional Bldg., Houston 77025 Telephone: 713-523-1127

Turner's Clinical & X-Ray Laboratories

Medical Center

El Paso, Texas

Telephone 532-4689

☆

SURGICAL PATHOLOGY
CLINICAL PATHOLOGY
RADIOLOGY

☆

GEORGE TURNER, M.D.
JEANNE TURNER BOWMAN, M.D.
DAVID LIBMAN, M.D.

The Martin X-Ray and Radium Clinic

3501 Gaston Ave. Dallas, Texas

ADJOINING
GASTON EPISCOPAL HOSPITAL

For X-ray diagnosis and the X-ray and radium treatment of cancer and other conditions suitable for radiation therapy.

Chas L. Martin, M.D. James A. Martin, M.D.

Schlaegel, T. F., Jr.: *Essentials of Uveitis*, Boston, Little, Brown & Co., 1969.
Schwarz, R. H.: *Septic Abortion*, Philadelphia, J. B. Lippincott Co., 1968.
Sluckin, W.: *Imprinting and Early Learning*, Chicago, Aldine, 1965.
Smith, D. W.: *Recognizable Patterns of Human Malformation: Genetic, Embryonic and Clinical Aspects*, vol. VII in the series *Major Problems in Clinical Pediatrics*, A. J. Schaffer, ed., W. B. Saunders Co., 1970.
Sodi-Pallares, D., Medrano, G., et al.: *Deductive and Polyparametric Electrocardiography*, Mexico, Instituto Nacional de Cardiologia, 1970.
Tietz, N.: *Fundamentals of Clinical Chemistry*, Philadelphia, W. B. Saunders Co., 1970.
Van Allen, M. W.: *Pictorial Manual of Neurologic Tests*, Chicago, Year Book Medical Publishers, Inc., 1969.
Vinken, P. J., and Bruyn, G. W., eds.: *Handbook of Clinical Neurology: Diseases of the Basal Ganglia*, Amsterdam, North-Holland, 1968.
Waldenström, J.: *Diagnosis and Treatment of Multiple Myeloma*, New York, Grune & Stratton, Inc., 1970.
Wright, E.: *The New Childbirth*, New York, Hart Publishing Co., 1966.
Zweng, H. C., et al.: *Laser Photocoagulation and Retinal Angiography; With Current Concepts in Retinal and Choroidal Diseases*, St. Louis, The C. V. Mosby Co., 1969.

Many of the books listed are available for review. If you would like to prepare a review on one of the new books listed, or if you would like to review other new books on a specific topic, write to the TMA Library, 1801 North Lamar Boulevard, Austin 78701. Guidelines for book reviewers are available from the Library.

Recent Deaths

Dr. A. C. Jones

Kingsville general practitioner Dr. Augustus Claiborne Jones, 72, died Aug. 11, 1970, following a short illness.

Born in Henderson, Tex., on Nov. 16, 1897, Dr. Jones was the son of John C. and Emma Propes Jones. He attended Baylor University and in

DR. JONES

1924 was graduated from The University of Texas in Austin with a BS degree. In 1926, he was awarded his MD degree from The University of Texas Medical Branch at Galveston, after which he interned at John Sealy Hospital in Galveston.

A Kingsville resident since 1927, Dr. Jones was a member of American Medical Association, was elected to honorary membership in Texas Medical Association in 1970, and had served as president of the Kleberg-Kenedy Counties Medical Society. He was also a member of the First Baptist Church of Kingsville and the Chamberlain Masonic Lodge. He was a charter member and the second president of the Kingsville Lions Club. Dr. Jones had served as city health officer for Kingsville and as county health officer for Kleberg County. He had served in the US Army and, since 1942, had been a member of the local Selective Service Board.

Surviving are his wife, Ola Smith Jones; two sons, Augustus Claiborne Jones, Jr., of Kingsville and Gerald F. Jones of Dallas; a daughter, Mrs. Ann Estelle Hill of San Antonio; a brother, Reginald L. Jones of Bellaire; a sister, Mrs. Mattie Jeanette Thompson of San Antonio; and three grandchildren.

Dr. R. E. Guill

Dr. Russell Edward Guill, 48, allergist, died Aug. 9, 1970, in Sid Peterson Memorial Hospital, Kerrville, Tex., after a lengthy illness.

A 39-year resident of Kerrville, Dr. Guill was born Jan. 7, 1922, in Brownfield, Ill., to Arthur C. and Millie Allen Guill. He attended Southwest Texas State University (formerly Southwest Texas State Teachers College) in San Marcos, and received his BS degree from Southwestern Louisiana Institute in Lafayette, La., in 1944. In 1948, he was awarded his MD degree from Baylor College of Medicine, Houston. He served his internship and residency at Santa Rosa Hospital in San Antonio, where he received pediatrics training.

Dr. Guill served in the US Navy from 1942 to 1945 and was a captain in the US Air Force from 1954 to 1956. While serving in the Air Force, Dr. Guill was stationed at the 6208th US Air Force Hospital, Clark Air Base, Luzon, Philippines, where he received special training in pediatric allergy. He also served as a professor of pediatrics at Faculty of Medicine and Surgery, University of Santo Tomás, Philippines.

Dr. Guill, who was on the staff of the Sid Peterson Memorial Hospital, was a member of Texas Medical Association, American Medical Association, Kerr-Kendall-Gillespie-Bandera Counties Medical Society, American College of Allergists, and American Academy of Allergy.

He was also a member of the First Baptist Church of Kerrville. He was active as a Master Mason in Kerrville Lodge No. 697 and was a 32nd degree Mason in the Philippines. He had served as medical director for civil defense of Kerr County and was named to *Who's Who of Texas*.

He is survived by his wife; two daughters, Margaret Alice Wendel of Huntsville, Ala., and Mary Louise Guill of Kerrville; two sons, Russell Edward Guill, Jr., and Rodney Stephen Guill, both of Kerrville; two brothers, Paul E. Guill of Baytown and Billy Robert Guill of San Antonio; his mother of Kerrville; and three grandchildren.

DR. GUILL

Dr. H. V. Burns

Corpus Christi neurological surgeon Dr. Herbert V. Burns, 51, died May 21, 1970, in Corpus Christi.

The son of Peter and Edith Richardson Burns, Dr. Burns was born May 30, 1918, in Gloucester, Mass. He was graduated in 1940 from the University of Massachusetts in Amherst with a BS degree, and he received his MD degree in 1943 from Tufts University School of Medicine at Boston. In 1944 he served an internship at William W. Backus Hospital in Norwich, Conn. He served residencies at Boston City Hospital in 1947; at Veterans Administration Hospital in Baltimore from 1947-1948; at New York Neurological Institute in New York City in 1950; and at the University of Nebraska College of Medicine in Omaha in 1951.

From 1944-1946 he served in the US Army medical corps, attaining the

rank of captain. He had practiced in Corpus Christi since 1952.

Dr. Burns was a member of Nueces County Medical Society, Texas Medical Association, and American Medical Association.

Surviving Dr. Burns are two sons, Mark Vane Burns of Norwalk, Conn., and Reginald Y. Burns of Corpus Christi.

DR. BARCUS

Dr. W. S. Barcus

Dr. William Shelton Barcus, 77, retired internist, died in a Fort Worth hospital on Aug. 25, 1970.

The son of John M. and Molly McCrary Barcus, he was born in Vernon, Tex., on April 23, 1893. In 1913, he was graduated from Southwestern University at Georgetown, Tex., with an AB degree, and from UT Medical Branch at Galveston in 1918, with an MD degree. During World War I, Dr. Barcus served as a lieutenant in the US Navy medical corps, and in 1922 moved to Fort Worth where he was in practice until his retirement in 1968.

A member of Tarrant County Medical Society and the American Medical Association, Dr. Barcus was elected to honorary membership in Texas Medical Association in 1969. He was a past president of the Fort Worth Club of Internists and the Texas Club of Internists. Dr. Barcus was one of the founders of the Family Service Association and the Council of Social Agencies of Fort Worth, now the Tarrant County Community Council, serving as its president in 1938. He served as chief of staff at Harris Hospital at Fort Worth in 1932. In 1965, he was honored by Southwestern University for distinguished service in a chosen profession. He was a member of First United Methodist Church and Kappa Alpha social fraternity.

Surviving are his wife, Margaret White Barcus; a daughter, Mrs. Charles S. Hunter of Midland; a brother, James R. Barcus, MD, of Fort Worth; a sister, Mrs. G. H. L. Kent of Sarasota, Fla.; and two grandchildren.

Dr. B. Milligan, Sr.

General practitioner Dr. Barth Milligan, Sr., 72, died at his home in Austin on Aug. 22, 1970. He had practiced in Austin for the past 41 years.

Born Oct. 26, 1897, in Thomaston, Tex., he was the son of Joseph Benjamin and Mary Barth Milligan. He attended The University of Texas at Austin from 1918 to 1920 and was graduated from UT Medical Branch at Galveston in 1924 with an MD degree. From 1924 to 1925, Dr. Milligan served an internship at John Sealy Hospital at Galveston, and in 1939 did postgraduate study at Tulane University School of Medicine at New Orleans. Before moving to Austin in 1939, he practiced in Mexia and Amherst, Tex., from 1925 to 1938.

Dr. Milligan was a member of Travis County Medical Society, Texas Medical Association, and American Medical Association.

Surviving are his wife, Willie Carswell Milligan; a son, Barth Milligan, Jr., MD, of Austin; a brother, William Milligan of Thomaston, Tex.; three sisters, Mrs. Claudia Sample of Floresville, Mrs. Mary Fanett of Cuero, and Mrs. Blanche Green of San Antonio; and four grandchildren.

DR. MILLIGAN

DR. HORBALY

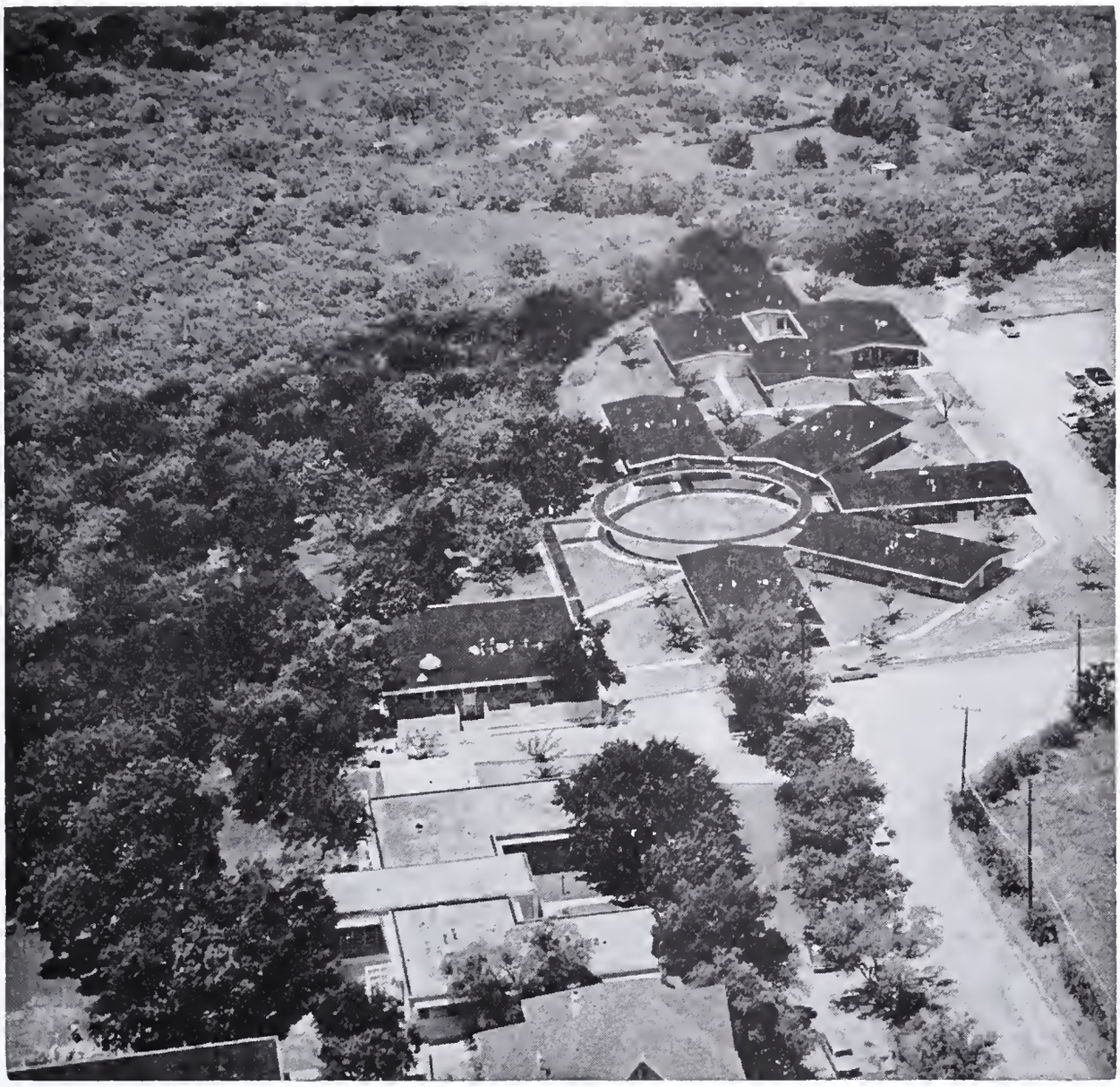
Dr. W. V. Horbaly

Dr. William V. Horbaly, 57, died in an Alamogordo, N.M., hospital on Aug. 24, 1970. At the time of his death, he was assistant superintendent of Terrell State Hospital.

Dr. Horbaly was born in Pittsburgh, Pa., on July 19, 1913, and was the son of Vincent and Mary Horbaly. In 1933, he received a BS degree from the University of Pittsburgh and in 1936 was graduated from the University of Pittsburgh School of Medicine with an MD degree. From 1936 to 1937, he served an internship at Presbyterian Hospital in Pittsburgh, and from 1962 to 1965, he served a residency in psychiatry at Southwestern Medical School in Dallas. After serving as physician for the Bethlehem Steel Corp., in Marianna, Pa., from 1937 to 1944, he practiced medicine in Corpus Christi until 1953. He was in the US Army medical corps from 1953 to 1956, attaining the rank of lieutenant colonel. Dr. Horbaly joined the staff at the Big Spring State Hospital in 1956, and in 1959 he moved to Wills Point, Tex., and joined the staff at Terrell State Hospital.

He was a member of Van Zandt County Medical Society, Texas Medical Association, and American Medical Association. He also belonged to the Trinity Lutheran Church in Dallas.

Surviving Dr. Horbaly are his wife, Ras Stockton Horbaly; a son, William Horbaly of San Jose, Calif.; a daughter, Mrs. Nancy Willis of Reno, Nev.; and one grandchild.



BEVERLY HILLS HOSPITAL
BEVERLY HILLS CLINIC

PSYCHIATRY
INPATIENT — OUTPATIENT

Multiple-approach treatment of thinking disorders. Established diagnostic procedures available. Secluded in-town location convenient to the medical community.

Psychiatry

Joseph L. Knapp, M.D. — Fred H. Jordan, M.D.
Jackson H. Speegle, M.D. — Joseph H. Lindsay, M.D.
Jack R. Tomlinson, M.D.

Psychology

Traudl E. Jordan-Diener, Ph.D. — R. A. Mitchell, M.S. — David K. Fooshee, M.S.

1353 North Westmoreland Avenue — Dallas, Texas 75211 — 214 331-8331

Starlite Village Clinic

Center Point, Texas

Ph.: ME 4-2426

- - - A specialized clinic dedicated to the physical, mental, and spiritual treatment of men and women suffering from alcoholic and similar disturbances.

F. E. Seale, M.D.
Medical Director

Bland Seale
Administrator

RADIOLOGY ASSOCIATES OF FORT WORTH

John S. Alexander, M.D., M.A.C.R.
Robert J. Atcheson, M.D., M.A.C.R.
Douglas E. Bibby, M.D., F.A.C.R.
James W. Buice, M.D., F.A.C.R.
Richard C. Gasser, M.D., M.A.C.R.
James A. Holland, M.D., M.A.C.R.
Paul W. Mathews, Jr., M.D., M.A.C.R.
Preston W. Nash, M.D., M.A.C.R.
Rolland F. Oakes, M.D., M.A.C.R.
Norman L. Presley, M.D., M.A.C.R.
Sanford Reitman, M.D., M.A.C.R.
Gomer W. Roberts, M.D., M.A.C.R.
Herman C. Sehested, M.D., F.A.C.R.
Glenn A. Stokdyk, M.D., M.A.C.R.
J. Thomas Telle, M.D., D.A.B.R.
C. H. Tseng, M.D., M.A.C.R.
Claude Williams, M.D., M.A.C.R.

DIPLOMATES OF THE AMERICAN BOARD OF RADIOLOGY

Offices:

100 Medical Tower Bldg. — 336-8681
1217 West Cannon — 336-8627
900 W. Randol Mill Rd., Arlington, Texas 76010 — 277-7681

TRAVIS CLINIC ASSOCIATION AND THE NAN TRAVIS MEMORIAL HOSPITAL

JACKSONVILLE, TEXAS

STAFF

General Surgery:
L. L. Travis, M.D.
J. S. O'Hare, M.D.
R. K. Willms, M.D.

Orthopedic Surgery:
E. L. Mahon, Jr., M.D.

Urology:
H. F. Rives, M.D.

Pathology:
Harbert Davenport, Jr., M.D.

Internal Medicine:
J. T. Boyd, M.D.
F. H. Verheyden, M.D.
J. T. Scogin, M.D.
J. H. Pesnell, M.D.
Mary A. Bone, M.D.

Obstetrics and Gynecology:
J. C. Rucker, M.D.
J. D. Crawford, M.D.

Pediatrics:
M. L. Gray, M.D.

Radiology and Radioactive Isotopes:
L. W. Ralston, M.D.

William J. Fowler
Administrator of Nan Travis Memorial Hospital

J. G. Casey
Business Manager of Travis Clinic

MEDICAL ARTS CLINIC

Box 841
Corsicana, Texas

PEDIATRICS
JOHN W. GRIFFIN, M.D., F.A.A.P.*
JAMES E. SPEIER, M.D.

INTERNAL MEDICINE
ROBERT D. BONE, M.D., F.A.C.P.*
JAMES F. WITTEN, M.D., F.A.C.P.*
CHARLES I. BILTZ., M.D.*

OBSTETRICS & GYNECOLOGY
KELLY PAUL BURKHART, M.D., F.A.C.O.G.*

DERMATOLOGY
JOSEPH M. GLICKSMAN, M.D.

BUSINESS MANAGER
OWEN G. ELLIOTT, M.G.M.A.

SURGERY
LOUIS E. GIBSON, M.D., F.A.C.S.*
E. SCOTT MIDDLETON, M.D.

OPHTHALMOLOGY
ROBERT D. MERTZ, M.D., F.A.A.O.O.*
WILLIAM E. LAGOMARSINO, M.D.

EAR, NOSE, THROAT
PHILLIP M. AWTREY, M.D.,* F.A.A.O.O.

DENTISTRY
ROBERT A. LANG, D.D.S.

*Diplomate of the American Board

Sandoz announces...

a new agent for the alcohol-dependent patient who wants to quit

and

a program for the Texas physician who wants to help

a major tranquilizer with specific advantages for the alcohol-dependent patient:

1. Alleviates tension, anxiety, and depression; may also ease prevalent neurotic symptoms in personality disorders.
2. No reported habituation or addiction.
3. Antiemetic properties to control nausea and vomiting.
4. Has not caused hepatic dysfunction or interfered with functional recovery of impaired liver.
5. Four tablet strengths to allow flexibility of dosage (usual starting dose: for the problem drinker, 10 mg. t.i.d.; for the frank alcoholic, 25 mg. b.i.d.).
6. Injectable form available for acute episodes.

a program for early recognition and successful treatment:

Alcoholism in Texas*

State Rank

total no. alcoholics	9th
no. per capita	34th
per capita consumption†	32nd

Texas Physicians' Report
(compared with U.S. average)

	%Tex.	%U.S.
see 5 or more problem drinkers in 2-month period	30.2	37.1
half or more seen are women	39.6	37.4
treat, rather than refer	69.1	72.6
more community services needed	61.7	63.0

*based on preliminary data supplied by Center of Alcohol Studies, Rutgers Univ. †absolute alcohol

The Ins-and-Outs of Alcoholism: A series of recordings and other mailings, each concerned with a particular aspect of the alcohol problem. Recognized authorities in the field discuss the scope, recognition and treatment of alcohol-dependent patients. Also included will be **The Alcoholic Directory,** a nationwide survey of treatment centers.

Interested? Complete and mail this coupon to:
Dept. SERENTIL/Sandoz Pharmaceuticals
Route 10/Hanover, N. J. 07936

SANDOZ

Dr. _____
(PLEASE PRINT)

Street _____

City _____ State _____ Zip _____

See next page for prescribing information.

SERENTIL®
(mesoridazine)
new weapon in the fight against alcoholism

INDICATIONS: In clinical studies, Serentil (mesoridazine) has been found useful in the following disease states:

Alcoholism—Acute and Chronic: Serentil ameliorates anxiety, tension, depression, nauseo and vomiting in both acute and chronic alcoholics without producing hepatic dysfunction or hindering the functional recovery of the impaired liver.

Schizophrenia: Serentil is effective in the treatment of schizophrenia. It substantially reduces the severity of Emotional Withdrawal, Conceptual Disorganization, Anxiety, Tension, Hallucinatory Behavior, Suspiciousness and Blunted Affect in schizophrenic patients. As with other phenothiazines, patients refractory to previous medication may respond to Serentil.

Behavioral Problems in Mental Deficiency and Chronic Brain Syndrome: The effect of Serentil was found to be excellent or good in the management of hyperactivity and uncooperativeness associated with Mental Deficiency and Chronic Brain Syndrome.

Psychoneurotic Manifestations: Serentil reduces the symptoms of anxiety and tension, prevalent symptoms often associated with neurotic components of many disorders, and benefits personality disorders in general.

CONTRAINDICATIONS: As with other phenothiazines Serentil (mesoridazine) is contraindicated in severe central nervous system depression or comatose states from any cause. Serentil is contraindicated in individuals who have previously shown hypersensitivity to the drug.

WARNINGS: Where patients are participating in activities requiring complete mental alertness (e.g., driving), it is advisable to administer the phenothiazines cautiously and to increase the dosage gradually.

Usage in pregnancy: The safety of this drug in pregnancy has not been established; hence, it should be given only when the anticipated benefits to be derived from treatment exceed the possible risks to mother and fetus.

Usage in children: The use of Serentil in children under 12 years of age is not recommended, because safe conditions for its use have not been established.

Attention should be paid to the fact that phenothiazines are capable of potentiating central nervous system depressants (e.g., anesthetics, opiates, alcohol, etc.) as well as atropine and phosphorus insecticides.

PRECAUTIONS: While ocular changes have not to date been related to Serentil, one should be aware that such changes have been seen with other drugs of this class.

Because of possible hypotensive effects, reserve parenteral administration for bedfast patients or for acute ambulatory cases, and keep patient lying down for at least ½ hour after injection.

Leukopenia and/or agranulocytosis have been attributed to phenothiazine therapy. A single case of transient granulocytopenia has been associated with Serentil (mesoridazine).

ADVERSE REACTIONS: Drowsiness and hypotension were the most prevalent side effects encountered. Side effects tended to reach their maximum level of severity early with the exception of a few (rigidity and motoric effects) which occurred later in therapy.

With the exceptions of tremor and rigidity, adverse reactions were generally found among those patients who received relatively high doses early in treatment. Clinical data showed no tendency for the investigators to terminate treatment because of side effects.

Serentil has demonstrated a remarkably low incidence of adverse reactions when compared with other phenothiazine compounds.

Central Nervous System: Drowsiness, Parkinson's syndrome, dizziness, weakness, tremor, restlessness, ataxia, dystonia, rigidity, slurring, akathisia, motoric reactions (opisthotonos) have been reported.

Autonomic Nervous System: Dry mouth, nausea and vomiting, fainting, stuffy nose, photophobia, constipation and blurred vision have occurred in some instances.

Endocrine System: Inhibition of ejaculation and lactation have been noted rarely.

Skin: Itching, rash, hypertrophic papillae of the tongue and angioneurotic edema have been reported.

Cardiovascular System: Hypotension and tachycardia have been reported. EKG changes have occurred in some instances (see Phenothiazine Derivatives: Cardiovascular Effects).

Phenothiazine Derivatives: It should be noted that efficacy, indications and untoward effects have varied with the different phenothiazines. The physician should be aware that the following have occurred with one or more phenothiazines and should be considered whenever one of these drugs is used:

Autonomic Reactions: Miosis, obstipation, anorexia, paralytic ileus.

Cutaneous Reactions: Erythema, exfoliative dermatitis, contact dermatitis.

Blood Dyscrasias: Agranulocytosis, leukopenia, eosinophilia, thrombocytopenia, anemia, aplastic anemia, pancytopenia.

Allergic Reactions: Fever, laryngeal edema, angioneurotic edema, asthma.

Hepatotoxicity: Jaundice, biliary stasis.

Cardiovascular Effects: Changes in the terminal portion of the electrocardiogram, including prolongation of the Q-T interval, lowering and inversion of the T-wave and appearance of a wave tentatively identified as a bifid T or a U wave have been observed in some patients receiving the phenothiazine tranquilizers, including Serentil (mesoridazine). To date, these appear to be due to altered repolarization and not related to myocardial damage. They appear to be reversible. There is no evidence at present that these changes are in any way precursors of any significant disturbance of cardiac rhythm.

Hypotension, rarely resulting in cardiac arrest, has been noted.

Extrapyramidal Symptoms: Akathisia, agitation, motor restlessness, dystonic reactions, trismus, torticollis, opisthotonos, oculogyric crises, tremor, muscular rigidity, akinesia—some of which on rare occasions have persisted for several months or years especially in patients of advanced age with brain damage.

Endocrine Disturbances: Menstrual irregularities, altered libido, gynecomastia, weight gain. False positive pregnancy tests have been reported.

Urinary Disturbances: Retention, incontinence.

Others: Hyperpyrexia. Behavioral effects suggestive of a paradoxical reaction have been reported. These include excitement, bizarre dreams, aggravation of psychoses and toxic confusional states. More recently, a peculiar skin-eye syndrome has been recognized as a side effect following long-term treatment with phenothiazines. This reaction is marked by progressive pigmentation of areas of the skin or conjunctiva and/or accompanied by discoloration of the exposed sclera and cornea. Opacities of the anterior lens and cornea described as irregular or stellate in shape have also been reported.

DOSAGE AND ADMINISTRATION: Oral: The dosage of Serentil (mesoridazine), as in most medications, should be adjusted to the needs of the individual. The lowest effective dosage should always be used. When maximum response is achieved, dosage may be reduced gradually to a maintenance level.

Alcoholism: For most patients the usual starting dose is 25 mg. b.i.d. The usual optimum total daily dose range is 50-200 mg. per day.

Schizophrenia: For most patients, regardless of severity, a starting dose of 50 mg. t.i.d. is recommended. The usual optimum total daily dose range is 100-400 mg. per day.

Behavioral Problems in Mental Deficiency and Chronic Brain Syndrome: For most patients a starting dose of 25 mg. t.i.d. is recommended. The usual optimum total daily dose range is 75-300 mg. per day.

Psychoneurotic Manifestations: For most patients the usual starting dose is 10 mg. t.i.d. The usual optimum total daily dose range is 30-150 mg. per day.

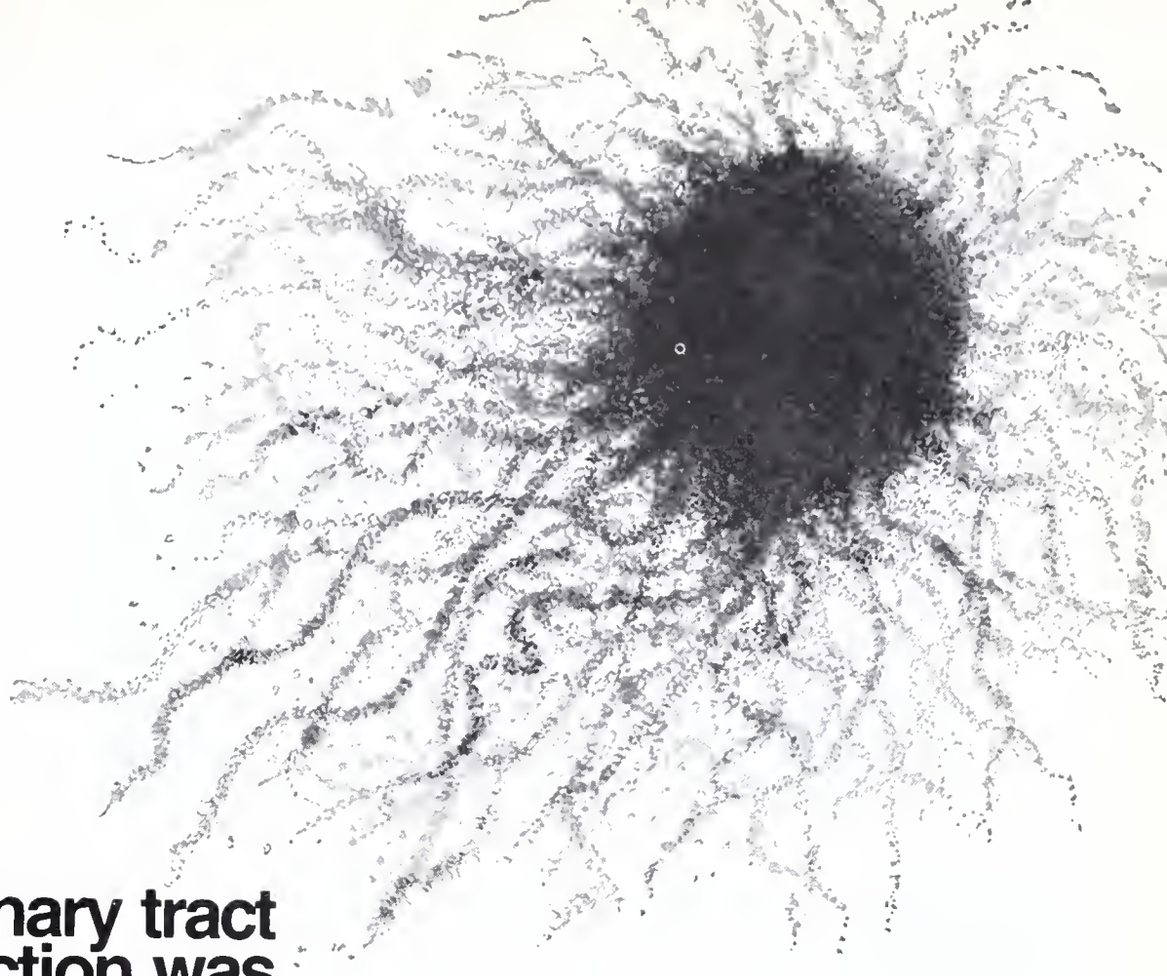
Injectable Form: In those situations in which an intramuscular form of medication is indicated, Serentil (mesoridazine) Injectable is available. For most patients a starting dose of 25 mg. is recommended. The dose may be repeated in 30 to 60 minutes, if necessary. The usual optimum total daily dose range is 25-200 mg. per day.

HOW SUPPLIED: Tablets: 10 mg., 25 mg., 50 mg., and 100 mg. mesoridazine (as the besylate). Bottles of 100.

Ampuls: 1 cc. [25 mg. mesoridazine (as the besylate)]. Inactive ingredients—Disodium Edetate, U.S.P., 0.5 mg.; Sodium Chloride, U.S.P., 7.2 mg.; Carbon Dioxide Gas (Bone Dry), q.s.; Water for Injection, U.S.P., q.s. to 1 cc. Boxes of 20 and 100.

SER70-101

Sandoz Pharmaceuticals, Hanover, N.J.



A urinary tract infection was eliminated last week

Intestinal monilial overgrowth has appeared this week

For women who are diabetic or debilitated, oral antibiotic therapy often sets the stage for monilial overgrowth in the intestine.

When you anticipate such a problem, take action with DECLOSTATIN 300. It combines the broad-spectrum potency of demethylchlortetracycline with the antifungal effectiveness of nystatin—it helps avoid monilial take-over. Experience has shown DECLOSTATIN to be highly useful for many women patients; individual culture studies will show exactly where this usefulness may best be applied.

It doesn't let monilia begin where bacteria end. Declostatin® 300

Demethylchlortetracycline HCl 300 mg and Nystatin 500,000 units Capsule-Shaped Tablets Lederle

Effectiveness: Because its antibacterial component is DECLOMYCIN® Demethylchlortetracycline, DECLOSTATIN should be equally or more effective therapeutically than other tetracyclines in infections caused by tetracycline-sensitive organisms. The antifungal component, nystatin, protects against superinfection by antibiotic-resistant fungal overgrowth (particularly monilia) in the intestinal tract.

Contraindication: History of hypersensitivity to demethylchlortetracycline or nystatin.

Warning: In renal impairment, usual doses may lead to excessive accumulation and liver toxicity. Under such conditions, lower than usual doses are indicated and, if therapy is prolonged, serum level determinations may be advisable. A photodynamic reaction to natural or artificial sunlight has been observed. Small amounts of drug and short exposure may produce an exaggerated sunburn reaction which may range from erythema to severe skin manifestations. In a smaller proportion, photoallergic reactions have been reported. Patients should avoid direct exposure to sunlight and discontinue drug at the first evidence of skin discomfort. Necessary subsequent courses of treatment with tetracyclines should be carefully observed.

Precautions: Overgrowth of nonsusceptible organisms may occur. Constant observation is essential. If new infections appear, appropriate measures should be taken. In infants, increased intracranial pressure with bulging fontanels has been observed. All signs and symptoms have disappeared rapidly upon cessation of treatment.

Side Effects: Gastrointestinal system—anorexia, nausea, vomiting, diarrhea, stomatitis, glossitis, enterocolitis, pruritus ani. Skin—maculopapular and erythematous rashes; a rare case of exfoliative dermatitis has been reported. Photosensitivity; onycholysis and discoloration of the nails (rare). Kidney—rise in BUN, apparently dose-related. Transient, reversible, nephrogenic diabetes insipidus with excessive thirst and polyuria (rare). Hypersensitivity reactions—urticaria, angioneurotic edema, anaphylaxis. Teeth—dental staining (yellow-brown) in children of mothers given this drug during the latter half of pregnancy, and in children given the drug during the neonatal period, infancy and early childhood. Enamel hypoplasia has been seen in a few children. If adverse reaction or idiosyncrasy occurs, discontinue medication and institute appropriate therapy. Demethylchlortetracycline may form a stable calcium complex in any bone-forming tissue with no serious harmful effects reported thus far in humans.

Average Adult Daily Dosage: One tablet b.i.d. Should be given 1 hour before or 2 hours after meals, since absorption is impaired by the concomitant administration of high calcium content drugs, foods and some dairy products. Treatment of streptococcal infections should continue for 10 days, even though symptoms have subsided.

Lederle LEDERLE LABORATORIES, A Division of American Cyanamid Company, Pearl River, New York 450-9

Serving Texas Physicians for Over Forty Years

Precision-engineered, functionally-built equipment

SMR keeps you and your patients' comfort and satisfaction in mind . . . a room that reflects professional good taste.

SMR has manufactured medical and Dental equipment for over forty years on a direct to user basis.

STAINLESS STEEL POLISH

SMR Stainless Steel Polish cleans, and preserves with superior results —ends fingerprints, watermarks and surface stains. 22 oz. economy $2.75 F.O.B. Plant

NEW CATALOG NOW AVAILABLE

SMR®

SURGICAL MECHANICAL RESEARCH, INC.

Post Office Box 1185 • (714) 646-4405

960 W. 16th St., Newport Beach, Calif. 92663

Established Over 40 Years

Factory Direct Sales

T. ROWE PRICE GROWTH STOCK FUND, INC.

Est. 1950

A NO-LOAD FUND

Investing in stocks selected for long term growth possibilities

Individuals & institutions are invited to request free prospectus

NO SALES CHARGE

T. Rowe Price Growth Stock Fund, Inc.
One Charles Center, Dept. F-1
Baltimore, Md. 21201 Phone (301) 539-1992

Name _____

Address _____

_____ Zip _____

Taste!

Dicarbosil®
ANTACID

Your ulcer patients and others will love it. Specify DICARBOSIL 144's—144 tablets in 12 rolls.

ARCH LABORATORIES
319 South Fourth Street, St. Louis, Missouri 63102

DIRECTORY RATES & DATA: Space is available to TMA members at $8.00 per column inch and listings must run for a minimum of six months. New listings are limited to those specialties recognized by the American Medical Association. A discount of 5% is allowed for six months' advance payment. Mail copy to Advertising Assistant, TEXAS MEDICINE, 1801 North Lamar Blvd., Austin, Texas 78701. Deadline is 20th of the month preceding publication month.

Texas Physicians' Directory

Allergy

DRS. FEIN AND KAMIN
Allergy and Immunology

Bernard T. Fein, M.D., F.A.C.A., Fellow, American Academy of Allergy
Peter B. Kamin, M.D., F.A.A.P., Diplomate, Sub-Board Pediatric Allergy
216 Medical Prof. Bldg., San Antonio, Texas, 226-7671, 227-6331

HOUSTON ALLERGY CLINIC
Clinical Allergy and Immunology

Richard L. Etter, M.D., F.A.C.A., F.A.A.A.
Richard H. Jackson, M.D., F.A.C.A.
Warren J. Raymer, M.D., F.A.C.A.
Ramon Garrido, M.D. (Certified American Board of Pediatrics)
Suite 156, Hermann Professional Building
6410 Fannin St., Houston, Texas 77025, 526-3281

V. E. FRIEDWALD, M.D., F.A.C.P.
Allergy

Diplomate American Boards of Internal Medicine and Allergy
2203 West Tennessee, Midland, Texas 79701, 682-5385

McGOVERN ALLERGY CLINIC
Diagnosis and Treatment of Allergic Diseases

John P. McGovern, M.D.
Orville C. Thomas, M.D.
Charles D. Haunschild, M.D.
Theodore J. Haywood, M.D.
Joseph T. Queng, M.D.
James A. Murray, M.D.
Hermann Gregory, M.D. (Military Leave of Absence)
Certified American Boards of Pediatrics and Allergy
6655 Travis Street, Houston, Texas 77025, 528-5591

HARRIS HOSEN, M.D., F.A.A.Pd.
Clinical Allergy and Immunology

2649 Procter Street, Port Arthur, Texas

ALLERGY CLINIC

Saul Grossman, M.D., F.A.C.A., Allergy-Dermatology
W. A. Crozier, M.D., F.A.C.A., Allergy-Immunology
2530 Morgan, Corpus Christi, Texas, 882-3487

STUART A. MASON, M.D.
Allergic Diseases

921 Eighth Avenue, Fort Worth, Texas 76104
Phone: 336-1574 If no answer: 924-4231

PHYLLIS HUFFMAN, M.D.
Fellow American Academy of Pediatrics
Certified by Sub-Board of Pediatric Allergy
Pediatric Allergy and Immunology

606 North Kent Street, Midland, Texas 79701
Telephone 915 682-9479

Cardiovascular Disease

EVERETT C. PRICE, M.D.
Diplomate American Boards of Internal Medicine and Cardiovascular Disease
Consultation, Cardiac Catheterization, and Angiography in Children and Adults
EKG interpretation by return mail
1705 Medical Towers Bldg., Houston, Texas 77025
523-4388 523-6949

Clinics

THE CLINIC-HOSPITAL OF SAN ANGELO
224-234 West Beauregard Avenue, San Angelo, Texas

R. M. Finks, M.D., Pediatrics
M. D. Knight, M.D., Surgery
W. H. Brauns, M.D., Internal Medicine
Roy E. Moon, M.D., Obstetrics and Gynecology
Chas. F. Engelking, M.D., Ear, Nose and Throat
R. A. Morse, M.D., Internal Medicine
Ralph R. Chase, M.D., Pediatrics
Tom R. Hunter, M.D., Surgery
Robert P. Gordon, C.P.A., Administrator
Dale W. Hayter, M.D., Ophthalmology
O. Sterling Gillis, III, M.D., Obstetrics and Gynecology
Consultant in Pathology—Lloyd R. Hershberger, M.D.
Consultant in Radiology—John E. Ballard, M.D.
John G. Bolen, M.D.
William T. Gordon, M.D.

THE FORT WORTH CLINIC
1221 West Lancaster Avenue, Fort Worth, Texas

John M. Church, M.D.
T. J. Coleman, M.D.
O. M. Phillips, M.D.
Wm. L. Asper, Bus. Mgr.
Robert L. Sewell, M.D.
John H. Sewell, M.D.
C. K. Holsapple, M.D.

FIFTH AVENUE CLINIC
650 Fifth Avenue, Fort Worth, Texas

MEDICINE
Sidney E. Stout, M.D.
Frank L. Bynum, M.D.
Ed Etier, Jr., M.D.

GENERAL PRACTICE
Donald S. Gibbs, M.D.

RADIOLOGY
Otto H. Grunow, M.D.

SEAT BELTS SAVE LIVES—BUT ONLY IF YOU USE THEM

THOMAS-SPANN CLINIC AND HOSPITAL
1546 South Brownlee, Corpus Christi, Texas 78404
Telephone 884-3861

SURGERY
R. Gayle Spann, M.D., F.A.C.S. (Deceased)
S. T. Coleman, M.D., F.A.C.S. (Consultant)
Donald E. Jackson, M.D., F.A.C.S. (Consultant)

OPHTHALMOLOGY
L. David Wright, M.D., F.A.C.S.

GENERAL PRACTICE
Travis B. Phelps, M.D.
T. D. Harvey, M.D.
H. R. Rose, M.D.
C. L. Vernor, M.D.

ORTHOPEDICS
Carlos M. Yanez, M.D., F.A.C.S.

GYNECOLOGY
J. H. Thomas, M.D.

INTERNAL MEDICINE
William E. Morris, M.D
Gerald A. Reeves, M.D.
Pruett Moore, Jr., M.D.

RADIOLOGY
Crysup Sory, M.D.

ADMINISTRATOR
B. J. Clark

DIRECTOR OF NURSES
Clinic - Pat Parker
Hospital - Mrs. Joyce Petit

THE JOHN BUIST CHESTER HOSPITAL & THE CHESTER CLINICS
3330 S. Lancaster Road, Dallas, Texas
Telephone 376-5411

John B. Chester, M.D., F.A.C.S., Orthopedic Surgery
Gene W. Rogers, M.D., General Surgery
Douglas M. Hardy, M.D., Obstetrics & Gynecology
Ervin R. Miller, M.D., Cardiovascular Diseases
Ralph C. Disch, M.D., D.A.B.S., F.A.C.S., Surgery
Catherine P. Chester, M.D., Pediatrics & Allergy
Doyle L. Sharp, M.D., General Surgery
Arlan P. Larson, M.D., D.A.B.O.S., F.A.C.S., Orthopedic Surgery
Robert B. Curry, M.D., General Practice
Amado E. Dominguez, M.D., Diagnosis & Internal Medicine
Jose Newman, M.D., Internal Medicine
Alfredo Zevallos, M.D., Obstetrics & Gynecology
Souren Chakmakjian, M.D., D.A.B.P., Pediatric Cardiology
Emmett R. Hamby, D.D.S., General Dentistry
H. A. Mueller, M.D., Consultant in Radiology
Gerard Noteboom, M.D., Consultant in Pathology
Charles B. Glover, M.D., Consultant in Nuclear Medicine
Elizabeth Garnett, R.N., Superintendent of Nurses
E. B. Morgan, F.A.A.M.A., Administrator

LANCASTER OFFICE
525 W. Pleasant Run Rd., Lancaster, Texas; Telephone 227-2151
David E. Krebs, M.D., Pediatrics & Medicine
Charles W. Waldrop, M.D., General Practice
Miles W. Davis, M.D., General Practice
Garrett W. Maxwell, M.D., Internal Medicine

COUNTRY CLUB CORNERS OFFICE
7140 Baytree Drive, Dallas, Texas; Telephone 224-1181
Rudolf M. Flasdick, M.D., Diagnosis & Diseases of the Heart
J. A. Harris, M.D., General Practice

DeSOTO OFFICE
804 N. Hampton Rd., DeSoto, Texas; Telephone 223-7701
Herbert M. Hinckley, M.D., General Practice
D. Owen Coons, M.D., Aerospace Medicine & General Practice

BEELER-MANSKE CLINIC
9th Avenue N. at 5th Street N., Texas City, Texas 77590
Telephone 713 948-8521

Obstetrics & Gynecology
G. W. Beeler, M.D.

Internal Medicine
W. T. Matlage, M.D.
C. M. Maruri, M.D.

General Surgery
B. W. Hink, M.D., F.A.C.S.

General Practice
J. H. Cochrane, M.D.
J. W. O'Bryant, M.D.
O. O. Smith, M.D.

Clinic Manager
Stan M. Sheppard

Complete X-Ray, Physical Therapy and Laboratory Facilities

MALONE AND HOGAN CLINIC
901 Main Street, Big Spring, Texas 79720
Telephone 267-6361

OPHTHALMOLOGY AND OTOLARYNGOLOGY
P. W. Malone, M.D., F.A.C.S.
J. W. Tipton, M.D.

GENERAL SURGERY
J. E. Hogan, M.D., F.A.C.S.
C. B. Marcum, Jr., M.D., F.A.C.S.

ORTHOPEDIC SURGERY
P. H. Rhymes, M.D.

INTERNAL MEDICINE
J. H. Burnett, Jr., M.D.
W. A. Riley, M.D.
R. S. Griffin, M.D.
R. T. Torp, M.D.

OBSTETRICS AND GYNECOLOGY
M. A. Porter, M.D.

PEDIATRICS
J. M. Woodall, M.D.
M. W. Talbot, Jr., M.D., F.A.A.P.

RADIOLOGY
W. R. Cashion, M.D.

UROLOGY
G. F. Dillon, M.D.

CONSULTANTS IN PATHOLOGY
Jarrett E. Williams, M.D.
B. B. Trotter, M.D.

BUSINESS MANAGER
R. L. Heith

THE LORIMER CLINIC
901 West Leuda Street, Fort Worth, Texas 76104
Telephone 335-4333

SURGERY
W. S. Lorimer, Jr., M.D., F.A.C.S.
R. J. Turner, III, M.D., F.A.C.S.

INTERNAL MEDICINE
W. W. Moorman, M.D., F.A.C.P.
D. W. Johnston, M.D., F.A.C.P.
Stephen Eppstein, M.D.
A. R. Daniell, M.D.

Mrs. Evelyn Farr, Business Manager

RUGELEY AND BLASINGAME CLINIC
2100 North Fulton Street, Wharton, Texas
Telephone 713 532-1700

ADMINISTRATION
C. H. "Ham" Rugeley
Malcolm D. Rugeley

INTERNAL MEDICINE
R. D. Little, M.D.
D. W. Samuelson, M.D.

GENERAL PRACTICE
C. E. Woodson, M.D.

PEDIATRICS
F. W. Kolle, M.D.

NEUROPSYCHIATRY
R. R. Gleason, Jr., M.D.

DERMATOLOGY & SKIN CANCER
J. S. Stell, M.D.

GENERAL & THORACIC SURGERY
R. E. Goelzer, M.D.

GENERAL SURGERY
R. B. Caraway, Jr., M.D.

UROLOGY
H. Z. Fretz, M.D.
C. M. Collins, M.D.

OBSTETRICS & GYNECOLOGY
D. M. Voulgaris, M.D.
H. E. Secor, M.D.

OPHTHALMOLOGY
V. A. Black, M.D.

OTOLARYNGOLOGY
J. L. Holcomb, M.D.

DENTISTRY
C. J. Shumbera, D.D.S.
J. R. Kieler, Jr., D.D.S.

PATHOLOGY—CONSULTANT
H. M. Perches, M.D.

ANESTHESIOLOGY—CONSULTANT
C. G. Spears, M.D.

RADIOLOGY—CONSULTANT
L. D. O'Gorman, M.D.

DIAGNOSTIC CLINIC OF HOUSTON
6448 Fannin, Houston, Texas 77025
Telephone 713 526-2051

Internal Medicine and Diagnosis

CARDIOVASCULAR DISEASE
Thomas J. Fatheree, M.D.
Hugh F. Arnold, M.D.
Hugh H. Hanson, M.D.
Michael B. Raine, M.D.
Michael A. Modelski, M.D.
Sigmund W. Friedland, M.D.

ENDOCRINOLOGY AND METABOLIC DISEASES
H. Leland Kaplan, M.D.
Thomas G. Vandivier, M.D.
Charles H. Gregory, M.D.
R. Frederick Gregory, M.D.

ENDOCRINOLOGY, METABOLIC DISEASES AND DIRECTOR OF CLINICAL RESEARCH
Raymond L. Gregory, M.D.

GERIATRICS
Frederick G. Dorsey, M.D.

GASTROENTEROLOGY
Dolph L. Curb, M.D.
W. Tom Arnold, M.D.
Belton G. Griffin, M.D.
Frederick R. Lummis, Jr., M.D.
Dean C. Solcher, M.D.

HEMATOLOGY
Edmund N. Gouldin, M.D.
George W. Conrad, Jr., M.D.

HYPERTENSION AND RENAL DISEASES
K. Ronald Bingman, M.D.
R. Robert Durrett, M.D.

INFECTIOUS DISEASES
Lewie L. Travis, Jr., M.D.
Jack L. Reddin, M.D.

INTERNAL MEDICINE
Jeffrey Zatorski, M.D.

NEUROLOGY
Donald J. Russell, M.D.

ONCOLOGY
Lester L. Hoaglin, Jr., M.D.
Peter Sullivan, M.D.

PATHOLOGY
Jack P. Abbott, M.D.
Paul B. Radelat, M.D.

PULMONARY DISEASE
William M. Donohue, M.D.
Joel E. Reed, M.D.
Gene R. Lindley, M.D.

RADIOLOGY AND NUCLEAR MEDICINE
William L. Hinds, M.D.
Charles P. Eldridge, Jr., M.D.
David D. Lawrence, M.D.
Charles A. Spain, M.D.

RHEUMATOLOGY
John E. Norris, M.D.

ADMINISTRATION
C. G. Mercy, Administrator
Robert B. Hall, Assistant Administrator

LABORATORY
Clinical Pathology
Cytology

NUCLEAR MEDICINE
Isotope uptake, Gammagram and Therapy

ROENTGENOLOGY

PROCEDURES:
Bronchoscopy
Pulmonary Functions
Cardiac Catheterization
Electrocardiography-Phonocardiography
Esophagoscopy
Gastroscopy
Proctosigmoidoscopy

Consultation By Appointment

CLINIC OF THE SOUTHWEST
6437 High Star at Hillcroft, Houston, Texas 77036
Telephone 774-7671

INTERNAL MEDICINE
William C. Franklin, M.D.
Arthur B. Conde, M.D.

OBSTETRICS & GYNECOLOGY
Joy L. Deere, M.D.
Loren B. Goss, M.D.

PEDIATRICS
John R. Dunn, Jr., M.D.
Blanca S. Azios, M.D.

PHYSICAL THERAPY
Richard D. Tinsley, R.P.T.

GENERAL SURGERY
Harvey B. Koch, M.D.

UROLOGY
Glen E. Lewis, M.D.

DENTISTRY
Burley G. Ingram, D.D.S.

RADIOLOGY
Neil B. Longley, M.D.
Richard E. Schuette, M.D.

BUSINESS MANAGER
C. C. Walker

Colon & Rectal Surgery

ALVIN BALDWIN, JR., M.D., F.A.C.S.
Practice Limited to Diseases and Surgery of the Colon and Rectum

714 Doctors Building, 3707 Gaston Avenue, Dallas, Texas
Office Telephone 824-2573; Residence Telephone 361-4500

HUGH C. WELSH, M.D.
Proctology and Abdominal Surgery

2715 Fannin Street, Houston, Texas

J. WADE HARRIS, M.D., F.A.C.S.
JOHN E. COGAN, M.D., F.A.C.S.
Surgery of the Rectum and Colon

406 Hermann Professional Bldg., Houston, Texas

C. D. L. CROMAR, M.D.
Surgery of the Rectum and Colon

617 South Tatar Street, Pasadena, Texas 77502

Dermatology

ROGER W. MANAR, M.D.
Dermatology and Superficial X-Ray Therapy

1400 Eighth Street, Wichita Falls, Texas

BEDFORD SHELMIRE, M.D.
BEDFORD SHELMIRE, JR., M.D.
DAVID S. SHELMIRE, M.D.
Dermatology

1410 Medical Arts Bldg., Dallas, Texas

DRS. PIPKIN, RESSMANN & RICHARDSON
J. Lewis Pipkin, M.D.
Arthur C. Ressmann, M.D.
A. W. Richardson, M.D.
Dermatology
X-Ray and Radium in the Treatment of Skin Malignancies

714 Medical Arts Bldg., San Antonio, Texas

EVERETT R. SEALE, M.D.
Dermatology and Treatment of Skin Malignancies

1217 Hermann Professional Bldg., Houston, Texas

J. GILMORE BRAU, M.D.
Dermatology and Syphilology
X-Ray and Radium Therapy

Hours 9 to 1—3 to 5

3817 Brown Street, Dallas, Texas

J. FRANKLIN CAMPBELL, M.D.
EDMUND N. WALSH, M.D.
Dermatology and Syphilology, and Treatment of Skin Cancer, Radium and X-Ray Therapy

1410 Pruitt Street, Fort Worth, Texas

Leslie M. Smith, M.D.
H. D. Garrett, M.D.
John C. Wilkinson, M.D.

DRS. SMITH, GARRETT & WILKINSON
Dermatology and Syphilology X-Ray and Radium in the Treatment of Skin Malignancies

Medical Center, 1501 Arizona, El Paso, Texas

WALTER B. MANTOOTH, JR., M.D.
JOE M. LEHMAN, M.D.
ROBERT LEHMAN, M.D.
Dermatology, Syphilology, and Cancer of the Skin

3801 19th St., Suite 500, Lubbock, Texas

MARVIN E. CHERNOSKY, M.D.
Dermatology and Syphilology

703 Hermann Professional Bldg., Houston, Texas; Phone 526-3733

THOMAS L. SHIELDS, M.D.
Dermatology and Syphilology
X-Ray Therapy in the Treatment of Skin Malignancies

Hours 9 to 1—3 to 5

800 Fifth Ave., Fort Worth, Texas

DAVID R. WEAKLEY, M.D., F.A.C.P.
Dermatology
Treatment of Skin Malignancies

8548 Northwest Plaza Drive, Dallas, Texas; Phone 369-2321

315 North Shiloh Road, Garland, Texas; Phone 272-2561

M. A. (Mac) HAIRSTON, JR., M.D.
Dermatology, Hair Transplantation & Dermoplaning

Memorial City Professional Bldg., 902 Frostwood, Suite 184
(Between Memorial & Katy Fwy.)
Houston, Texas 77024, Phone 464-6369

JOHN B. McMASTER, JR., M.D.
Dermatology
Dermabrasion & Chemosurgery

416 M & S Tower, San Antonio, Texas 78205; Phone 222-2147

Eye, Ear, Nose, Throat

DRS. CANON, WATKINS, ANDERSON, NALLE AND ELLSASSER
Eye, Ear, Nose and Throat, Broncho-Esophagology and Allergy
R. T. Canon, M.D., F.A.C.S.
Wm. F. Anderson, M.D., DAB Oph., F.A.C.S.
M. G. Ellsasser, M.D., DAB Oph.
M. D. Watkins, M.D., F.A.C.S., A.I.C.S.
Ernest Nalle, Jr., M.D. DAB Oto., F.A.C.S., F.I.C.S.
West Texas Clinic, 1312 Main, Lubbock, Texas

W. HUBERT SEALE, M.D.
Eye, Ear, Nose & Throat

HUBERT JAMES SEALE, M.D.
Disease & Surgery of the Eye
1321 Hickory St., Abilene, Texas, Phone 673-3751

Gastroenterology

JAMES J. GORMAN, M.D., F.A.C.P.
Gastroenterology
Diagnosis, Gastroscopy
1111 El Paso National Bank Bldg., El Paso, Texas 79901

MILFORD O. ROUSE, M.D.
announces limitation of practice to consultation in hospitals.
Records of his patients are with Cecil O. Patterson, M.D., and Daniel Polter, M.D.,
1414 Medical Arts Building, Dallas, 742-6144

CECIL O. PATTERSON, M.D.
Gastroenterology, Gastroscopy, Esophagoscopy
1414 Medical Arts Building, Dallas, Texas, 742-6141

DRS. BAILEY, DOUGLAS AND FISHER ASSOCIATION
3434 Swiss Avenue, Suite 303, Dallas, Texas
Diseases of the Digestive System
Herbert A. Bailey, M.D.
F. Clark Douglas, M.D.
John W. Fisher, M.D.

W. CROCKETT CHEARS, JR., M.D.
Gastroenterology, Gastroscopy & Esophagoscopy
1027 Medical Arts Building, Dallas, Texas, 748-4975

General Surgery

J. PEYTON BARNES, M.D., F.A.C.S.
Surgery
1000 St. Joseph Professional Bldg., Houston, Texas 77002

★ BE SURE TO VOTE NOV. 3 ★
or vote absentee from October 14-30

L. GONZALEZ CIGARROA, M.D., F.A.C.S.
Diplomate American Board of Surgery
Practice Limited to Surgery
1502 Logan Ave., Laredo, Texas

BURT B. SMITH, M.D.
Surgery
Emphasizing Breast, Thyroid and Gastro-Intestinal Surgery
728 Hermann Professional Bldg., Houston, Texas 77025, 523-8323

ADOLPH F. KAUFFMANN, M.D., F.A.C.S.
Diplomate American Board of Surgery
General Surgery
707 Fifth Ave., Fort Worth, Texas, Phone 332-7597

BRYAN V. WILLIAMS, M.D., F.A.C.S.
Diplomate American Board of Surgery
General Surgery
1506 St. Joseph Professional Bldg., Houston, Texas 77002, 227-5505

PAUL CARRILLO-RIVERA, M.D., F.A.C.S.
General, Pulmonary, Cardiovascular Surgery
105 University Towers, 1900 N. Oregon St., El Paso, Texas 79902
Telephone 915 533-2508

Internal Medicine

JOHN A. WIGGINS, JR., M.D.
Diseases of the Chest
Bronchoscopy
1105 Pennsylvania Ave., Fort Worth, Texas

HENRY N. GEMOETS, M.D., F.A.C.P., F.C.C.P.
Internal Medicine and Diseases of the Chest and Heart

THOMAS H. GEMOETS, M.D.
Internal Medicine and Diagnosis
1003 Memorial Professional Building
1010 Louisiana, Houston, Texas 77002, 222-7224

Neurology & Psychiatry

STEPHEN WEISZ, M.D.
Practice Limited to
Neurology and Psychiatry
1637 Medical Arts Bldg., Dallas, Texas, 747-5183

ALEX K. MUNSON, M.D.
Child Psychiatry
KERBEY LANE EVALUATION AND TREATMENT CENTER
Office Hours By Appointment
3400 Kerbey Lane, Austin, Texas 78703, 512 454-8718

HAUSER CLINIC
Psychiatry, Neurology and Electroencephalography

Section of Psychiatry
*Abe Hauser, M.D.
*Robert I. Hauser, M.D.
*Barry M. Brown, M.D.
*Harris M. Hauser, M.D.

Section of Neurology
*Harris M. Hauser, M.D.
*Gerald Ratinov, M.D.
Robert M. Gordon, M.D.
*Abe Hauser, M.D.

Section of Social Work
Ethel Feinsilver, M.S.

Administrator
Gordon D. Keller

808 Memorial Professional Building, Houston, Texas 77002
Telephone 224-5041

*Diplomate, American Board of Psychiatry and Neurology

Perry C. Talkington, M.D.
Charles L. Bloss, M.D.
Howard M. Burkett, M.D.
Jerry M. Lewis, M.D.
James K. Peden, M.D.
Claude L. Jackson, M.D.
Dode M. Hanke, M.D.
Doyle I. Carson, M.D.
Thomas H. Allison, M.D.
Stanley L. Seaton, M.D.
Maurice S. Green, M.D.
Joe W. King, M.D.
Keith H. Johansen, M.D.
Charles G. Markward, M.D.
Aretta J. Rathmell, M.D.
Donald N. Offutt, M.D.

practice limited to
PSYCHIATRY

4645 Samuell Blvd., Dallas, Texas
Timberlawn Psychiatric Hospital
4600 Samuell Blvd., Dallas, Texas
Telephone 381-7181

CHAPMAN ISHAM, M.D.
Diplomate American Board of Psychiatry
Child Psychiatry and Marriage Counseling
Hypnotherapy for Smoking and Obesity

3701 21st Street, Lubbock, Texas 79410, 795-4023

MEDICAL NEUROLOGY AND ELECTROENCEPHALOGRAPHY

205 Swiss Avenue Medical Building
3434 Swiss
Dallas, Texas 75204, 827-3610

Sheff D. Olinger, M.D.
Joseph S. Jenike, M.D.
Charles W. Barrier, M.D.

Hours By Appointment Only

THE FORT WORTH NEUROPSYCHIATRIC CENTER

*Bernard J. Dolenz, M.D.
*Herbert G. Rush, M.D.

1066 W. Magnolia Avenue, Fort Worth, Texas 76104, 336-5469

*Diplomates American Board of Psychiatry and Neurology

HOUSTON ASSOCIATES IN PSYCHIATRY AND NEUROLOGY

Houston, Texas

C. A. Iannucci, M.D.

Joe C. A. Eckhardt, Jr., M.D.

Alfred H. Vogt, M.D.

George M. Stevens, M.D.

Jules Bohnn, M.D.

Leroy Androes, M.D.

A. R. Martinez, Ph.D.

Ruth Searls, M.S.W.

Diana Sheer, M.S.W.

Dan DeShazo, M.S.W.

Beth Bowman, M.A.

Comprehensive Neuropsychiatric Evaluation and Treatment Electroencephalography

1021 Hermann Prof. Bldg., 529-5721
6812 Staffordshire, 748-3780

PASADENA NEUROPSYCHIATRIC CLINIC ASSN.
Robert E. Hazlewood, M.D., Richard M. Orr, M.D.

Department of Psychology
T. E. Morosko, Ph.D., Allen Goss, Ph.D.

Practice Limited to Neurology and Psychiatry
Office Hours By Appointment

First Pasadena State Bank Building
1001 E. Southmore, Suite 1103, Pasadena, Texas 77502, 473-7646

Neurological Surgery

JAMES GREENWOOD, JR., M.D.
Neurosurgery

718 Hermann Professional Bldg., Houston, Texas 77025

Office: 528-5373; Residence: 528-4038

Morris Sanders, M.D.
Jack I. Woolf, M.D.

DRS. WOOLF AND SANDERS

Diplomate American Board of Neurological Surgery

Locke Medical Bldg., 6011 Harry Hines Blvd., Dallas, Texas, 631-1500

JACK STERN, M.D.
GARY C. HUTCHISON, M.D.
CLARK WATTS, M.D.
Neurological Surgery

8226 Douglas, Suite 609, Dallas, Texas 75225, 363-8524

Watch out for the other guy!
DRIVE DEFENSIVELY

Casey E. Patterson, M.D.
Charles W. Simpson, M.D.
Tom M. Nash, M.D.
James E. Bland, M.D.

DRS. NASH, PATTERSON & SIMPSON, ASSN.
Neurological Surgery
Suite 557, Locke Medical Building
6011 Harry Hines Blvd., Dallas, Texas 75235, 637-0420

ALBERT D'ERRICO, M.D.
Neurological Surgery
3707 Gaston Avenue, Dallas, Texas 75246, 824-2543

RONALD SMITH, M.D.
Neurological Surgery
901 South Lake, Fort Worth, Texas, 336-0551

GLENN R. CHERRY, M.D., F.A.C.S.
R. GORDON LONG, M.D.
Diplomate American Board of Neurological Surgery
712 North Washington, Dallas, Texas, 826-7060

ROBT. C. L. ROBERTSON, M.D., F.A.C.S.
JOSEPH W. ROBERTSON, M.D.
Neurological Surgery
2210 Maroneal, Houston, Texas 77025, 523-3684

WILLIAM J. NELSON, M.D.
Certified by the American Board of Neurological Surgery
Suite 300, University Towers
1900 N. Oregon St., El Paso, Texas 79902, 915 542-0643

CHARLES A. BORNE, JR., M.D.
Neurological Surgery
Suite 834, Sealy-Smith Professional Building
200 University Blvd., Galveston, Texas 77550, 713 763-1688

Nuclear Medicine

HERBERT C. ALLEN, JR., M.D.
Practice Limited to Nuclear Medicine
100 Hermann Professional Bldg., Houston, Texas 77025, 526-1501

ADDRESS CHANGE?

Avoid missing or delayed mail from the Texas Medical Association. Send your old and new address to:

Membership Office
Texas Medical Association
1801 North Lamar Blvd.
Austin, Texas 78701

Ophthalmology

HOUSTON EYE ASSOCIATES
1121 Hermann Prof. Bldg., Houston, Texas 77025, 713 526-7261
Richard S. Ruiz, M.D., F.A.C.S.
Charles E. Russo, M.D.
Malcolm L. Mazow, M.D.
Robert H. Stewart, M.D.
Robert B. Wilkins, M.D.

DRS. MURPHY, ALPAR, TAYLOR & HOWELL
Ophthalmology
Weldon O. Murphy, M.D.
John J. Alpar, M.D.
Coleman Taylor, M.D.
J. Franklin Howell, Jr., M.D.
Diplomates of the American Board of Ophthalmology
2300 West 7th Avenue, Amarillo, Texas

ALBERT VAISER, M.D.
WILLIAM B. SNYDER, M.D.
Diseases and Surgery of the Retina
318 Medical Arts Building, Dallas, Texas, 748-0958

LIEVEN J. VAN RIET, M.D.
Ophthalmology
Medical—Surgical
Saint Joseph Professional Bldg., Houston, Texas 77002, 224-0654

W. REX HAWKINS, M.D.
Diseases of the Retina
608 Medical Center Professional Building
Houston, Texas 77025, 713 528-6341

DAVID R. STAGER, M.D.
Pediatric Ophthalmology
8226 Douglas Ave., Dallas, Texas 75225

ARTHUR M. CLEMENTS, M.D.
Surgery and Diseases of the Eye
Northlake Professional Bldg., 8535 Ferndale Road, Dallas, Texas 75238
Telephone 214 341-3407

BRYSON AND STRUVE ASSOCIATES
General Ophthalmology
J. Gordon Bryson, M.D.
C. A. Struve, M.D.
Disease and Surgery of the Retina
John A. Bryant, M.D.
3166 Reid Drive, P. O. Box 6374, Corpus Christi, Texas 78411
Telephone 512 853-7319

Do your patients understand your fees?

Displaying an AMA Fee Plaque serves as an invitation for patients to discuss medical costs with you. It shows you care and helps prevent doctor-patient misunderstanding. Send $1.25 to: Order Department, American Medical Association, 535 North Dearborn Street, Chicago, Illinois 60610.

Orthopedic Surgery

H. H. Beckering, M.D.
L. Ray Lawson, M.D.
George Truett James, M.D.
Robert D. Vandermeer, M.D.
Wynn M. Snoots, M.D.

W. B. CARRELL MEMORIAL CLINIC

2828 Lemmon Ave., Dallas, Texas

FORT WORTH BONE & JOINT CLINIC

918 8th Avenue, Fort Worth, Texas

Louis J. Levy, M.D.
Henry C. McDonald, Jr., M.D.
Cuvier P. Lipscomb, M.D.
Fred W. Sanders, M.D.

Ralph E. Donnell, M.D.
F. Carlton Hodges, M.D.

ORTHOPEDIC ASSOCIATES

Diplomates American Board of Orthopaedic Surgery

1133 N. 19th St., Abilene, Texas 79601

HOUSTON ORTHOPEDIC CLINIC

Joseph Barnhart, M.D.

Donald T. Lazarz, M.D.

1817 Dryden Road, Houston, Texas, 529-4389

LUBBOCK ORTHOPEDIC SURGERY CLINIC
Surgery of the Hand

Royce C. Lewis, Jr., M.D.
Kenneth C. Scholz, D.D.S., M.D.
Ray E. Santos, M.D.
Robert O. Bateman, M.D.

3702 21st St., Suite 9, Lubbock, Texas 79410, 806 795-8261

THE EL PASO ORTHOPEDIC SURGERY GROUP

Diplomates American Board of Orthopaedic Surgery

Louis W. Breck, M.D.
W. Compere Basom, M.D.
Morton H. Leonard, M.D.*
Oren H. Ellis, M.D.
Wellington J. Pindar, M.D.
Donald A. Shearer, Administrator

*Special Attention to Surgery of the Hand

1220 N. Stanton St., El Paso, Texas 79902
Telephone 533-7465

B. C. HALLEY, JR., M.D.
DAVID R. WEBB, JR., M.D.
Orthopaedic Surgery

3909 Worth at Washington, Dallas, Texas 75246, 821-1417

RUSS B. GRAHAM, M.D., F.A.C.S.
Orthopedic Surgery

306 Presbyterian Professional Building,
8210 Walnut Hill Lane, Dallas, Texas 75231, 824-7883

THE ORTHOPEDIC GROUP OF RICHARDSON

Charles E. Graham, M.D.
M. Gayle Glidewell, M.D.

812 S. Central Expressway, Richardson, Texas 75080, 231-6396

Orthopedic Surgery

L. LEE LANKFORD, M.D.
Diplomate American Board of Orthopaedic Surgery
Hand Surgery and Upper Extremity
Reconstructive Surgery

3707 Gaston Ave., Dallas, Texas 75246, 214 823-5351

THE ARLINGTON ORTHOPEDIC GROUP

H. W. Bendel, Jr., M.D.
E. E. Rising, Jr., M.D.
C. Poindexter, M.D.

Diplomate American Board of Orthopaedic Surgery

801 West Randol Mill Road, Arlington, Texas 76010, 817 261-8284

THE BOSWELL-EVANS ORTHOPAEDIC CLINIC

George M. Boswell, Jr., M.D., F.A.C.S.
Gerald W. Schofield, M.D.

James P. Evans, M.D.
Lewis R. Thompson, M.D.

4849 W. Lawther Dr., Dallas, Texas 75218, 348-8300

Otolaryngology

TOM BARR, M.D.
Ear, Nose, and Throat
Diseases of Larynx, and Laryngeal Surgery

Medical Arts Building, Dallas, Texas

HERBERT H. HARRIS, M.D., F.A.C.S., F.I.C.S.
Oto-Laryngology Broncho-Esophagology and
Laryngeal Surgery

907 Hermann Professional Bldg., Houston, Texas

MARVIN G. SHEPARD, M.D., F.A.C.S.
Practice Limited to Otology and Otological Surgery

Medical Tower Bldg., Suite 514, 712 N. Washington, Dallas, Texas

Hours By Appointment

W. P. ANTHONY, M.D.
Otology

662 South Henderson, Fort Worth, Texas 76104

DONALD N. MATHESON, M.D., F.A.C.S.
Diplomate American Board of Otolaryngology

800 Fifth Avenue, Fort Worth, Texas, 336-7133

TEXAS MEDICAL ASSOCIATION MEMBERS' RETIREMENT TRUST

This fully trusteed retirement program qualifies under the Keogh Act and is approved by IRS. For full information, write: TMA Members' Retirement Trust, 1801 North Lamar Blvd., Austin, Texas 78701.

JACK BLUM, M.D.
LLOYD F. RITCHEY, M.D.
Otolaryngology

8215 Westchester, Suite 135, Dallas, Texas

Pathology

A. B. CAIRNS, M.D.
GERARD NOTEBOOM, M.D.
MARC GARZA, M.D.
RONALD E. BUCHANAN, M.D.
WADE M. BRANNAN, M.D.

Diplomates American Board of Pathology

1105 N. Bishop, Methodist Hospital, Dallas, Texas

FORT WORTH MEDICAL LABORATORIES

John J. Andujar, M.D.
Dorothy Patras, M.D.

1404 Pennsylvania Ave., P. O. Box 1118, Fort Worth, Texas 76104

Telephone 817 336-7137

BROWN & ASSOCIATES MEDICAL LABORATORY

Tissue Pathology, Exfoliative Cytology, Hematology, Serology, Clinical Chemistry, Bacteriology, Parasitology, Serum Protein Electrophoresis and Hemoglobin Electrophoresis

Wilson G. Brown, M.D.
Walter G. Olin, M.D.
S. J. Skinner, M.D.
George V. Miller, M.D.
John R. Thomas, M.D.
Joe B. Haden, M.D.

Diplomates American Board of Pathology

165 Hermann Prof. Bldg., Houston, Texas
Telephone 526-4031

Mailing Containers on Request—Office Pickup Service in Houston

DR. PREUSS PATHOLOGY LABORATORY

Exfoliative Cytology and Surgical Pathology

FRED S. PREUSS, M.D., F.C.A.P.

3607 Gaston Ave., Room 305, Dallas, Texas 75226, 823-6912
Specimen Containers on Request

NUCLEAR MEDICINE LABORATORIES OF TEXAS

Texas Medical Center

6411 South Main Street, Houston, Texas 77025

Completely Equipped Radioisotope Laboratory for Diagnostic Radioactive Tests in: Hematology, Thyroidology, Endocrinology, Gastroenterology, Cardiology, Neurology, Neurosurgery, Urology, Ophthalmology and Obstetrics-Gynecology

Herbert C. Allen, Jr., M.D., Director, 526-1501

TEXAS MEDICAL ASSOCIATION
MEMORIAL LIBRARY

A clinical library designed to assist the practicing physician

45,000 BOUND VOLUMES — 1100 CURRENT JOURNALS
EXTENSIVE REPRINT COLLECTION — 400 FILMS
AUDIO-DIGEST TAPES & AMA NEWS — JOURNAL

1801 North Lamar Blvd., Austin, Texas 78701, 512 477-6704

John H. Childers, M.D.
R. R. Rember, M.D.
E. H. Valentine, M.D.
W. L. Crofford, M.D.
E. P. Jenevein, M.D.

MEDICAL LABORATORY SERVICE OF DALLAS

Clinical Pathology
Diagnostic Radioisotopes
Surgical Pathology
Exfoliative Cytology

6011 Harry Hines Blvd., Dallas, Texas 75235, 637-0210
(Mailing Containers Available Upon Request)

PRUITT MEDICAL LABORATORIES

Jack Pruitt, M.D.
Diplomate, American Board of Pathology

Tissue Pathology, Exfoliative Cytology, Clinical Pathology, Medicolegal Consultation

P. O. Box 160, Lufkin, Texas 75901, 634-4453

WACO CLINICAL PATHOLOGY LABORATORY

K. P. Wittstruck, M.D., F.C.A.P., Walter Krohn, M.D., F.C.A.P.
Harold M. Block, Jr., M.D., F.C.A.P.
Clinical Pathology
Surgical Pathology
Exfoliative Cytology
Medicolegal Consultation

Mailing Containers on Request
2112 Washington Ave., P. O. Box 3160, Waco, Texas 76707, 756-7226

GEORGE J. RACE, M.D. AND ASSOCIATES

Pathologists

421 Medical Tower Building,
712 North Washington, Dallas, Texas 75246, 214 824-1258

DELTA PATHOLOGY LABORATORIES

James W. G. Carman, M.D.
Clinical Pathology and Anatomic Pathology
Cytology

6209 Stuebner Airline, Houston, Texas 77018, 713 697-7875

Physical Medicine & Rehabilitation

TEXAS REHABILITATION HOSPITAL OF GONZALES
WARM SPRINGS FOUNDATION, INC.

P.O. BOX 58, GONZALES, TEXAS 78629

Facilities for Physical Restoration
Physical Therapy, Occupational Therapy, Speech Therapy, Recreational Therapy, School from first grade through twelfth grade

ROBERT M. IZARD, JR., M.D., Medical Director
LYNN SMITH, SR., Administrator

Plastic Surgery

THOMAS D. CRONIN, M.D., F.A.C.S.
RAYMOND O. BRAUER, M.D.
THOMAS M. BIGGS, M.D.
JAMES H. PENOFF, M.D.

Diplomates American Board of Plastic Surgery

PLASTIC SURGERY

5419 Caroline St., Houston, Texas 77004, 523-8131

WILLARD C. SELLMAN, JR., M.D.

Plastic, Maxillo-Facial and Hand Surgery

530 Locke Medical Building,
6011 Harry Hines Blvd., Dallas, Texas 75235, 637-4770

BROMLEY SMITH FREEMAN, M.D., F.A.C.S.
Diplomate American Boards of Surgery and Plastic Surgery

PLASTIC AND RECONSTRUCTIVE SURGERY

Tumors of the Head and Neck

1810 The Medical Towers, Houston, Texas 77025
Telephone 529-3579; Residence 782-1628

JOHN B. PATTERSON, M.D., F.A.C.S.
Diplomate American Board
Plastic Surgery

612 Doctors Bldg., Fort Worth, Texas, 336-0356

SIMON FREDRICKS, M.D., F.A.C.S.
Diplomate American Board of Plastic Surgery

Houston Office
1103 Medical Towers, Houston, Texas 77025, 523-5575

Pasadena Office
904½ E. Southmore, Pasadena, Texas 77502, 473-5488

DAVID A. GRANT, M.D., F.A.C.S.
Diplomate American Boards of Surgery and Plastic Surgery
Plastic & Reconstructive Surgery
Cosmetic Surgery

800 Fifth Avenue, Fort Worth, Texas 76104, 335-4751

CARL R. COERS, III, M.D.
Diplomate American Board of Plastic Surgery
Plastic, Reconstructive & Hand Surgery

800 Fifth Avenue, Fort Worth, Texas 76104, 335-4751

MARCUS L. FINLEY, M.D., F.A.C.S.
Diplomate American Board of Plastic Surgery
Plastic, Reconstructive and Hand Surgery

1115A Pennsylvania Avenue, Fort Worth, Texas 76104, 335-6439

VALENTIN GRACIA, M.D., F.A.C.S., F.I.C.S., D.A.B.
Aesthetic Surgery—Burns

1001 W. Rosedale, Fort Worth, Texas 76104, 336-0446

FRANCIS A. MORRIS, JR., M.D.
WILLIAM E. BARNES, M.D.
Diplomates American Board of Plastic Surgery
Plastic, Reconstructive and Hand Surgery

3100 Red River, Austin, Texas, 476-9149

Plastic Surgery
JOHN R. HILL, M.D., F.A.C.S.
Diplomate American Board of Plastic Surgery
Practice Limited to Plastic, Reconstructive and Hand Surgery
Medical Center Office:
272 Hermann Prof. Bldg., Houston, Texas 77025, 528-2481
Spring Branch Office:
9320 Westview, Houston, Texas 77055, 528-2481

E. FRANK DUNTON, M.D., F.A.C.S.
Plastic & Reconstructive Surgery and
Surgery of the Hand

Suite 104, 3434 Swiss Avenue, Dallas, Texas, 824-7290

W. W. SCHUESSLER, M.D., F.A.C.S.
Diplomate of American Board of Plastic Surgery
Plastic, Reconstructive & Maxillo-Facial Surgery

Suite 4-C Medical Center,
1501 Arizona Avenue, El Paso, Texas 79902, 533-6362

Radiology

AMARILLO RADIOLOGICAL GROUP
Practice Limited to Radiology
Royal Wertz, M.D., F.A.C.R.
Wilbur Q. Budd, M.D., D.A.B.R.

800 Rusk Street, Amarillo, Texas 79106, 373-8324

J. R. MAXFIELD, JR., M.D., M.A.C.R.
JACK G. S. MAXFIELD, M.D., M.A.C.R.
Radiological Center, Including Radioisotopes

2711 Oak Lawn, Dallas, Texas, 526-6661

MAURICE C. ARCHER, M.D., M.A.C.R.
MARY L. KILLINGSWORTH, M.D., M.A.C.R.

Diplomates of the American Board of Radiology

Doctors Bldg., 800 Fifth Avenue, Fort Worth, Texas, 332-3401

DRS. CARLSON AND BAREKMAN
Glenn D. Carlson, M.D., F.A.C.R.
William H. Barekman, M.D., D.A.B.R.
Agnes M. Guthrie, M.D., D.A.B.R.

X-Ray Diagnosis, X-Ray and Radium Therapy,
Radioisotopes

1221 Medical Arts Bldg., 741-3621
6011 Harry Hines Blvd., 631-7070
3607 Gaston Ave., 823-9961
Dallas, Texas

Harvey M. Lowry, M.D., F.A.C.R.
James R. Gish, M.D., D.A.B.R.
Edward A. Sheldon, M.D., D.A.B.R.
James P. Wills, M.D.

RADIOLOGY
109 Doctors Bldg., 838-4543
502 Goodhue Bldg., 838-2224
Baptist Hospital, 833-6421
Beaumont, Texas

JAMES L. CLIFFORD, M.D., D.A.B.R.
Cobalt 60 Rotational Therapy, X-Ray and
Radium Therapy
X-Ray Diagnosis, Radioisotopes

845 Clarksville St., Paris, Texas, 784-4624

TMA
ANNUAL
SESSION
MAY 6-9
HOUSTON

Thoracic Surgery

Donald L. Paulson, M.D.
Harold C. Urschel, Jr., M.D.

DRS. PAULSON AND URSCHEL
Thoracic and Cardiovascular Surgery

3810 Swiss Ave., Dallas, Texas, 824-2503

Thoracic and Cardiovascular Surgery
JAMES O. McBRIDE, M.D., F.A.C.S.

662 S. Henderson, Suite A, P. O. Box 1407, Fort Worth, Texas 76102
Telephones 332-7454, 738-4594

CHARLES T. MEADOWS, M.D.
Diplomate American Board of Thoracic Surgery
Thoracic and Cardiovascular Surgery
Broncho-esophagology

1101 North 19th, The Professional Bldg., Abilene, Texas, 673-8184

LeROY J. KLEINSASSER, M.D., F.A.C.S.
Diplomate American Board of Surgery &
The Board of Thoracic Surgery
Cardiovascular and Peripheral Vascular Surgery

The Doctors Bldg., 3707 Gaston Ave., Dallas, Texas 75246

Robert R. Shaw, M.D.
John L. Kee, Jr., M.D.

DRS. SHAW AND KEE
Thoracic Surgery

The Doctors Bldg., 3707 Gaston Ave., Dallas, Texas 75246, 826-5184

WILLIAM W. TAYLOR, M.D.
Diplomate Board of Thoracic Surgery
Thoracic, Cardiac, and Vascular Surgery

804 Locke Med. Bldg., 6011 Harry Hines Blvd., Dallas, Texas 75235
Telephone 637-4833

ALLAN L. GRAHAM, M.D.
Diplomate American Board of Surgery and
Board of Thoracic Surgery
Cardiovascular and Peripheral Vascular Surgery

502 Docotrs Bldg., 800 Fifth Ave., Fort Worth, Texas, 332-7879

ALTON C. LAWTON, M.D., F.A.C.S.
Diplomate American Board of Thoracic Surgery
Thoracic and Cardiovascular Surgery
Endoscopy

626 Doctors Bldg., 800 Fifth Ave., Fort Worth, Texas, 332-5791

Texas Medicine

For details on submitting manuscripts, send for a copy of "Information for Authors."

Mrs. Marilyn Baker
Managing Editor
TEXAS MEDICINE
1801 North Lamar Blvd., Austin, Texas 78701

Urology

CECIL M. CRIGLER, M.D., F.A.C.S.
Practice Limited to Urology

1519 Hermann Professional Bldg., Houston, Texas

JO C. ALEXANDER, M.D., KARL B. KING, M.D., FOSTER FUQUA, M.D., ELGIN W. WARE, JR., M.D., GEORGE E. HURT, JR., M.D., EUGENE R. TODD, M.D., DONALD E. JOHNSON, M.D. & ASSOCIATES
Urology

3707 Gaston Avenue, Dallas, Texas 75246

THE UROLOGY CLINIC
1415 Pennsylvania Ave., Fort Worth, Texas 76104

Dolphus E. Compere, M.D., M.S., F.A.C.S.
Diplomate of American Board of Urology
Grant F. Begley, A.B., M.D.
Diplomate of American Board of Urology
Hugh Lamensdorf, M.D.

H. M. GIBSON, JR., M.D., F.A.C.S.
Certified by American Board of Urology
Practice Limited to Urology

512 University Towers Bldg., 1900 N. Oregon St., El Paso, Texas
Telephones 532-8130 & 533-4765

MARVIN GREER RAPE, M.D.
Diplomate of American Board of Urology
NEWTON F. McDONALD, M.D.
Diplomate of American Board of Urology
Practice Limited to Urology

1703 St. Joseph Prof. Bldg., 2000 Crawford, Houston, Texas 77002

JOHN B. TRIBLE, M.D.
Practice Limited to Urology

1209-10 Medical Arts Bldg., Houston, Texas 77002, 222-7521

ERWIN C. WINKEL, M.D.
Practice Limited to Urology

Northwest Professional Center,
2925 West T.C. Jester Blvd., Houston, Texas, 681-0343

THE UROLOGY CLINIC
1010 Louisiana, Houston, Texas 77002, 227-1414
James S. Boren, M.D.
Robert I. Cox, M.D.

Diplomates American Board of Urology

JOHN F. COLLINS, JR., M.D.
Urology

Doctor's Park, 1400 Crescent, Denton, Texas 76201, 817 387-3828

Remember your less fortunate colleagues.
Give to the TMA Physicians Benevolent Fund.

Classified Advertising

Physicians Wanted

ORTHOPEDIC SURGEON AND TWO GP's needed by 19 doctor gronp. 100-bed fully accredited hospital. Salary open. Full partnership in one year. For additional details, write John B. Chester, M.D., 3330 South Lancaster Road, Dallas, Texas 75216.

GENERAL PRACTITIONER NEEDED to assume well-estabiished practice in Milford, Texas. The community's only doctor recently suffered a heart attack and has moved. An eight room small clinic owned by the City is available rent free. Income iimited only by interest and ability. Good schooi and churches. Twelve and 17 miles from two first-class hospitals, 48 miles south of Dallas, 48 miles north of Waco. Contact C. O. Milier, P.O. Box 546, Milford, Texas 76670, area code 214, 493-2511.

INTERNIST—Sixth member needed by 13-member multi-specialty group in North Texas university city of over 100,000 population. Board certified or eligible. Fully equipped lab and x-ray. Starting salary $25,000 plus percentage with liberal fringe benefits. Please reply to Ad-273, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

EXCELLENT OPPORTUNITY FOR PHYSICIANS in Carrizo Springs, Texas. Office space available in new professional building adjacent to hospital and nursing home. Excellent schools and housing in city. One general practitioner needed. For information write or call C. W. Vandervoort, 500 North 1st Street, Carrizo Springs, Texas 78834. Phone 876-2550.

UROLOGIST, board certified or eligible, to associate with a progressive and expanding multispecialty group in West Texas. Many fringe benefits inciuding retirement program. No investment required. Adjoining accredited hospital. City population 36,000. Contact Ad-236, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

PEDIATRICIAN, board certified or eligible, to associate with a progressive and expanding multispecialty group in West Texas. Many fringe benefits including retirement program. No investment required. Adjoining accredited hospital. City popuiation 35,000. Contact Ad-236, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

ORTHOPEDIC SURGEON, PEDIATRICIAN, OBSTETRICIAN AND TWO GENERAL PRACTITIONERS needed by 19 doctor-group. Salary open. Full partnership in one year. 100-bed fully accredited hospital. Many fringe benefits including tax-sheltered retirement plan. For additional details write Chester Clinic and Hospital Association, 3330 South Lancaster Road, Dallas, Texas 75216, Attn: John B. Chester, M.D.

WANTED: GENERAL PRACTITIONER, PEDIATRICIAN, INTERNIST on staff of Denton State School. Base annual salary $20,000, extra $1,000 to $3,500 if board certified. 40-hour work week with ample vacation time, other fringe benefits. Excellent community to live. Near Dallas, Fort Worth. Contact Medicai Director, Denton State School, Box 368, Denton, Texas.

GENERAL PRACTITIONER OR GP-SURGEON WANTED in East Texas community of Crockett (Houston County). Office space available for solo practice or association with other physicians in area—106-bed new hospital. Center for industry, farming, livestock, and forestry operations. Excellent schools, churches, and recreational facilities available. For additional information contact Houston County Development Foundation, P.O. Box 807, Crockett, Texas 75835, area code 713, 544-2359.

PATHOLOGY RESIDENCIES AND INTERNSHIPS available in 600-bed general hospitai. Fully approved four year program in anatomical and clinical pathology. Average annual specimens and tests—348,587. Interns—$6300; residents—$8100 up. Board and laundry. Charles B. Mitchell, M.D., Director of Laboratories, Harris Hospital, 1300 West Cannon, Fort Worth, Texas 76104.

GENERAL PRACTITIONER WANTED to join five man clinic in growing town of Clifton, 30 miles northwest of Waco near Lake Whitney. 41-bed fully accredited hospital with plans to expand by 30 beds. Salary to start, commensurate with present requirements; partnership later. Good schools, churches and hunting and fishing facilities. Contact V. D. Goodall, M.D., Goodall & Witcher Clinic, Clifton, Texas 76634.

RETIRED PHYSICIAN interested in Ob-Gyn and family planning clinics on part-time basis. $300 and up plus travel. Central Texas. Excellent fishing and hunting nearby. Easy access to metropolitan areas. Contact John B. Bryson, M.D., Bell County Health Department, Box 3745, Temple, Texas 76501.

PHYSICAL MEDICINE AND REHABILITATION RESIDENCY, 3-year, integrated with Baylor College of Medicine affiliated hospitals. Non-career $7,500-$8,700; career $11,905-$16,760 (license in any one of the states required). Nondiscrimination in employment. William P. Blocker, Jr., M.D., VA Hospital, Houston, Texas 77031.

M.D.'S TO DO GENERAL PRACTICE WITH SURGERY, Houston area, new offices in an expanding general hospital. Liberal guarantee first six months. Average monthly income of present doctors $8,000 plus. Pasadena Memorial Hospital, 4040 Red Bluff Road, Pasadena, Texas 77503. Area code, 713, 473-3311.

GENERAL PRACTITIONER WANTED—Modern office space and hospital available in town of 2,500; trade area of 5,000. Made up of stable economy and permanent residents. Located in the heart of the Hill Country, where excellent hunting and fishing are always available. Good schools and numerous churches. Contact immediately. Administrator, Mason Memorial Hospital, Mason, Texas 76856.

GENERAL PRACTITIONER TO JOIN 2 GP'S in Central Texas town between San Antonio and Houston on Interstate 10, 80 miles from Austin. Modern three-man clinic adjacent to 30-bed hospital being remodeled. Salary open. Please reply to Ad-293, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

WANTED BOARD CERTIFIED OR ELIGIBLE ANESTHESIOLOGIST in San Angelo, Texas. This is a private practice with fee for service. Direct all correspondence to O. G. Zacharias, M.D., 224 East Harris Avenue, San Angelo, Texas 76901.

NEWLY CONSTRUCTED AND EXPANDED multi-specialty clinic and 120-bed general hospital has openings for physicians in fields of general practice, radiology, urology, pathology, anesthesiology, and orthopedic surgery. Construction to be completed in February, 1971. Located in growing West Texas city of 180,000. Renumeration open depending on board certification and experience. Partnership in two years. Interested applicants send medical curriculum vitae to Ad-287, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

BOARD ELIGIBLE INTERNIST WANTED for 7-man medical department with well established multispecialty group in Dallas, Texas. $25,000 beginning annual salary, early partnership; liberal vacation and meeting time; life insurance, group hospitalization, retirement benefits and teaching opportunities. New facilities. Interviewing expenses paid. Please reply to Arthur L. Cook, Business Manager, Dallas Medicai & Surgical Clinic, P. O. Box 28, Dallas, Texas 75221.

OPPORTUNITIES IN YOAKUM COUNTY, TEXAS. DENVER CITY, TEXAS. Actual need for four general practitioners. Three overworked general practitioners for the past six years until January 15, 1970. One man left at that time to enter industrial medicine, leaving two. His modern well equipped clinic available, rent free for six months, low rent for following six months, with option to buy, records available. This clinic on same block with hospital. Hospital is 50 beds, well equipped, has radiology, clinical and tissue pathology consultation on regular basis. Present two physicians will welcome one or two other physicians, will help introduce. Amicable working arrangement for time off, patient coverage and consultation. PLAINS, TEXAS. County seat of Yoakum County, 15 miles north of Denver City, excellent highway. Completely equipped modern clinic available for one dollar ($1.00) a month. Utilities furnished by city. Large enough for two physicians. Physicians in Denver will make same arrangements for coverage, etc. as outlined above. Yoakum County has excellent schools, good churches, Yoakum County Park between the two towns with very good grass, green nine hole golf course. Lubbock with Texas Tech University, one hour, twenty minutes away. Midland-Odessa area one hour, thirty minutes away. Contact administrator Yoakum County Hospital, Denver City, Texas, area code 806, 592-2121 or County Judge Gene Bennett, Plains, Texas, area code 806, 456-8606.

GENERAL PRACTITIONER WANTED to associate with five-doctor clinic, including one general surgeon. Community of 6,000 with fully accredited 53-bed hospital; country club and lakes close by. General surgery and Ob/Gyn interest especially wanted. Contact Bowie Clinic, P. O. Box 681, Bowie, Texas 76230.

$30,000.00 GUARANTEED FIRST YEAR with little or no practice expense. Private solo and group practices available. Maximum leisure time with family. Both small town and city locations. Not an employment agency. No cost to the doctor. Sanford Smith, P. O. Box 9836, Houston, Texas 77015. 713-453-5454.

GENERAL PRACTITIONER, OPHTHALMOLOGIST, INTERNIST: To affiliate with five other G.P.'s and three specialists in general and multispecialty group near Houston, Texas. Liberal salary and extensive fringe benefits including retirement program and life and health insurance programs. Open staff hospital appointments in 125 bed general hospital. Rapidly growing industrial complex. Herbert H. Duke, Jr., M.D., The Medical and Surgical Group, Baytown, Texas 77520.

PSYCHIATRIC RESIDENCY in approved three year program. Effective connections with universities, medical schools, private clinics, and community centers. Outstanding faculty, and programs. Stipends with Texas license are $13,000, $14,000 and $15,000 per year. NIMH grants available. For full information write Anthony P. Rousos, M.D., Director of Training and Research, Austin State Hospital, 4110 Guadalupe, Austin, Texas 78751.

WANTED: PHYSICIANS WITH INTEREST IN SURGERY AND/OR OBSTETRICS to locate in progressive East Texas area with complete support of local medical staff. Contact Paul R. Bennett, 300 West Upshur, Gladewater, Texas. or phone AC 214, 845-2281.

GENERAL PRACTITIONER, GENERAL SURGEON, OR INTERNIST WANTED, Cisco, Texas—45 miles east of Abilene, 100 miles west of Fort Worth on Interstate 20. Association, partnership or solo practice. New 30-bed hospital opening October 1970. Only one active practicing physician. Community of 5,000 population, farming and ranching, some industry. Excellent recreational facilities—lake, golf course. Progressive junior college. For additional information contact E. E. Addy, Jr., M.D., 1106 West Sixth Street, Cisco, Texas. Telephone AC 817, 442-1001.

PEDIATRICIAN FOR CHILDREN'S AND YOUTH PROJECT sponsored by Driscoll Foundation Children's Hospital, Corpus Christi, Texas. Satellite clinic located in Robstown, Texas, just 10 miles from Corpus Christi. Salary $22,500 to $25,000 dependent on qualifications. Hours—40/week. Fringe benefits extra. The sponsoring hospital is an active general pediatric hospital of 95 beds, 250-300 admissions per month and with an active teaching program for 12 residents (approved intern program to begin January 1971). Please reply to Project Director: M. P. Tristan, M.D., Driscoll Foundation Children's Hospital, 3533 South Alameda, Corpus Christi, Texas 78411 or call collect 854-5341.

CLASSIFIED AD RATES & DATA: Classified Advertising sells for $6.00 per Issue for 50 words or less, payable In advance. Ad numbers can be substituted for formal addresses upon request at no extra cost. Name and address of ad number listings can not be given out unless specific permission to do so has been given. The advertising office will not contact ad number holders except by mail. Copy deadline Is the 20th of the month preceding publication. Send copy to Advertising Assistant, TEXAS MEDICINE, 1801 North Lamar Blvd., Austin, Texas 78701.

INTERNIST, board certified or eligible to join four internists in 15-man, multi-specialty clinic in West Texas city of 35,000. Life and malpractice insurance, disability and retirement programs provided. Modern clinic building adjacent to accredited hospital. Starting salary $25,000. Contact Jack H. Burnett, Jr., M.D., Malone and Hogan Clinic, 901 Main Street, Big Spring, Texas 79720.

FAMILY PHYSICIAN—Preferably with some residency training who would like to associate with two physicians, ages 32 and 38, doing competent and comprehensive family practice in small East Texas town. Present physicians have residency experience, one is board certified. 50-bed county hospital now under construction, complete in May, 1971, Hill-Burton standards. Near Toledo-Bend and Sam Rayburn Lakes, hunting, fishing, tall timber. Practice consists of general family medicine including major surgery and obstetrics. New doctor would fit in according to his interests and abilities. Salary $2500/month with increases based on earning. Present doctors earning far more. Combination of income and working environment will be difficult to beat for doctor who prefers small town. Contact J. D. Bussey, M.D., 379-8155, 379-8156, Newton, Texas.

ATTENTION: GENERAL PRACTITIONERS-SURGEONS. If you would like the advantages of small city living together with a wide open field for practicing your profession, contact the Board of Directors, Taft Hospital District, 1220 Gregory Street, Taft, Texas 78390. A modern hospital and convalescent home is at your disposal. Added attraction: only 15 minutes by car from the Sparkling City by the Sea, Corpus Christi, Texas. Ideal climate, plus swimming, fishing, sailing, golfing, hunting, and social activities available. Write us for more details, or better still, come and see for yourself. You will be pleasantly surprised.

Seeking an associate or looking for

a good practice location?

Contact: Physicians Placement Service
Texas Medical Association
1801 North Lamar Blvd.
Austin, Texas 78701

HOMESTEAD
CHILD PLACEMENT AGENCY
and
HOMESTEAD MATERNITY HOME
1250 W. Rosedale
335-5942 **336-7905**
Fort Worth, Texas

Licensed Adoption Service and Private, Confidential maternity care provided unwed expectant mothers. Obstetrical services by a Diplomate of THE AMERICAN BOARD. Also pediatric care furnished by a licentiate of THE AMERICAN BOARD.

Situations Wanted

RADIOLOGIST, board certified, wants to relocate to Central Texas. Willing to do general radiology with hospital or private group. Please reply to Ad-289, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

GENERAL SURGEON, age 35, desires to relocate in town between 10,000 and 50,000. Would consider association, partnership or solo practice. Leaving present position because of too much general practice. Curriculum vitae on request. Available 1971. Please reply to Ad-291, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

PEDIATRICIAN—Board certified, seeking group practice with eventual partnership or hospital based practice. Military obligation completed in January 1972. Please reply to Stephen R. Ryter, M.D., Naval Hospital, Camp Lejeune, N.C. 28542.

For Sale or For Rent

DO YOU WANT YOUR OWN PRACTICE? Prestige building in Dallas, nicely furnished offices, reasonable rent and lucrative practice all for less than the cost of opening office and starting practice. Well established general practice. Please reply to Ad-292, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

WICHITA FALLS CLINIC-HOSPITAL

GENERAL SURGERY
W. E. Crump, M.D., F.A.C.S.
James T. Lee, M.D.
Charles H. Wilson, M.D., F.A.C.S.

ORTHOPEDIC SURGERY
Jack E. Maxfield, M.D., F.A.C.S.
Clyde W. Parsons, M.D.
Mark E. Huff, Jr., M.D.
David G. Borman, M.D.

ORAL SURGERY
R. A. Mitchell, D.D.S.
Larry J. Cason, D.D.S.

RADIOACTIVE ISOTOPES
Claude D. Wilson, M.D., F.A.C.R.
Joe D. Steed, M.D., D.A.B.R.
Julian H. Acker, M.D.
David D. Salmon, M.D., D.A.B.R.

PEDIATRICS
George W. Slaughter, III, M.D., F.A.A.P.
Joseph Bilder, Jr., M.D.

LABORATORIES
Claude D. Wilson, F.A.C.R., Radiology
Joe D. Steed, M.D., D.A.B.R., Radiology
David D. Salmon, M.D., D.A.B.R., Radiology

MEDICINE
W. B. Whiting, M.D., Cardiology
R. F. Knox, M.D., Endocrinology
P. K. Smith, M.D., F.A.C.P., Diagnosis & Internal Medicine
I. L. Humphrey, Jr., M.D., Diagnosis & Internal Medicine
Julian H. Acker, M.D., Diagnosis & Internal Medicine
Preston McCall, M.D., Diagnosis & Internal Medicine
Julian C. Sleeper, M.D., Cardiology
Eugene Jackson, M.D., Diagnosis & Internal Medicine

GENERAL PRACTICE
J. B. Hathorn, Jr., M.D.
Melvin Horany, M.D.
John E. Worthen, Jr., M.D.

UROLOGY
Owen C. Berg, M.D., F.A.C.S.

OBSTETRICS AND GYNECOLOGY
W. L. Parker, M.D., F.A.C.S.
Warren T. Kable, M.D.
Frank J. Lee, M.D.

ADMINISTRATIVE OFFICER
Bertha McNeill, Administrator
Jesse E. Dobbs, Jr., Asst. Administrator

ONCOLOGY

Oscar L. Morphis, M.D., F.A.C.R.
Radiation Therapy
Radium Therapy

R. P. O'Bannon, M.D., F.A.C.R.
Radiation Therapy

Norris Gilfillan, M.D., F.A.C.S.
Chemotherapy

Tom B. Bond, M.D., F.A.C.R.
Consultant

Jack M. Morgan, M.S., F.A.C.R.
Consultant-Physicist

1550 West Rosedale, Suite 620 Fort Worth 336-2028

Advertising Directory

Arch Laboratories
Dicarbosil 120

Beverly Hills Hospital and Clinic 113

Blue Cross-Blue Shield of Texas 7

The Brown Pharmaceutical Company
Android 12
Cerebro-Nicin 12

Burroughs Wellcome & Company, Inc.
Neosporin 98

Campbell Soup Company 97

The Carlton Corporation
Calphosan 43

Casualty Indemnity Exchange
Malpractice Insurance 21

Dallas Medical & Surgical Clinic and Hospital 2nd Cover

First Texas Pharmaceuticals, Inc.
Amylofene 40
Secran 81

Francis Hospitels Incorporated
Convalescent Care 3rd Cover

Highland Hospital 134

Homestead Child Placement 132

Humco Laboratory
Vasomist 134

Hynson, Westcott and Dunning, Inc.
Bromsulphalein 41

Ives Laboratories, Inc.
Cyclospasmol 42-43

Mead Johnson Laboratories
Mucomyst-10 10-11

Kelsey-Seybold Clinic 108

King's Daughters Clinic Back Cover

Lederle Laboratories
Achrocidin 9
Declostatin 119

Eli Lilly and Company
Ilosone 28

The Martin X-Ray and Radium Clinic 110

Medical Arts Clinic, Corsicana 114

The Medical Protective Company
Professional Liability Insurance 110

Merck Sharp & Dohme
Triavil 76-78

The Wm. S. Merrell Company
Kolantyl 20

The National Drug Company
AVC 80
Orenzyme Bitabs 79
Quinamm 26
Tepanil Ten-tab 25

Oncology—Fort Worth 132

Ortho Comfort Stores
Electrically Adjustable Beds 34

William P. Poythress & Company, Inc.
Antrocol 35

T. Rowe Price Growth Stock Fund, Inc. 120

The Prudential Insurance Company of America
TMA Group Insurance Plan 90

Radiology Associates of Fort Worth 114

A. H. Robins Company
Dimetapp Extentabs 24
Silain-Gel 22-23

Roche Laboratories
Efudex 36-38
Menrium 102-103
Valium 8

Sandoz Pharmaceuticals
Serentil 115-118

Scott and White Clinic Back Cover

G. D. Searle & Company
Pro-Banthine 68-69

Smith Kline & French Laboratories
Dyazide 27

Starlite Village Clinic 114

Surgical Mechanical Research, Inc.
Medical and Dental Equipment 120

Terrell's Laboratories and Medical Group 1

Texas Medical Association
Directory of Continuing Education Courses 18
South Pacific Adventure 99

Texas Rehabilitation Hospital of Gonzales Warm Springs Foundation
Physician Wanted 34

Timberlawn Psychiatric Hospital 108

Torbett, Hutchings, Smith Memorial Hospital 2nd Cover

Travis Clinic and Nan Travis Memorial Hospital 114

Turner's Clinical & X-Ray Laboratories 110

Wichita Falls Clinic-Hospital 132

Physicians' Directory 121-130

Classified Advertisements 131-132

ADVERTISING RATES & DATA: Available on request from the Advertising Director, Texas Medicine. Advertising plates should be sent directly to the printer. Space reservations, copy and proofs should be sent to the Advertising Director. Represented nationally by the State Medical Journal Advertising Bureau, Inc., 1010 Lake Street, Oak Park, Ill. 60301.

ADVERTISING & BUSINESS OFFICES: Texas Medical Association, 1801 North Lamar Blvd., Austin 78701; Telephone: 512-477-6704.

PRINTING OFFICES: Texas Medicine, c/o Stafford-Lowdon Company, 1114 West Daggett, Fort Worth 76104.

HIGHLAND HOSPITAL

ASHEVILLE, NORTH CAROLINA

Founded 1904

A DIVISION OF THE DEPARTMENT OF PSYCHIATRY OF DUKE UNIVERSITY

Accredited by the Joint Commission on Accreditation and Certified for Medicare

Complete facilities for evaluation and intensive treatment of psychiatric patients, including individual psychotherapy, group therapy, psychodrama, electro-convulsive therapy, Indoklon convulsive therapy, drugs, social service work with families, family therapy, and an extensive and well organized activities program, including occupational therapy, art therapy, music therapy, athletic activities and games, recreational activities and outings. The treatment program of each patient is carefully supervised in order that the therapeutic needs of each patient may be realized.

High school facilities for a limited number of appropriate patients are now available on grounds. The School Program is fully integrated into the hospital treatment program and is accredited through the Asheville School System.

Complete modern facilities with 85 acres of landscaped and wooded grounds in the City of Asheville.

Brochures and information on financial arrangements available

Contact: (1) Mrs. Elizabeth Harkins, ACSW, Coordinator of Admissions

or

(2) Samuel N. Workman, M.D.
Chief of Clinical Services

(3) Charles W. Neville, Jr., M.D.
Assistant Professor of Psychiatry and Medical Director

Area Code 704 - 254-3201

Vasomist

(ANTIHISTAMINIC)

VASOCONSTRICTOR, NASAL DECONGESTANT AND LOCAL ANTIHISTAMINIC

Active Ingredients:
Phenylephrine Hcl 0.25%
Phenylpropanolamine Hcl ...0.50%
Chlorobutanol 0.15%
Tripelennamine Hel 0.50%
In Isotonic Solution

Vasomist

(PLAIN)

VASOCONSTRICTOR AND NASAL DECONGESTANT

Active Ingredients:
Phenylephrine Hcl 0.25%
Phenylpropanolamine Hcl ...0.50%
Chlorobutanol 0.15%
In Isotonic Solution

USE: Temporary relief of nasal congestion due to colds and hay fever.

DIRECTIONS: Adults and Children: Instill two or three drops into each nostril, using no more than needed to provide relief. Repeat every three to four hours as needed but not oftener.

AVAILABILITY

In plastic squeeze bottles containing ¾ fluid oz. and in dropper bottles containing 1 fluid oz.

HUMCO LABORATORY
TEXARKANA, ARK.-TEX.

HUMCO LABORATORY
TEXARKANA, ARK.-TEX.
Our Integrity is Your Guarantee

Texas Medicine

Burn injuries

Why do pregnant women die?

County Societies, grass roots, at work

NOVEMBER 1970

U. C. SAN FRANCISCO
MEDICAL CENTER LIBRARY
DEC 8 1970

Torbett, Hutchings, Smith Memorial Hospital
And The Torbett Clinic

306 Coleman Street
Post Office Box 60

Marlin, Texas

Telephone: WE 6-3561

GENERAL SURGERY
Howard O. Smith, M.D., F.A.C.S.
D. R. Swetland, M.D., F.A.C.S.
Howard L. Smith, M.D., F.A.C.S.

INTERNAL MEDICINE
W. F. McKinley, Jr., M.D.
James S. Russell, M.D.
C. G. Brown, M.D.

EYE, EAR, NOSE AND THROAT
S. W. Hughes, M.D.

ALLERGY
Walter S. Smith, M.D.*

OBSTETRICS AND PEDIATRICS
M. A. Davison, M.D., F.A.C.O.G.
W. L. Reese, M.D., F.A.C.O.G.
William Pickvance, M.D.

RADIOLOGY
J. M. Brown, M.D., F.A.C.R.

PATHOLOGY
Ronald E. Henderson, Jr., M.D.
Kent Smith, M.D.

UROLOGY
Howard O. Smith, M.D., F.A.C.S.

DENTISTRY
B. E. Latimer, D.D.S.

NEUROPSYCHIATRY
S. B. Morrison, M.D.

DERMATOLOGY
Maurice C. Barnes, M.D., D.A.B.D.

Administrator:
J. D. Norris, Jr.

Superintendent of Nurses:
Ruby Lowrance, R.N.

Howard O. Smith, M.D., FACS, Chairman of the Board of Trustees, of Torbett, Hutchings, Smith Memorial Hospital and the Torbett Clinic which opened January, 1963. The original hospital was founded by Dr. J. W. Torbett, Sr., in 1898.

The Torbett Clinic and Memorial Hospital continues to utilize the Marlin Hot Mineral Water and other forms of physical therapy as an adjunct in the treatment of arthritis and allied rheumatic conditions.

*Expired 4-24-69.

THE DALLAS MEDICAL & SURGICAL CLINIC AND HOSPITAL

4105 Live Oak Street

DALLAS, TEXAS

Telephone TA 3-4151

*Geo. M. Underwood, M.D., F.A.C.P., Diagnosis & Gastroenterology, D.A.B. Internal Medicine & Gastroenterology
P. E. Luecke, Sr., M.D., F.A.A.P., Pediatrics
Diplomate American Board Pediatrics
*G. A. Davidson, B.S., M.D., Dermatology
*Wm. H. Potts, B.A., F.A.C.P., Internal Medicine
*Ozro T. Woods, M.D., Surgery, Emphasizing Tumors
*Richard M. Smith, M.D., F.A.C.P., Diagnosis & Internal Medicine
J. Wilbur Bourland, Jr., M.D., Obstetrics & Gynecology
Harry M. Spence, M.D., D.A.B.U., F.A.C.S., Urology
Wells M. Wade, D.D.S., Dental Surgery
Halcuit Moore, M.D., F.A.A.P., Pediatrics
Diplomate American Board Pediatrics
John B. Bourland, M.D., Gynecology & Obstetrics
Diplomate American Board OB-GYN
Raymond W. Burford, M.D., D.A.B.R., Radiology
Henry G. Montgomery, M.D., F.A.C.S., D.A.B.S., Surgery
Edwin M. Cleveland, M.D., Internal Medicine
John B. Allen, M.D., Internal Medicine
Diplomate American Board Internal Medicine
R. M. Burnside, M.D., D.A.B.O., Ophthalmology
*Adam D. Green, M.D., Surgery
Morris E. Magers, M.D., Internal Medicine
Diplomate American Board Internal Medicine
B. Celia Slaughter, M.D., F.A.A.P., Pediatrics
Diplomate American Board Pediatrics
D. W. Shuster, M.D., D.A.B.O., Otolaryngology and Otologic Surgery
P. E. Luecke, Jr., M.D., Pediatrics, F.A.A.P.,
Diplomate American Board Pediatrics
Channing Woods, M.D., Internal Medicine
William W. Hoffman, M.D., D.A.B.U., F.A.C.S., Urology
James M. Copps, M.D., D.A.B.O., Ophthalmology
Joe B. Caldwell, M.D., D.A.B.R., Radiology
Terry D. Allen, M.D., D.A.B.U., Urology
J. Boyd Hollabaugh, D.D.S., General Dentistry
George P. Fosmire, M.D., F.A.C.S., D.A.B.S., General Surgery
Richard C. Stone, M.D., Internal Medicine and Gastroenterology
Daniel L. Maddox, D.D.S., General Dentistry
William N. New, M.D., Dermatology
Masashi Kawasaki, M.D., D.A.B.O., Otolaryngology, Tumor and Reconstructive Surgery of the Head and Neck
Landon W. Stewart, M.D., Internal Medicine
William S. Wolff, M.D., Surgery
George S. Phalen, M.D., Orthopedic Surgery
Miss Billye J. Norris, R.N., Director of Nurses
C. H. Rosamond, Administrator
Arthur L. Cook, Associate Administrator

*Inactive status

TERRELL'S LABORATORIES

T. C. TERRELL, M.D., F.C.A.P., F.A.C.P., DIRECTOR
JOHN S. TERRELL, M.D., F.A.A.P., ASSISTANT DIRECTOR

FORT WORTH, TEXAS

211 Medical Arts Building

DEPARTMENT OF PATHOLOGY
T. C. Terrell, M.D., F.C.A.P., F.A.C.P.
May Owen, M.D., F.C.A.P., F.A.C.P.
Robert Hausman, M.D., F.C.A.P.
Joan Windmiller, M.D., F.A.A.P.

DEPARTMENT OF RADIOLOGY
H. W. Banker, M.D., D.A.B.R., M.A.C.R.
Ernest E. Holt, M.D., D.A.B.R., M.A.C.R.
James C. Moore, M.D., D.A.B.R., M.A.C.R.

DEPARTMENT OF CHEMISTRY
LaMonte A. Tucker, Ph.D.

DEPARTMENT OF BACTERIOLOGY & MYCOLOGY

CONSULTING & ANALYTICAL SERVICES

PATHOLOGY, FORENSIC PATHOLOGY & VETERINARY PATHOLOGY: Histology, Cytology.
CLINICAL PATHOLOGY: Serology, Bacteriology & Mycology, Parasitology, Hematology.
INDUSTRIAL & CLINICAL CHEMISTRY: Radioassay, SMA-12 survey and other Automated Procedures. Hormone Chemistry, Chromatography, Electrophoresis, Immunochemistry.
TOXICOLOGY: Drugs, Water, Foods & Biological materials.
MANUFACTURING DEPARTMENT: Allergenic Extracts and Treatment Sets, Mounting Media, Specifically Prepared Reagents and Stains for Laboratory Use.

TERRELL MEDICAL GROUP

FORT WORTH, TEXAS

210 Medical Arts Building

INTERNAL MEDICINE Diagnosis, Allergy, Cardiology	T. C. Terrell, M.D., F.C.A.P., F.A.C.P. Elizabeth A. Taylor, M.D.
NEUROPSYCHIATRY Electroencephalography	Henry G. Gardiner, Jr., M.D.
PEDIATRICS Pediatric Hematology Adolescent Medicine & Pediatric Consultation	Joan Windmiller, M.D., F.A.A.P. John S. Terrell, M.D., F.A.A.P.
CLINICAL PSYCHOLOGY	Michael W. Wheeler, Ph.D.

Texas Medicine

VOLUME 66 NUMBER 11 NOVEMBER 1970

Devoted to the interests of the medical profession and public health in Texas

BOARD OF PUBLICATION
Charles P. Hardwicke, MD, Austin
Chairman
James A. Hallmark, MD, Fort Worth
John M. Smith, Jr, MD, San Antonio
Vice Chairman
R. Harvey Bell, MD, Palestine
N. L. Barker, MD, Paris
C. W. Yates, MD, Rosenberg
Don G. Harrel, MD, Dallas

TMA OFFICERS
Walter Walthall, MD, San Antonio
President
C. Lincoln Williston, Austin
Executive Secretary

EDITORIAL AND BUSINESS OFFICES
1801 N Lamar Blvd, Austin 78701
Telephone: 477-6704
Marilyn Baker, Managing Editor
Rae Vajgert, Assistant Managing Editor
Sharon Timmons, Assistant Editor
Sharon Walker, Editorial Assistant
Judy Harris, Editorial Secretary
E. Maxwell Jones, Business Manager
Jon R. Hornaday Advertising Director
Anne Shelnutt, Advertising Assistant

PRINTING OFFICES
c/o Stafford-Lowdon Company
1114 West Daggett, Fort Worth 76104

Subscriptions: $3 per year for members; $6 for nonmembers; $8 for foreign; $3 for medical students. Single copy: $1.

Copyright 1970 by The Texas Medical Association. Owned and issued monthly by the Association.

SCIENTIFIC ARTICLES

46 Why Do Pregnant Women Die?

Dr. James T. Downs, III, of Dallas is a member of the Texas Medical Association's Committee on Maternal Health. He is a diplomate of the American Board of Obstetrics and Gynecology, and a fellow of the American College of Obstetricians and Gynecologists. In addition to his private practice, Dr. Downs serves as clinical professor of obstetrics and gynecology at The University of Texas (Southwestern) Medical School.

50 Obstetric Hemorrhage: Frequency, Etiology, and Prevention of Deaths

54 Guiding Principles for Obstetric Care

Dr. Anthony Ruppersberg, Jr, is associate professor of obstetrics and gynecology at Ohio State University College of Medicine, Columbus, Ohio. He is a diplomate of the American Board of Obstetrics and Gynecology and a fellow of the International College of Surgeons, and serves on the American College of Obstetricians and Gynecologists Committee on Maternal Health. Dr. Ruppersberg has helped initiate and guide maternal mortality studies at the county and state level. He has twice been recognized for distinguished service to the Ohio State Medical Association.

58 Obstetric Anesthesia

Dr. Harry Prystowsky is professor and chairman of Obstetrics and Gynecology at the University of Florida College of Medicine, Gainesville. A diplomate of the American Board of Obstetrics and Gynecology, he also is active in the American College of Obstetricians and Gynecologists, Society for Gynecologic Investigation, American College of Surgeons, and other professional groups. As consultant or advisor, he has participated in a wide range of medical, government, and other organizational programs and projects.

60 Experiences with IUD Complications

Drs. Stephen C. Green and Dan C. Hinkle were chief residents, and Dr. Herman I. Kantor was director

PUBLICATION INFORMATION

Texas Medicine is published monthly by the Texas Medical Association.

Second Class Postage paid at Austin, Texas, with additional entry at Fort Worth, Texas, under Act of March 3, 1879.

Contributions, previously unpublished, are welcomed for review; suggestions for preparation are available from the Editorial Offices. News and other items should be sent to the Editorial Offices by the 10th of the month preceding the month of publication. All contributions are sent at the owner's risk.

Contents

of research on the Obstetrics-Gynecology Service of St. Paul's Hospital, Dallas, at the time this article was prepared. Dr. Kantor has been in private practice in Dallas for many years. Dr. Green is now with the Headquarters, 854th Medical Group (SAC), Malmstrom Air Force Base, Great Falls, Mont. After completing his residency, Dr. Hinkle entered the US Air Force in August, and is stationed at the USAF Hospital, Warren Air Force Base, Wyoming. All three authors are fellows of the American College of Obstetricians and Gynecologists.

64 Cervical Cone, Frozen Section Diagnosis; Review of 210 Cases

Dr. Byron B. Holt, former resident in obstetrics and gynecology at Hermann Hospital, is now in private practice in Houston. His coauthor, Dr. J. T. Armstrong, is chief of the Department of Gynecology at Hermann Hospital, Houston.

75 Complete Office Screening for Porphyria

Dr. Fred F. Castrow, II, is in the private practice of dermatology in Houston; Dr. D. F. Fincher, also a dermatologist, practices in Sherman. Dr. Gordon C. Mills (PhD) is professor of biochemistry and nutrition and Dr. J. Fred Mullins is professor and chairman of the Department of Dermatology, The University of Texas Medical Branch, Galveston.

78 Radiological Case of the Month: Thymic Hyperplasia Simulating Mediastinal Metastasis

Dr. Charles A. Hill is a resident in radiology at The University of Texas MD Anderson Hospital and Tumor Institute, Houston. Dr. Gerald D. Dodd, guest editor, is head of the Department of Diagnostic Radiology at MD Anderson. The series is sponsored by the Texas Radiological Society.

86 Clinicopathologic Conference

Participants in this CPC from Baylor College of Medicine in Houston are Dr. Carmelo C. Dichoso, resident in medicine; Drs. Robert O. Morgen and Wadi N. Suki, associate professors of medicine; Dr. John O. F. Roehm, Jr, clinical instructor of radiology; and Dr. Ferenc Györkey, professor of pathology. Guest editors are Dr. Montague Lane, professor of pharmacology and medicine; and Dr. Harlan J. Spjut, professor and chairman, Department of Pathology.

EDITORIALS

21 The Silent Epidemic: Burn Injuries in Texas
Dr. Armond S. Goldman
Robert L. Innes
Dr. Duane L. Larson
Richard C. Schmitt
Dr. Sally Abston
Dr. Mario Dobrkovsky

23 One Man's Idea Becomes Policy the Short Way—Through Channels
Dr. Jack B. Lee

24 Surgical Control of Population
Dr. W. E. Lockhart

26 Trends in Early Syphilis
Dr. R. F. Sowell, Jr

27 Questions and Answers: Insurance Whys and Wherefores

29 Let's Put Ideas Where They Count
Dr. Walter Walthall

DEPARTMENTS

4 Association & Late News

13 Highlights of Coming Meetings

19 Continuing Education Courses

97 News

103 Doctor in "Training"

108 The Changing Face of Texas Medicine

109 Personals

109 Pamphlets

113 Medicine in Literature

114 Recent Deaths

ON THE COVER

There was a real uproar when Texas had some 3,000 or more cases of poliomyelitis in one year. Where is the uproar about the 3,000 people who are now crippled from last year's burn injuries? Or about the 180 children and 360 adults who died? It isn't very loud yet but the rumble is beginning, and the editorial on page 21 tells why.

NEXT MONTH

Scheduled for the December issue are articles on epidemiology of Rocky Mountain spotted fever and murine typhus; chronic hepatitis; quinidine intoxication due to alkali ingestion; psychiatric patients treated with lithium carbonate; lateral unilobular thyroid; trends in cerebral palsy treatment; coagulation testing in the surgical patient; radiologic findings in nonspecific ulcerative colitis; and building a foundation.

Association &

Association endorses MECO program for med students through mailing

A recent mailing to chiefs of hospital medical staffs hopefully will result in an even wider base of education available for Texas medical students.

The mailing, a result of actions at the fall conference of the Texas Medical Association, concerns the establishment of a new program sponsored by the Student American Medical Association. Called the Medical Education and Community Orientation (MECO) program, the new project is designed to allow as many preclinical students as possible to observe and participate to a limited extent in the operations of a community hospital and to watch a community doctor in action.

Program format will be a preceptorship-like rotation through clinical and non-clinical areas of a non-university, community hospital under the direct supervision of physicians and the hospital staff. Freshmen and sophomore medical students will be eligible to participate.

The MECO program has been called "a student educational involvement in community medical practice." It has been successfully established in Illinois and other midwestern states, and the Sears Roebuck Foundation has now offered a grant to SAMA to help start the program in other states, including Texas.

Information on the program was brought first before the TMA Committee on Liaison with Medical Schools, chaired by Dr. Gerald S. Ahern of Corpus Christi, at its Sept. 19 meeting. Brad Chipps, a third-year student at The University of Texas Medical Branch and state program director for the proposed program, and Lee Fischer, a University of Illinois student who is involved in the MECO program in his home state, told committee members about the opportunities available with MECO and explained the format and goals of the program.

The committee discussed the project extensively and voted to endorse the program and refer it to the Council on Medical Education and Hospitals for further consideration. The Council also felt the project was worthwhile, and the Executive Board and the Board of Trustees approved the project.

As a result, some 550 letters were mailed on Oct. 15 to chiefs of hospital medical staffs in an effort to explain the program and to invite participation of community hospitals. The letter, signed by Dr. Ahern, also provided hospitals with a copy of the program guidelines as established by SAMA and a Hospital Information Sheet on which each participating hospital was to provide a synopsis of what its program would entail. Deadline for replies is Dec. 15.

After the deadline for replies, a booklet will be published and distributed to interested medical students. The booklet will list the participating hospitals and will give the program synopsis for each hospital.

Interested students will then register their preferences with state program director Brad Chipps, and he will be responsible for matching students with hospitals. Chipps stated that he hopes the matching will be completed by March 1, 1971.

Cooperating in the effort with TMA to establish the SAMA-MECO program are the Texas Hospital Association and the Texas Academy of General Practice.

Planners hard at work on January conference

Plans are currently being formulated for the 1971 winter conference of the Texas Medical Association.

The meeting, entitled the 1971 Conference on Legislation, is scheduled for Saturday, Jan. 16. It will focus primarily on legislation—both on the national and state levels. An Orientation Session will also be held on Jan. 16 to acquaint new TMA members with the services and opportunities offered by the Association.

Meetings of various TMA committees, councils, and boards are scheduled from Friday, Jan. 15, through Sunday, Jan. 17.

At the present stage of planning, three major issues are under consideration to receive primary attention at the conference: proposals for national health insurance; medical and health manpower; and legislation to further tighten reporting regulations of the Internal Revenue Service related to physician's income, professional association and corporation laws and pension plans, and medical device legislation.

TMA conference planners hope to establish one, or possibly two, panel discussions on some of the more pressing legislative issues.

TMA Keogh funds among top 16 in the nation

While most mutual funds plummeted in 1969 and the first months of 1970, Keogh Plan funds sponsored by state and county medical societies dropped only moderately, according to a recent report in *Medical Economics*.

The national medical magazine reported that while many mutual funds lost up to half their value during the market decline, on the average, the Keogh funds "performed three times better than the all-funds average."

Evidence of this fact is the record of the four mutual funds included among the investment media available to a participant in the Texas Medical Association's Member Retirement Program, which is under the Keogh Plan. All four of these funds were ranked in the top 16 funds in the Lipper Corporation's study of the performance of 381 funds in the 1969-1970 declining market.

The average decline in the top-ranked 16 funds was 4.5%, while the all-funds average was 14.5% and the Dow Jones Industrials average decline was 11.6%.

The report of the study in *Medical Economics* also concluded, "The portfolio managers of the doctor funds appear to know what they're doing. Their

_ate News

performance, especially in difficult market periods, has been better on average than that of most other professional money managers. As general market conditions improve, the Keogh funds' growth rate is likely to improve with them."

Alfred J. Hoffman, president of the David L. Babson Fund (not a TMA investment media), agrees with the bright outlook predicted for mutual funds under Keogh Plans. He says, "There's little doubt that Keogh is still a viable route to a retirement fund. And, we expect it to get better as tax reforms sweeten Keogh by raising the annual ceiling on tax-free contributions."

Offering a choice of nine investment media, the TMA Keogh retirement program is especially flexible. Each participant makes his own choices, and these selections can be changed at any time, with funds simply transferred from one medium to another.

A complete portfolio of information on the TMA Members Retirement Program can be obtained by writing Texas Medical Association, 1801 North Lamar Boulevard, Austin 78701.

UNIT VALUES FOR TMA MEMBERS RETIREMENT PLAN AND TRUST

(As a service to participants in the TMA Members Retirement Plan and to physicians interested in enrolling in the program, comparative values for investment media are published regularly in *Texas Medicine*. Figures shown are the latest available at press deadline and are for comparison purposes only. Most daily newspapers list up-to-the-minute values on mutual funds.)

Investment Media	Original Price 9-30-68	Net Asset Value Per Share 9-30-70	Net Asset Value Per Share 9-30-70*
Mercantile National Bank Stock Fund	$10.25	$ 8.56	$ 8.56
Loomis-Sayles Capital Development Fund	14.20	9.07	13.24
T. Rowe Price Growth Stock Fund	25.93	20.13	22.14
Loomis-Sayles Mutual Fund	16.82	12.36	13.47
Stein Roe & Farnham Balanced Fund	23.34	16.52	17.68
Mercantile Bank Fixed Income Fund	10.00	8.67	8.67

*Adjusted to include dividends and distributions since 9-30-68.

**A reminder: A physician whose tax year ends Dec. 31 and who wishes to claim a 1970 tax deduction for contributions made to a Keogh Act retirement program must enroll in and contribute to a program *before* Dec. 31.

Director announced for new manpower office

Robert G. Mickey, current executive director of TEXPAC, has been named director of the new Office on Medical and Health Manpower authorized by the Texas Medical Association's Board of Trustees in September.

The establishment of the office is designed to focus attention on the pressing need for more physicians, nurses, and paramedical personnel and to provide relief for those physicians who desire assistance.

Mickey, who has been associated with TEXPAC and TMA for three years, has also worked with the Council on Medical Service and Insurance. He will continue working with the council and will remain involved in TEXPAC activities.

The new director will assume his duties Nov. 1. Mickey's duties will include:

1. Maintaining liaison with medical students, interns, and residents.
2. Overseeing operation of the Association's Physician's Placement Service.
3. Conducting surveys on the needs of Texas physicians as they relate to manpower, including studies on doctor distribution.
4. Keeping Association officers and committees informed on new developments related to paramedical personnel, such as the new "physician's assistant," and developing liaison with other organizations which are also active in promoting health careers.
5. Providing information on medicine as a career, primarily to students and to others who inquire.

Mickey will work closely with the TMA Committee on Rural Health and the Committee on Health Careers. He will also acquire information about systems of medical service and patterns for delivering medical care and will be responsible for keeping TMA members informed of developments in this area.

Recess to delay changes in government programs

The Oct. 14 recess and the Nov. 3 elections have delayed any further actions on the Medicare and Medicaid programs by Congress. A final vote on the 1970 Social Security Act amendments was stalled in the Senate Finance Committee by the rush of other legislation.

Although Congress will reconvene on Nov. 16, indications are that final approval of the Social Security bill is not likely before December.

The House of Representatives has already approved a version of the bill that calls for establishment of a peer review system, a Health Maintenance Organization (HMO) option under which prepaid group plans could be formed to deliver service to Medicare patients, linking of future physician fee increases under Medicare to cost-of-living increases, a reduction of federal Medicaid payments to states, and a study of whether chiropractic services should be included as a benefit under Medicare.

Before the recess, the Senate Finance Committee had tentatively ap-

proved a modified version of the peer review mechanism known as the Professional Standards Review Organization. The committee also had tentatively called for the establishment of a new position, inspector general for the Department of Health, Education, and Welfare, to oversee Medicare and Medicaid operations, and the committee had tentatively proposed reduction in the amount of House-proposed cutbacks in Medicaid payments to states.

No action was taken by the committee on HMO, the proposed chiropractic study, or the recommendation of the Internal Revenue Service for authority to require insurance carriers to report unassigned payments.

VD program aimed at informing the public

With Texas leading the nation in the syphilis rate in 1969, Texas Medical Association has designed a state-wide educational program to help inform the public of the serious consequences of venereal disease.

Aimed especially at young people, who according to the Texas State Department of Health account for more than 50% of the VD cases reported to it, the program consists of a 24-sheet poster designed to attract attention and to speak to young people "in their language," a series of news releases, radio and television spots, and pamphlets.

The Association is hopeful that some 200 to 250 billboards will be provided without charge as a public service for the poster. The billboards were scheduled for posting on Nov. 5. Financial support for production of the posters was provided by a $1,500 grant awarded to TMA by Pfizer Laboratories.

Venereal disease was selected as the subject of the educational program by the Association's Council on Public Relations and Public Service, since VD represents a significant, growing health problem in this state. In 1969, exactly 2,500 cases of syphilis, or a rate of 24.2 per 100,000 population, were reported to the Texas State Department of Health, and Texas is currently reporting 10% of all VD-infected young adults in the nation. The number of cases of primary and secondary syphilis reported in Texas in 1969 was exceeded only by that reported for New York. In addition, the state had a total of 38,405 cases of gonorrhea reported last year, representing an increase of 14% over the 1968 figure.

Applications ready for prospective exhibitors

Physicians and researchers who wish to sponsor scientific exhibits at the Texas Medical Association's 104th Annual Session, May 6-9, in Houston may request applications for space in the exhibit hall from the TMA Headquarters office.

Dale Werner, exhibits manager for the Annual Session, said that applications and regulations regarding the scientific exhibits are available for distribution to interested, prospective exhibitors.

All prospective exhibitors are required to fill out an application form in duplicate, and return one copy by Jan. 1, 1971, to EXHIBITS, Texas Medical Association, 1801 North Lamar Boulevard, Austin 78701.

The Committee on Scientific Exhibits will review the applications at its January meeting and will accept or reject exhibits at that time.

Exhibitors will be notified as soon as possible after the January meeting as to the actions of the committee in regard to their proposed exhibits.

Three awards will be given in each of the following four categories:
Group 1—Scientific exhibit without grant or assistance.
Group 2—Scientific exhibit with grant or assistance from university, hospital, government, agency, or non-profit organization.
Group 3—Scientific exhibit with grant or assistance from a pharmaceutical or other commercial enterprise.
Group 4—Exhibits primarily of educational-promotional nature which bring a message of interest and importance to the attention of the profession.

In addition, TMA will present an Aesculapius Award for the most outstanding exhibit shown at the Annual Session.

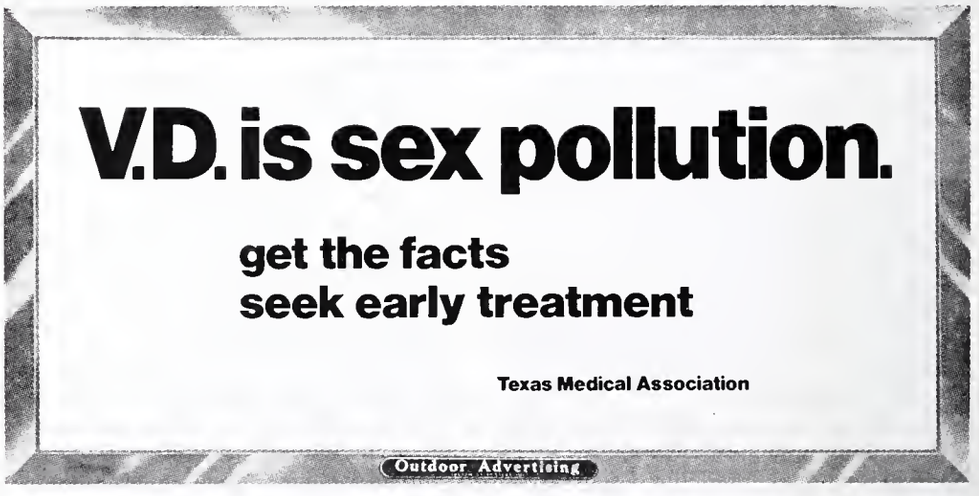
Criteria for judging the exhibits are clarity, effectiveness, personal presentation, contribution to basic knowledge, practical value, originality, newness, et cetera. An anonymous group of physicians from different specialties will serve as exhibit judges.

Booth space, free of charge, will be provided at the Shamrock Hilton Hotel Hall of Exhibits, the headquarters hotel for the scientific sections of the Association's annual meeting. Included with the booth space will be one table, two chairs, and one AC 110 electrical outlet. Additional supplies, such as shelves, rugs, and extra tables, may be rented from the local decorating service that will be handling booth construction for the show.

During exhibit times, each exhibit must be under constant supervision of the physician or researcher who performed the work shown or of a competent, well-informed assistant.

The following exhibit times have been tentatively scheduled: Thursday, May 6, 8:30 a.m. to 5:30 p.m.; Friday, May 7, 8 a.m. to 5:30 p.m.; and Saturday, May 8, 8 a.m. to 4 p.m.

Only those wearing authorized badges of the convention will be admitted to the exhibit hall. The show is not open to the general public.



Approximately 200 to 250 of these posters will appear on Texas billboards in November in an effort to attract the public's attention to the dangers of venereal disease.

"They go all the way for you, here!"

This is a sign of:

1. A good place to work.
2. Patients who don't have to worry about money.
3. Better collections for hospital and doctor.

Some signs, you can really believe in.

"Everybody's swingin' to the Blues!"

BLUE CROSS®and BLUE SHIELD®'

Hospital and Health Care Coverage
(GROUP HOSPITAL SERVICE, INC.)

Medical and Surgical Benefits
(GROUP LIFE & HEALTH INSURANCE COMPANY)

OF TEXAS

MAIN AT NORTH CENTRAL EXPRESSWAY ■ DALLAS, TEXAS 75222

®American Hospital Association
®'National Association of Blue Shield Plans

Gone with the wind

The gas/acid group of disorders

"The two most common complaints referable to the upper gastrointestinal tract for which patients seek medical relief are hyperacidity and 'gas.' The two often occur together."*

Frees captured gas...neutralizes free acid

SILAIN-GEL Tablets and Liquid are separate formulas designed to provide equivalent dual-action symptomatic relief. Both dosage forms contain simethicone which effectively frees trapped gas, enabling the patient to eliminate it. Magnesium hydroxide in both assures a rapid rise in pH for prompt relief of hyperacidity. The special co-dried aluminum hydroxide/magnesium carbonate gel in the tablets assures the same rapid and uniform reaction rate as the liquid. Thus, both medications achieve prompt and prolonged neutralization of free acid *plus* prompt relief from the pain and pressure of trapped gas.

Always in good taste

The pleasant, distinctive flavor of SILAIN-GEL, as well as its non-constipating feature, make it a therapy your patients can live with—in comfort and without complaint.

Select the form of SILAIN-GEL you want to provide symptomatic relief in: gastric ulcer • duodenal ulcer • heartburn • gastric hyperacidity • gastritis • dyspepsia

when the patient prefers the convenience of a tablet, select

Silain-Gel® Tablets:

when the patient prefers a liquid, select

Silain-Gel® Liquid

Also available for the patient who needs an antifrothicant/antiflatulent agent only: **Silain®** (simethicone) Tablets

*Slanger, A.: Med. Times *94*:150 (Feb.) 1966.

Announcing the "Antgasid"

Silain-Gel®

Tablets: simethicone plus aluminum hydroxide/magnesium carbonate co-dried gel and magnesium hydroxide

Liquid: simethicone plus aluminum hydroxide and magnesium hydroxide

one dose does both: frees captured gas... neutralizes free acid

A·H·ROBINS A.H. Robins Company, Richmond, Virginia 23220

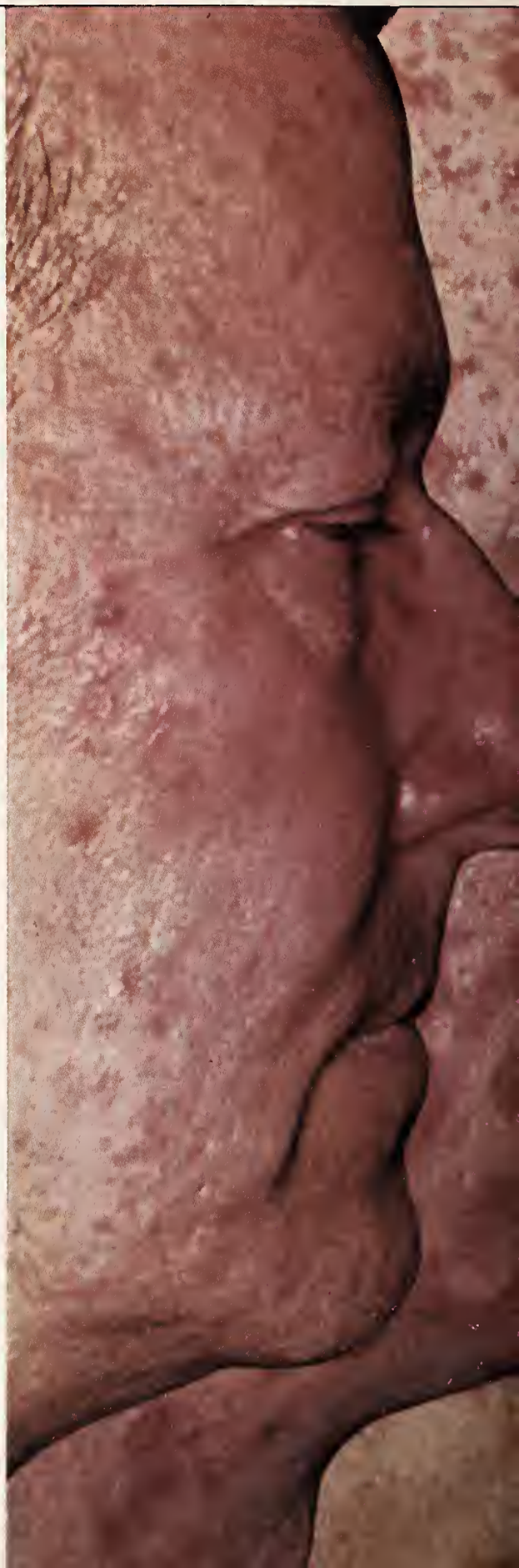
Roche announces

Efudex®

(fluorouracil) cream/solution

for the treatment of solar/actinic keratoses... a topical alternative to conventional therapy

1/22/68—Treatment with 5% 5-FU cream commences. Patient K.L. showing widespread but mild solar keratoses (also known as actinic keratoses).



Fluorouracil—the Roche contribution

In 1962, Roche Laboratories introduced Fluorouracil Roche® (5-fluorouracil). Early clinical work with this drug suggested that it possessed a selective cytotoxic activity when applied topically to certain kinds of lesions. Based on this work and years of clinical trials, a standardized form of topical fluorouracil can now be recommended for treatment of multiple solar or actinic keratoses.

Efudex®(fluorouracil)—a new alternative to conventional therapy

Efudex presents the physician with a topical alternative to surgery in the treatment of solar or actinic keratoses. It is effective, comparatively inexpensive and especially well-suited for treatment of multiple lesions. Important, too, is the highly desirable cosmetic result. Clinical experience demonstrates that treatment with Efudex results in an extremely low incidence of scarring.*

Highly effective on first and later applications

In clinical trials, depending on the dosage form and strength used, complete involution occurred in 77 to 88 per cent of lesions following treatment. The rate of recurrence was low, ranging from 1.7 to 5.6 per cent up to a year after completion of therapy. When lesions did recur or new ones appeared, repeated courses of Efudex therapy proved effective.*

2/2/68—After 11 days of treatment. Erythema is seen at site of keratoses. In addition, numerous lesions not apparent prior to therapy have become manifest by sharply defined reactions. Intervening skin, also treated, shows no response to therapy.

2/19/69—One year after cessation of therapy. Skin appears clear with no evidence of scarring. Examination reveals lack of recurrence or the formation of new lesions.

Predictable sequence of therapeutic response

Two to four weeks constitutes a typical course of Efudex therapy. The response is usually characteristic and predictable. After three or four days of treatment, erythema begins to appear in the area of the keratoses. This is followed by an intense inflammatory response, scaling and occasionally moderate tenderness or pain. The height of the inflammatory reaction generally occurs two weeks after the start of therapy, and then begins to subside as treatment is stopped. Within two weeks of discontinuing medication, the inflammation is usually gone. A mild erythema may remain for two to three months before gradually receding.

Selective—with a high degree of safety

Despite the temporary unsightliness and discomfort of the inflammatory episode, Efudex is, in general, more readily tolerated than surgery. Clinical work shows the intense inflammatory response to be limited to the area of the lesion. Normal skin is not similarly affected. Another measure of Efudex safety: systemic absorption of topical fluorouracil was insignificant, indicating a low risk of systemic toxicity.*

Two strengths—two convenient dosage forms

Efudex is available as a 2% or 5% solution or as a 5% cream. It is applied twice daily by the patient with a nonmetal applicator or suitable glove.

Before prescribing Efudex, however, there are two important considerations. First, please consult the complete prescribing information for precautions, warnings and adverse reactions. Second, advise the patient that treated lesions should respond with the characteristic but transient inflammation. A positive sign that Efudex is working for them.

*Data on file, Hoffmann-La Roche Inc., Nutley, New Jersey.

2% and 5% Solutions; 5% Cream Applied twice daily—resolves solar or actinic keratoses.

new Efudex® (fluorouracil) cream/solution

For full prescribing information, please see the following page.

Roche introduces

Efudex®

(fluorouracil) cream/solution the new standardized topical for solar/actinic keratoses

Description: Efudex solutions and cream are topical preparations containing the fluorinated pyrimidine 5-fluorouracil, an antineoplastic antimetabolite.

Efudex Solution consists of 2% or 5% fluorouracil on a weight/weight basis, compounded with propylene glycol, tris-(hydroxymethyl) aminomethane, hydroxypropyl cellulose, parabens (methyl and propyl) and disodium edetate.

Efudex Cream contains 5% fluorouracil in a vanishing cream base consisting of white petrolatum, stearyl alcohol, propylene glycol, polysorbate 60 and parabens (methyl and propyl).

Actions: There is evidence that the metabolism of fluorouracil in the anabolic pathway blocks the methylation reaction of deoxyuridylic acid to thymidylic acid. In this fashion fluorouracil interferes with the synthesis of deoxyribonucleic acid (DNA) and to a lesser extent inhibits the formation of ribonucleic acid (RNA). Since DNA and RNA are essential for cell division and growth, the effect of fluorouracil may be to create a thymine deficiency which provokes unbalanced growth and death of the cell. The effects of DNA and RNA deprivation are most marked on those cells which grow more rapidly and which take up fluorouracil at a more rapid pace. The catabolic metabolism of fluorouracil results in degradative products (*e.g.*, CO_2, urea, α-fluoro-β-alanine) which are inactive.

Studies in man with topical application of ^{14}C-labeled Efudex demonstrated insignificant absorption as measured by ^{14}C content of plasma, urine and respiratory CO_2.

Indications: Efudex is recommended for the topical treatment of multiple actinic or solar keratoses.

Contraindications: Efudex is contraindicated in patients with known hypersensitivity to any of its components.

Warnings: If an occlusive dressing is used, there may be an increase in the incidence of inflammatory reactions in the adjacent normal skin.

Prolonged exposure to ultraviolet rays should be avoided while under treatment with Efudex because the intensity of the reaction may be increased.

Usage in Pregnancy: Safety for use in pregnancy has not been established.

Precautions: If Efudex is applied with the fingers, the hands should be washed immediately afterward. Efudex should be applied with care near the eyes, nose and mouth. To rule out the presence of a frank neoplasm, a biopsy should be made of those areas failing to respond to treatment or recurring after treatment.

Adverse Reactions: The most frequently encountered local reactions were pain, pruritus, hyperpigmentation and burning at the site of application. Other local reactions included dermatitis, scarring, soreness and tenderness.

Also reported were insomnia, stomatitis, suppuration, scaling, swelling, irritability, medicinal taste, photosensitivity and lacrimation.

Laboratory abnormalities reported were leukocytosis, thrombocytopenia, toxic granulation and eosinophilia.

Dosage and Administration: Efudex should be applied twice daily with a nonmetal applicator or suitable glove in an amount of the solution or cream sufficient to cover the lesion. When Efudex is applied to a lesion, a response occurs with the following sequence erythema, usually followed by vesiculation, erosion, ulceration, necrosis and epithelization. The lower frequency and intensity of activity in adjacent normal skin indicate a selective cytotoxic property. Medication should be continued until the inflammatory reaction reaches the erosion, necrosis and ulceration stage, at which time use of the drug should be terminated. The usual duration of therapy is from 2 to 4 weeks. Complete healing of the lesion may not be evident for 1 to 2 months following cessation of Efudex therapy.

How Supplied: Efudex Solution, 10-ml drop dispensers—containing 2% or 5% fluorouracil on a weight/weight basis, compounded with propylene glycol, tris(hydroxymethyl)aminomethane, hydroxypropyl cellulose, parabens (methyl and propyl) and disodium edetate.

Efudex Cream, 25-Gm tubes—containing 5% fluorouracil in a vanishing cream base consisting of white petrolatum, stearyl alcohol, propylene glycol, polysorbate 60 and parabens (methyl and propyl).

Clinical Studies: The effectiveness of the three preparations as determined by complete involution of solar keratoses was: 2% Solution, 77% of 282 lesions; 5% Solution, 88% of 202 lesions; and 5% Cream, 85% of 189 lesions. In those lesions where complete involution followed treatment, the rate of possible recurrences observed clinically at periods up to 12 months or more was: 2% Solution, 4.6% of 218 lesions; 5% Solution, 1.7% of 177 lesions; and 5% Cream, 5.6% of 160 lesions. Because of the toxic potential of fluorouracil, some physicians preferred to use the 2% solution when large areas were to be treated. Approximately 30% of the lesions required treatment for two weeks or less; approximately 78% required four weeks or less for adequate treatment.

ROCHE Roche LABORATORIES
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

AMERICAN COLLEGE OF PHYSICIANS and TEXAS SOCIETY OF INTERNAL MEDICINE

Flagship Hotel in Galveston will be headquarters for the 9th annual conjoint meeting of American College of Physicians and Texas Society of Internal Medicine on Dec. 4. Dr. Joseph T. Painter, president, American Society of Internal Medicine; Dr. Richard S. Wilbur, deputy executive vice president, American Medical Association; and Barbara Jordan, Texas State Senator, will participate in a symposium, "The Means of Delivery of Medical Care to the Medically Disadvantaged," conducted by TSIM. Some of the program speakers and their presentations are Drs. Edward C. Larkin, UT Medical Branch, Galveston, "The Relationship Between 2,3 Diphosphoglycerate Red Cell Levels and the Regulation of Oxygen Release by Hemoglobin in Humans"; Richard V. McCloskey, UT Medical School at San Antonio, "The San Antonio Diphtheria Epidemic of 1970"; J. G. Sinkovics, B. MacKay, J. R. Cabiness, and C. C. Shullenberger, UT MD Anderson Hospital and Tumor Institute at Houston, "Rhabdomyosarcoma in the Adult: Response to Chemotherapy and Immune Reactions to Tumor Cells"; John M. Lewis, Baylor College of Medicine, Houston, "Autogenous Saphenous Vein By-Pass Surgery for the Treatment of Angina Pectoris: Clinical and Angiographic Assessment of 50 Cases"; William J. Collins, MAJ, MC, and Ralph F. Wells, LTC, MC, Brooke Army Medical Center, Fort Sam Houston, "Experience with the Australia Antigen Test in a General Hospital Setting."

Contact: Dr. Jay J. Welch, 1223 Memorial Prof. Bldg., Houston 77002, president-elect.

AMERICAN ACADEMY FOR CEREBRAL PALSY

The 24th annual meeting of the American Academy for Cerebral Palsy will be held Dec. 8-12 in Houston at the Shamrock Hilton Hotel. The theme of the meeting will be "Clinical Application of Basic Sciences" and featured guest speaker will be Dr. Ashley Montagu (PhD, DSc), who will address the Academy on "Sociogenic Brain Disease." Subjects to be covered in instructional courses include a basic course in cerebral palsy, emotional reactions of handicapped children, spinal and supraspinal reflexes, upper extremity surgery in cerebral palsy, drug therapy in cerebral palsy, syndromes associated with mental retardation, childhood myopathies and neuropathies, and techniques of treatment. Participating in the program will be Drs. Dominick P. Purpura (PhD), professor of anatomy, Albert Einstein College of Medicine, Bronx, NY; Edward V. Evarts, chief, section of physiology, laboratory of clinical science, National Institute of Mental Health, Bethesda, Md.; William M. Landau, professor of neurology, Washington University School of Medicine, St. Louis; David G. Simons, director, physiometrics research laboratory, Veterans Administration Hospital, Washington, DC; Harriet E. Gillette, professor of physical medicine and rehabilitation, University of Colorado School of Medicine, Denver; Arthur Robinson, professor, departments of biophysics and pediatrics, University of Colorado School of Medicine, Denver; Joaquin Cravioto, professor, department of nutrition, Hospital Infantil de Mexico, Mexico City; and Riley Gardner (PhD), senior research psychologist, Menninger Foundation, Topeka, Kans.

Contact: Dr. Gerald Solomons, University Hospital School, Iowa City, Iowa 52240, secretary.

HIGHLIGHTS OF COMING MEETINGS

CURRENT MEETINGS IN TEXAS

TEXAS ACADEMY OF INTERNAL MEDICINE will convene at the Flagship Hotel in Galveston on Dec. 5. Speakers from The University of Texas Medical Branch at Galveston are Drs. John M. Wallace, John F. Williams, Jr., Murphy Scurry, R. L. Peake, James Guckian, Luther B. Travis, A. R. Remmers, Jr., James Thompson, Douglas Cain, E. S. Barratt (PhD), and R. B. White. Presentations include "Current Status of Glucagon in Heart Disease," "Multiple Endocrine Adenomatosis," "The Changing Concepts of Glomerulonephritis," "Studies on the Metabolism of Gastrin," and "Steroids and Liver Disease." Contact: Dr. O. Roger Hollan, 703 Nix Bldg., San Antonio 78205, secretary.

CURRENT NATIONAL MEETINGS

AMERICAN ACADEMY OF DERMATOLOGY's 29th annual meeting will be staged at the Palmer House in Chicago, Dec. 5-10. Postgraduate courses will be offered and will cover a wide range of medical and surgical procedures and basic biochemical knowledge needed for the diagnosis and treatment of skin diseases. Also planned are symposia on problems in dermatology ranging from the role of the environment in skin diseases to burns and venereal diseases. Special symposia will be held on military dermatology, pediatric dermatology, genetics in dermatology, and recent advances in cutaneous medicine. Guest lecturers will be Drs. Robert J. Huebner, chief of the viral carcinogenesis branch, National Cancer Institute, Washington, DC; and H. Sherwood Lawrence, professor of medicine and head of the infectious disease and immunology division, New York University Medical Center, New York, NY. Contact: Dr. Frederick A. J. Kingery, 2250 Northwest Flanders, Portland, Ore. 97210, secretary-treasurer.

AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE will meet in Chicago Dec. 26-31, with headquarters at the Conrad Hilton Hotel. Subjects to be covered in symposia include mood, behavior and drugs; crime, violence and social control; problems in the meaning of death; advances in human genetics and their impact on society; separation and depression; and industrial approach to urban problems. Also included in the program will be general lectures that include illustrated and demonstration lectures; panel discussions on themes of general interest; and current science films. Contact: Dr. Dael Wolfe, 1515 Massachusetts Ave., NW, Washington, DC 20005, executive officer.

MORE HIGHLIGHTS OF COMING MEETINGS

■ Denotes Texas meetings.

AMERICAN MEDICAL ASSOCIATION's 24th clinical convention will be held Nov. 29-Dec. 2 in Boston. Motion pictures, courses, lectures, round table discussions, and scientific and industrial exhibits will make up the scientific program. A wide range of topics will be offered and will include surgery of the gastrointestinal tract, applied genetics, problems in pediatric surgery, pollution and the physician, medical practice in the future, respiratory pathophysiology and pulmonary failure, clinical immunology, renal failure, adolescents' medical care, present day problems in obstetrics, and cancer chemotherapy. The 12th National Conference on the Medical Aspects of Sports, sponsored by AMA, will be held in conjunction with and on the first day of the clinical convention. Included in the conference will be forums and discussion sections relating to research in sports, aquatic sports, football rules and injuries, psychology in sports, and emergency and public health aspects of sports. Contact: AMA Council on Medical Service, 535 N. Dearborn St., Chicago 60610.

ASSOCIATION OF MILITARY SURGEONS OF THE UNITED STATES will meet at the Washington Hilton Hotel, Washington, DC, Nov. 29-Dec. 2. Delivering the keynote address at the 77th annual meeting will be Dr. Roger O. Egeberg, assistant secretary for health and scientific affairs, Department of Health, Education, and Welfare. Topics of clinical medical interest will be covered in panel discussions. Contact: RADM Walter Welham, MC, USN, Ret, 8502 Connecticut Ave., Chevy Chase, Md. 20015, executive director.

THE RADIOLOGICAL SOCIETY OF NORTH AMERICA, INC., will offer presentations on neuroradiology, diagnosis, nuclear medicine, radiation therapy, pediatric radiology, and diagnosis in cardiovascular radiology at its 56th scientific assembly at the Palmer House in Chicago, Nov. 29-Dec. 4. Symposia and refresher courses will also be offered. Contact: Marguerite H. Henry, 713 E. Genesee St., Syracuse, NY 13210, executive director.

ALSO IN NOVEMBER

INTERNATIONAL COLLEGE OF SURGEONS, Las Vegas, Nov. 20-24, 1970. Dr. Aldo Parentela, 1516 Lake Shore, Chicago 60610, Exec. Officer.

ALSO IN DECEMBER

ASSOCIATION OF STATE AND TERRITORIAL HEALTH OFFICERS, Washington, DC, Dec. 6-10. 1970. Noble J. Swearingen, 234 E. Capitol St., Washington, DC 20002, Dir.

SOUTHERN SURGICAL ASSOCIATION, Boca Raton, Fla., Dec. 7-9, 1970. Dr. David C. Sabiston, Jr., Duke University Medical Center, Durham, NC, Sec.

■ TEXAS SOCIETY OF OPHTHALMOLOGY AND OTOLARYNGOLOGY, Corpus Christi, Dec. 4-5, 1970. Dr. Bland H. Schwarting, 304 Med. Prof. Bldg., San Antonio, Sec.

■ TEXAS STATE BOARD OF MEDICAL EXAMINERS, Fort Worth, Dec. 7-9, 1970. Dr. M. H. Crabb, 1612 Summit Ave., Suite 303, Fort Worth 76102, Sec.

JANUARY

ARIZONA HEART ASSOCIATION, Fourteenth Annual Cardiac Symposium, Phoenix, Jan. 22-24, 1971. Arizona Heart Association, 1720 E. McDowell Rd., Phoenix 85006.

■ FIFTH DISTRICT MEDICAL SOCIETY, annual, San Antonio, Jan. 29, 1971. S. E. Cockrell, Jr., 202 W. French Place, San Antonio 78212, Exec. Officer.

■ INTERNATIONAL MEDICAL ASSEMBLY OF SOUTHWEST TEXAS, annual, San Antonio, Jan. 28-29, 1971; extension trip to Mexico follows. S. E. Cockrell, Jr., 202 W. French Place, San Antonio 78212, Exec. Officer.

NATIONAL CONFERENCE ON CANCER OF THE COLON AND RECTUM, San Diego, Jan. 7-9, 1971. Dr. Ronald N. Grant, c/o American Cancer Society, Inc., 219 E. 42nd St., New York 10017.

■ TEXAS MEDICAL ASSOCIATION, Austin, Jan. 15-17, 1971. C. Lincoln Williston, 1801 N. Lamar Blvd., Austin 78701, Exec. Sec.

■ TEXAS RADIOLOGICAL SOCIETY, annual, Dallas, Jan. 29-30, 1971. Dr. Herman C. Sehested, 1550 W. Rosedale, Fort Worth 76104, Sec.

■ UNITED CEREBRAL PALSY ASSOCIATION OF TEXAS, INC., annual, Austin, Jan. 16-17, 1971. Glen Duncan, 2104 Benwick Circle, Austin 78723, Sec.

FEBRUARY

AMERICAN ACADEMY OF ALLERGY, annual, Chicago, Feb. 20-24, 1971. James O. Kelley, 756 N. Milwaukee St., Milwaukee, Wis. 53202, Exec. Officer.

AMERICAN COLLEGE OF CARDIOLOGY, annual, Washington, DC, Feb. 3-7, 1971. William D. Nelligan, 9650 Rockville Pike, Bethesda, Md. 20014, Exec. Dir.

AMERICAN SOCIETY OF ABDOMINAL SURGEONS, New Orleans, Feb. 14-17, 1971. Dr. Blaise F. Alfano, 675 Main St., Melrose, Mass., Exec. Sec.

■ FIRST DISTRICT MEDICAL SOCIETY, annual, Pecos, February, 1971. Dr. John Emmett, 1900 N. Oregon, El Paso, Sec.

INTERNATIONAL ACADEMY OF PROCTOLOGY, 23rd annual congress and teaching seminar, Mexico City, Feb. 26-March 5, 1971. Dr. Alfred J. Cantor, 147-41 Sanford Ave., Flushing, NY 11355, Exec. Sec.

PAN-PACIFIC SURGICAL ASSOCIATION, annual, Honolulu, Feb. 26-March 3, 1972. Harriet N. DeVault, 236 Alexander Young Bldg., Honolulu 96813, Exec. Sec.

■ TEXAS PUBLIC HEALTH ASSOCIATION, annual, Fort Worth, Feb. 28-March 3, 1971. Joseph N. Murphy, Jr., PO Box 5192, Austin 78703, Exec. Sec.

MARCH

AMERICAN ACADEMY OF ORTHOPAEDIC SURGEONS, annual, San Francisco, March 6-11, 1971. John K. Hart, 430 N. Michigan Ave., Chicago 60611, Exec. Sec.

AMERICAN ASSOCIATION OF PATHOLOGISTS AND BACTERIOLOGISTS, annual, Montreal, Quebec, March 6-9, 1971. Dr. K. M. Brinkhous, Dept. of Pathology, University of North Carolina, Chapel Hill, NC 27514, Sec.

AMERICAN COLLEGE OF ALLERGISTS, annual, San Francisco, March 28-April 1, 1971. Dr. John D. Gillaspie, 2141 14th St., Boulder, Colo. 80302, Exec. Sec.

AMERICAN COLLEGE OF PHYSICIANS, annual, Denver, March 28-April 2, 1971. Dr. Edward C. Rosenow, Jr., 4300 Pine St., Philadelphia 19104, Exec. Dir.

AMERICAN COLLEGE OF RADIOLOGY, annual, St. Louis, March 29-April 3, 1971. William C. Stronach, 20 N. Wacker Dr., Rm. 2920, Chicago 60606, Exec. Dir.

AMERICAN COLLEGE OF SURGEONS, Phoenix, March 1-3; New Orleans, March 15-17, 1971. Dr. C. Rollins Hanlon, 55 E. Erie St., Chicago 60611, Dir.

AMERICAN MEDICAL ASSOCIATION, 24th national conference on rural health, Atlanta, March 25-26, 1971. AMA, Council on Rural Health, 535 N. Dearborn, Chicago 60610.

AMERICAN SOCIETY OF INTERNAL MEDICINE, annual, Denver, March 26-28, 1971. W. R. Ramsey, 525 The Hearst Bldg., San Francisco 94103, Exec. Officer.

■ DALLAS SOUTHERN CLINICAL SOCIETY, annual, Dallas, March 15-18, 1971. Millard J. Heath, 433 Medical Arts Bldg., Dallas 75201, Exec. Officer.

NEW ORLEANS GRADUATE MEDICAL ASSEMBLY, annual, New Orleans, March 8-11, 1971. Irma B. Sherwood, 1430 Tulane Ave., New Orleans 70112, Exec. Sec.

SOCIETY FOR CRYOSURGERY, annual, Hollywood, Fla., March 1-5, 1971. Dr. John G. Bellows, 30 N. Michigan Ave., Chicago 60602, Sec.

■ SOCIETY OF NUCLEAR MEDICINE, Southwestern Chapter, annual, Houston, March 19-21, 1971. Dr. Herbert C. Allen, Jr., 100 Hermann Prof. Bldg., Houston 77025, Sec.-Treas.

■ TEXAS ASSOCIATION OF OBSTETRICIANS AND GYNECOLOGISTS, annual, Corpus Christi, March 5-6, 1971. Dr. J. L. Jinkins, Jr., 200 University Blvd., Galveston 77550, Sec.-Treas.

■ TEXAS UROLOGICAL SOCIETY, annual, Wichita Falls, March 11-13, 1971. Dr. Charles Dryden, 1605 Tenth St., Wichita Falls 76301, Sec.-Treas.

US-MEXICO BORDER PUBLIC HEALTH ASSOCIATION, annual, Tucson, March 29-April 2, 1971. Dr. Jorge Jimenez-Gandica, 501 US Court House, El Paso 79901, Sec.

MORE HIGHLIGHTS OF COMING MEETINGS

APRIL

■ AEROSPACE MEDICAL ASSOCIATION, annual, Houston, April 26-29, 1971. Dr. Merrill H. Goodwin, Washington Nat'l Airport, Washington, DC 20001, Exec. Sec.

AMERICAN ACADEMY OF NEUROLOGY, annual, New York City, April 26-May 1, 1971. Stanley A. Nelson, 4005 W. 65th St., Minneapolis 55435, Exec. Sec.

AMERICAN ASSOCIATION OF ANATOMISTS, annual, Philadelphia, April 18-23, 1971. Dr. Russell T. Woodburne, Dept. of Anatomy, The University of Michigan, 4643 Medical Science Bldg., Ann Arbor, Mich. 48104, Sec.-Treas.

AMERICAN ASSOCIATION FOR THORACIC SURGERY, Atlanta, April 26-28, 1971. Ada Hanvey, 7710 Carondelet Ave., St. Louis 63105, Admin. Asst.

AMERICAN COLLEGE HEALTH ASSOCIATION, annual, San Francisco, April 27-30, 1971. James W. Dilley, 2807 Central St., Evanston, Ill. 60201, Exec. Dir.

AMERICAN COLLEGE OF SURGEONS, Montreal, Quebec, Canada, April 5-7, 1971. Dr. C. Rollins Hanlon, 55 E. Erie St., Chicago 60611, Dir.

AMERICAN GERIATRICS SOCIETY, annual, Chicago, April 23-24, 1971. Dr. Edward Henderson, 10 Columbus Circle, New York 10019, Exec. Dir.

AMERICAN PEDIATRIC SOCIETY, annual, Atlantic City, April 28-May 1, 1971. Dr. C. D. Cook, 333 Cedar St., New Haven, Conn. 06514, Exec. Sec.

AMERICAN SOCIETY FOR CLINICAL PHARMACOLOGY AND THERAPEUTICS, annual, Atlantic City, April 29-May 1, 1971. Dr. Richard T. Smith, 1718 Gallagher Rd., Norristown, Pa. 19401, Sec.-Treas.

■ BAYLOR COLLEGE OF MEDICINE, seventh annual orthopaedic symposium, Houston, April 22-24, 1971. Dr. W. Malcolm Granberry, 6624 Fannin St., Houston 77025, Chrmn.

■ EIGHTH DISTRICT MEDICAL SOCIETY, annual, Galveston, April, 1971. Dr. Paul J. Cunningham, 200 University Blvd., Galveston, Sec.-Treas.

INDUSTRIAL MEDICAL ASSOCIATION, annual, Atlanta, April 19-22, 1971. Howard N. Schulz, 55 E. Washington, Chicago 60602, Exec. Dir.

SOUTHWESTERN SURGICAL CONGRESS, annual, Las Vegas, April 19-22, 1971. Dr. Jack A. Barney, 301 Pasteur Medical Bldg., Oklahoma City 73103, Sec.-Treas.

■ ST. LUKE'S EPISCOPAL HOSPITAL, annual orthopaedic symposium, Houston, April 22-24, 1971. Dr. W. Malcolm Granberry, 6624 Fannin, Houston 77025, Chrmn.

■ TEXAS MEDICAL ASSISTANTS ASSOCIATION, annual, Dallas, April 28-May 3, 1971. Mrs. Jo Alice Thompson, 2321 Hillsboro, Dallas 75228, Sec.

■ THIRTEENTH DISTRICT MEDICAL SOCIETY, annual, Abilene, April, 17, 1971. Dr. W. H. Neil, 104 Doctors Bldg., 800 Fifth Ave., Fort Worth 76104, Sec.

MAY

AMERICAN ACADEMY OF FACIAL PLASTIC AND RECONSTRUCTIVE SURGERY, annual, San Francisco, May 25-27, 1971. Dr. Carl N. Patterson, 1110 W. Main, Durham, NC 27701, Sec.

AMERICAN ACADEMY OF PSYCHOANALYSIS, Washington, DC, May 8-10, 1971. Charlotte Bruskin, 40 Gramercy Park N., New York 10010, Exec. Sec.

AMERICAN CANCER SOCIETY, INC., second national conference on breast cancer, Los Angeles, May 17-19, 1971. Esther Kelley, Professional Education, American Cancer Society, Inc., 219 E. 42nd St., New York 10017.

■ AMERICAN COLLEGE OF CHEST PHYSICIANS, Texas Chapter, annual, Houston, May 9, 1971. Dr. George P. Noon, 1200 Moursund Ave., Houston 77025, Sec.-Treas.

AMERICAN COLLEGE OF OBSTETRICIANS AND GYNECOLOGISTS, annual, San Francisco, May 3-6, 1971. Dr. Michael Newton, 79 W. Monroe St., Chicago 60603, Exec. Dir.

■ AMERICAN COLLEGE OF SURGEONS, North Texas Chapter, annual, Dallas, May 15, 1971. Dr. Ronald F. Garvey, 6011 Harry Hines Blvd., Dallas 75235, Sec.-Treas.

AMERICAN DERMATOLOGICAL ASSOCIATION, annual, Skytop, Pa., May 16-20, 1971. Dr. Barrett Kennedy, 1542 Tulane Ave., New Orleans 70112, Exec. Sec.

■ AMERICAN PHYSICAL THERAPY ASSOCIATION, TEXAS CHAPTER, annual, San Antonio, May, 1971. Hilda McKethan, 4162 Monaco Dr., Corpus Christi 78411, Sec.

AMERICAN PROCTOLOGIC SOCIETY, annual, Las Vegas, May 9-13, 1971. Harriette Gibson, 320 W. Lafayette, Detroit 48226, Exec. Officer.

AMERICAN PSYCHIATRIC ASSOCIATION, annual, Washington, DC, May 3-7, 1971. Dr. Walter E. Barton, 1700 18th St., NW, Washington, DC 20009, Med. Dir.

AMERICAN SOCIETY FOR AESTHETIC PLASTIC SURGERY, annual, Boston, May 16-19, 1971. Dr. Simon Fredricks, 1103 Medical Towers, Houston 77025, Sec.

AMERICAN THORACIC SOCIETY, annual, Los Angeles, May 17-19, 1971. Robert G. Weymueller, 1740 Broadway, New York 10019, Exec. Sec.

AMERICAN UROLOGICAL ASSOCIATION, INC., annual, Chicago, May 17-20, 1971. Richard J. Hannigan, 1120 N. Charles St., Baltimore 21201, Exec. Sec.

MEDICAL LIBRARY ASSOCIATION, annual, New York City, May 30-June 3, 1971. Helen Brown Schmidt, 919 N. Michigan Ave., Chicago 60611, Exec. Dir.

■ NATIONAL LEAGUE FOR NURSING, Dallas, May 10-14, 1971. Margaret E. Walsh, 10 Columbus Circle, New York 10019, Sec.

NATIONAL TUBERCULOSIS AND RESPIRATORY DISEASE ASSOCIATION, annual, Los Angeles, May 16-19, 1971. Dr. Robert J. Anderson, 1740 Broadway, New York 10019, Mng. Dir.

SOUTH CENTRAL ASSOCIATION OF BLOOD BANKS, annual, Little Rock, May, 1971. Elsie Howard, 2109 Commerce St., Dallas 75201, Exec. Officer.

STUDENT AMERICAN MEDICAL ASSOCIATION, annual, St. Louis, May 4-8, 1971. Charles C. Hewitt, JD, 2635 Flossmoor Rd., Flossmoor, Ill. 60422, Exec. Officer.

■ TEXAS DENTAL ASSOCIATION, annual, Houston, May 16-19, 1971. Bill Howard, 3707 Gaston Ave., Dallas 75246, Exec. Sec.

■ TEXAS HOSPITAL ASSOCIATION, annual, San Antonio, May 16-19, 1971. O. Ray Hurst, PO Box 4553, Austin 78751, Exec. Vice-Pres.

■ TEXAS MEDICAL ASSOCIATION, 104th annual session, Houston, May 6-9, 1971. C. Lincoln Williston, 1801 N. Lamar Blvd., Austin 78701, Exec. Sec.

■ TEXAS RHEUMATISM ASSOCIATION, annual, Houston, May 8, 1971. Dr. J. E. Norris, 6448 Fannin, Houston 77025, Sec.

JUNE

AMERICAN DIABETES ASSOCIATION, annual, San Francisco, June 17-23, 1971. J. Richard Connelly, 18 E. 48th St., New York 10017, Exec. Dir.

AMERICAN PHYSICAL THERAPY ASSOCIATION, annual, Boston, June 27-July 2, 1971. Royce P. Noland, 1156 15th St., NW, Washington, DC 20005, Exec. Dir.

SOCIETY OF NUCLEAR MEDICINE, annual, Los Angeles, June 28-July 2, 1971. Margaret Glos, 211 E. 43rd St., New York 10017, Exec. Officer.

JULY

ROCKY MOUNTAIN CANCER CONFERENCE, annual, Denver, July 16-17, 1971. F. C. Schmidt, 1764 Gilpin St., Denver 80218, Exec. Officer.

SEPTEMBER

FLYING PHYSICIANS ASSOCIATION, INC., annual, Mackinac Island, Michigan, Sept. 26-Oct. 1, 1971. Harriett C. Carriere, 801 Green Bay Rd., Lake Bluff, Ill. 60044, Sec.

■ TEXAS PEDIATRIC SOCIETY, Houston, Sept. 23-25, 1971. Dr. Pat A. Cato, 1015 E. 32nd St., Austin 78705, Sec.

WORLD MEDICAL ASSOCIATION, annual, Ottawa, Canada, Sept. 12-18, 1971. Miss M. L. Natwick, 10 Columbus Circle, New York 10019, Exec. Sec.

OCTOBER

AMERICAN COLLEGE OF SURGEONS, annual, Atlantic City, Oct. 18-22, 1971. Dr. C. Rollins Hanlon, 55 E. Erie St., Chicago 60611, Dir.

AMERICAN HUMANE ASSOCIATION, annual, Rochester, NY, Oct. 17-21, 1971. Rutherford T. Phillips, PO Box 1266, Denver 80201, Exec. Dir.

Is your program listed in the Texas Medical Association's Directory of Continuing Education Courses?

TEXAS MEDICINE will carry a comprehensive listing of continuing education courses scheduled in Texas during 1971 in the January 1971 issue.

If your organization will have one or more continuing education programs during the coming year, you will want it listed. This directory will provide greater publicity to all courses which will be offered in Texas and stimulate greater participation in many programs.

After the directory is published in TEXAS MEDICINE, it will be reproduced and sent to all Texas physicians.

Don't miss this opportunity to further promote your continuing education course. Time is limited, so write today for the questionnaire that must be filled out for each listing.

Complete and mail the form below and a questionnaire will be rushed to you. Do it now!

To: Mrs. Marilyn Baker
Managing Editar
TEXAS MEDICINE
1801 North Lamar Blvd.
Austin, Texas 78701

Name of Course_____

Dates_____

Sponsoring Organization_____

Please send me the TMA Continuing Education Course questionnaire in order that my organization may be listed in the Directory to be published in the January 1971 issue of TEXAS MEDICINE.

Name_____

Address_____

City_____ Zip_____

CONTINUING EDUCATION COURSES

Electrocardiography: The Houston Chapter, American Heart Association, will sponsor a three-day ECG Technician's Course at Astroworld Hotel in Houston, Dec. 2-4. The course will include such topics as basic electrocardiograph techniques, cardiovascular anatomy and physiology, and pulse wave reading and multi-channel electrocardiography. The course is also open to industrial nurses who may work with ECG testing. For information and registration contact the chapter at 3201 Lake, Houston 77006, or telephone 524-8343. Dr. William L. Winters, Jr., is course chairman.

Dietitians: The division of postgraduate education of The University of Texas (Southwestern) Medical School at Dallas announces a seminar for dietitians, Dec. 4-5, at the school. "Dietary Prevention of the Epidemic of Atherosclerosis in the Diabetic Patient," "Diabetes Mellitus and Adipose Tissue," and various topics in nutrition research will be presented. Guest faculty will be Dr. Daniel B. Stone, chief, diabetes division and professor of internal medicine, The University of Iowa, Iowa City.

The session is limited to 200 registrants and the fee is $15. Inquiries and registrations should be addressed to Dr. John S. Chapman, Assistant Dean for Postgraduate Education, The University of Texas (Southwestern) Medical School at Dallas, 5323 Harry Hines Blvd., Dallas 75235.

Polyparametric Electrocardiography: The University of Texas Graduate School of Biomedical Sciences at Houston, Division of Continuing Education will present a course on "Polyparametric Electrocardiography" Dec. 7-10 in Houston. Guest lecturer will be Dr. Demetrio Sodi-Pallares, director, department of electrocardiography, National Heart Institute of Mexico City. The primary discussions will be concerned with polyparametric approach to the injured and ischemic tissues, eutropy and cybernetic concepts in coronary artery disease, a new concept in coronary artery disease, and the depolarization of the heart: cardiac and extra-cardiac conditions.

For further information write The University of Texas Graduate School of Biomedical Sciences at Houston, Division of Continuing Education, PO Box 20367, Houston 77025.

Pulmonary Function: A course on "Pulmonary Function in Health and Disease" will be held at Tulane University School of Medicine, New Orleans, Dec. 7-10. Presented by American and Louisiana Thoracic Societies, Louisiana State and Tulane University Schools of Medicine, and Alton Ochsner Medical Foundation, the course is acceptable for 25 prescribed hours by the AAGP. Some of the topics to be presented are lung volumes and spirometry, mechanics of breathing, blood gas transport and acid-base regulation, pediatric aspects of pulmonary function, and the physiology of respiratory failure.

For registration information write W. Findley Raymond, Executive Director, Louisiana Thoracic Society, 305 Baronne St., New Orleans 70112.

Lower Extremity: This course, sponsored by the Committee on Injuries, American Academy of Orthopaedic Surgeons, will take place Dec. 7-9 at the Americana Hotel in Miami Beach. Held in cooperation with the University of Miami School of Medicine, the course will deal with current concepts in the management of major bone and joint injuries of the lower extremity. Time will be devoted to basic sciences and pathophysiology of trauma according to various anatomical and functional areas, and to major trauma of the knee joint, tibia and foot, the hip and the femur.

For further details write Dr. Augusto Sarmiento, University of Miami School of Medicine, PO Box 875, Biscayne Annex, Miami 33152.

Public Health Laboratory Workshops: Designed for the benefit of public health, hospital, clinical, and other medical laboratories, the following courses will be presented in Austin by the Texas State Department of Health:

Public Health and Medical Bacteriology, Jan. 18-22, 1971.

Public Health and Medical Mycology, Feb. 16-19, 1971.

There is no registration fee for the courses. Contact Dr. J. V. Irons (ScD), Director of Laboratories, Texas State Department of Health, 1100 W. 49th St., Austin 78756.

Hematology: The University of Texas Graduate School of Biomedical Sciences at Houston, Division of Continuing Education, will present a course on hematology, Jan. 21-22, in Houston. This will be a practical, brief, refresher course, with emphasis on the diagnosis, natural history, and pathophysiology of hematological disorders. The program is acceptable for 11 prescribed hours by the AAGP and tuition fee is $35. For more information write: The UT Graduate School of Biomedical Sciences at Houston, Division of Continuing Education, PO Box 20367, Houston 77025.

Coronary Atherosclerotic Heart Disease: This three-day program, offered by the department of medicine, Emory University School of Medicine, in association with the American College of Physicians and the American Heart Association, will be held at Grady Memorial Hospital in Atlanta, Ga., Jan. 13-15, 1971. Three facets of the coronary atherosclerotic heart disease problems—prevention, treatment, and rehabilitation—will be discussed by experts in great detail.

For information write Dr. Edward C. Rosenow, Jr., c/o ACP, 4200 Pine St., Philadelphia, Pa. 19104.

Sinton-Taft Seminar: Sponsored by the Gulf Coast Academy of General Practice, in cooperation with the Charles H. Ewing Community Hospital and the staffs of Sinton and Taft hospitals, this seminar will take place in Taft, Tex., on Jan. 14. Featured speakers will be Drs. John V. Goode, Dallas; Grady Lamar Hallman, Jr., Houston; and George A. Pankey, New Orleans. Topics to be covered are the diagnosis and treatment of life-threatening infections in the geriatric patient, the use of local anesthesia in general surgery, reconstruction versus transplantation-heart surgery, carcinoma of the breast, peripheral vascular disease, and cutaneous manifestations of infectious diseases.

The seminar is approved for 7 hours of credit by the AAGP. For more details, contact Dr. A. F. Tasch, 402 Green Ave., Taft 78390.

Medical Oncology: An approach to management of patients with cancer and hematologic malignancies, built on a theoretical background in experimental therapeutics, pharmacology, cell population kinetics, and immunology, will be developed in a program to be held March 8-12, 1971, at Shamrock-Hilton Hotel, Houston. Offered by Texas Medical Center, Houston, and co-sponsored by American College of Physicians, this course will emphasize the medical and psychological aspects of supportive care of the patient under treatment. Case material will further illustrate specific diseases, diagnostic techniques, complications of management, and results of therapy.

Contact Dr. Edward C. Rosenow, Jr., c/o ACP, 4200 Pine St., Philadelphia, Pa. 19104.

Each 5 cc. contain erythromycin estolate equivalent to 250 mg. erythromycin base.
1 PINT (473 cc.) M-148
Lilly
ILOSONE
LIQUID
ERYTHROMYCIN ESTOLATE
ORAL SUSPENSION, U.S.P.
125
SHAKE WELL BEFORE USING
REFRIGERATE
AVOID FREEZING
1 PINT (473 cc.) M-153
Lilly
ILOSONE
LIQUID
ERYTHROMYCIN ESTOLATE
ORAL SUSPENSION, U.S.P.
250
SHAKE WELL BEFORE USING
REFRIGERATE
AVOID FREEZING
When mixed as directed, each 5 cc. will contain erythromycin estolate equivalent to 125 mg. erythromycin base.
When mixed as directed, each cc. will contain erythromycin estolate equivalent to 100 mg. erythromycin base.
Each 5 cc. contain erythromycin estolate equivalent to 125 mg. erythromycin base.
50 TABLETS No. 1834
Lilly
ILOSONE
CHEWABLE
ERYTHROMYCIN ESTOLATE
TABLETS, N.F.
125 mg.
Each tablet contains erythromycin estolate equivalent to 125 mg. erythromycin base.
100 PULVULES No. 375
Lilly
ILOSONE
ERYTHROMYCIN ESTOLATE
CAPSULES, N.F.
250 mg.
100 PULVULES No. 374
Lilly
ILOSONE
ERYTHROMYCIN ESTOLATE
CAPSULES, N.F.
125 mg.
Each Pulvule® contains erythromycin estolate equivalent to 125 mg. erythromycin base.
Each Pulvule contains erythromycin estolate equivalent to 250 mg. erythromycin base.
The many forms of Ilosone®
Erythromycin Estolate
Lilly
Additional information available upon request.
Eli Lilly and Company
Indianapolis, Indiana 46206
900761

Editorials

THE SILENT EPIDEMIC: BURN INJURIES IN TEXAS

Epidemic: A disease or disorder which is common or prevalent in a large population.

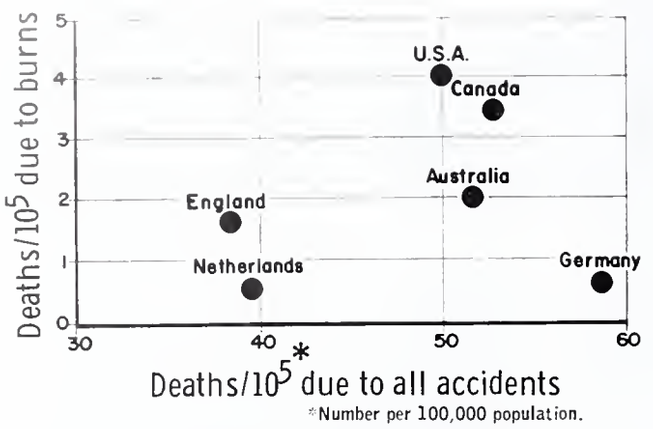
A silent epidemic is present in our nation, our region, and our state. Among the heavily populated, industrialized countries, the United States of America has the highest death rate from thermal burns (Fig 1).[1] The rate exceeds that of Canada, Australia, or Japan and is more than twice that of the countries in Western Europe.

The National Office of Vital Statistics reports that the South Central Region of the United States has the greatest relative frequency of burn deaths.[1] The rate in Texas, one of the four states in that region, is far greater than that of the major heavily populated states such as New York, California, Florida, Illinois, and Pennsylvania (Fig 2).[1]

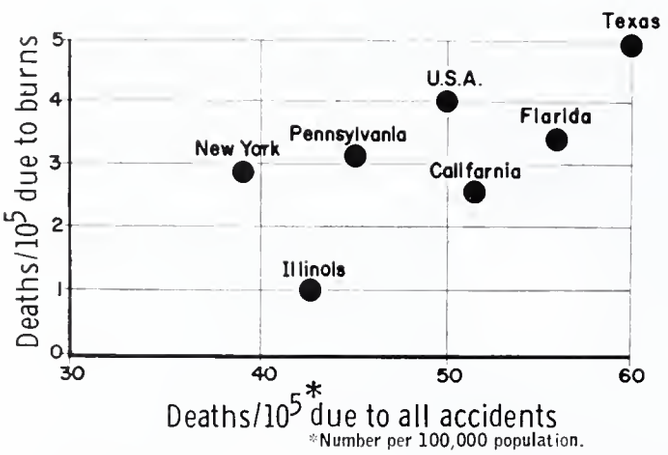
The people of Texas have not recognized that they are in the midst of an epidemic of burn injuries. Its magnitude can be appreciated by comparing it to the recent poliomyelitis epidemic in Texas. In the peak year of that epidemic, 1954, there were 3,037 reported cases, 1,210 of them paralytic, and 134 deaths attributed to poliomyelitis.[2] Eighty-three of the deaths were in children. From the data obtained from the US Department of Health, Education and Welfare, it can be estimated conservatively that the deaths and devastating crippling injuries from burns in Texas in 1969 exceeded those resulting from poliomyelitis during the peak epidemic year of 1954 (Fig 3). The estimated number of children who die from burns each year in Texas is greater than the total number of deaths caused by poliomyelitis in 1954.

The control of poliomyelitis was achieved by the following steps: (1) appreciating the epidemic nature of the disease, (2) recognizing the viral agents responsible for the disease, (3) attenuating the virulence of the viruses for use as vaccines, and (4) administering the viral vaccines to large populations, particularly the most susceptible groups.

A similar approach should lead to a control of burn injuries. First, the shocking number of burn injuries in our state should be brought to the attention of physicians. We believe that it is the duty of Texas physicians to help educate the public regarding this health problem, and to point out that those who are particularly vulnerable to burn



1. Death rates from all accidents and burns in heavily industrialized countries.



2. Death rates from all accidents and burns in key states in the United States.

POLIOMYELITIS 1954—Peak epidemic year		BURNS 1969—Estimated	
Total reported cases	3,037	Total cases	?
Paralytic cases	1,210	Crippled cases	3,000
Total deaths	134	Total deaths	540
Children's deaths	83	Children's deaths	180

3. Comparison of the poliomyelitis epidemic (1954) with the burn injuries epidemic (1969) in Texas.

injuries are the very young and the elderly.

As the next step, the agents which are responsible for burn injuries should be identified. We attempted to partly answer that question by an epidemiologic study of burn injuries in children.[3] The patients consisted of 368 children (57% from Texas) who were admitted to the Shriners Burns Institute at Galveston during 1966-1969. *Ninety percent* of the injuries occurred in the home. The principal agents were flammable clothing; gasoline and other flammable liquids; and natural gas-operated appliances such as open space heaters, stoves, and water heaters.

It is evident from this study that the majority of burn injuries can be prevented or minimized by better control of the main agents—flammable clothing, flammable liquids, and natural gas appliances. A plan of preventing burn injuries caused by these agents can be derived from the experiences of the British. A similar epidemic of burn injuries in children due to flammable nightwear and open space heaters occurred in Great Britain in the 1950s.[4] Three laws were passed in response to the situation.[5] The Heating Appliances (Fireguard) Act and Standards of 1952 and 1960 detailed the minimal standards of fireguards on space heaters. The Children's Nightdress Act of 1964 made it mandatory that all children's nightclothes be impregnated with a harmless, long-lasting, flame-retardant chemical. As a result of that legislation, burn injuries in children due to flammable nightdresses or open heaters decreased.[5,6]

The technology to attenuate the responsible agents is at hand and the standards which are required in this regard are known. We have an opportunity to minimize burn injuries in the children in Texas by passing key legislation which would control the agents responsible for the injuries. We recommend as an initial step that (1) adequate standards be set for flame-proofing children's clothing, (2) the use of open gas space heaters be outlawed, and (3) adequate safety standards be devised for gas water heaters.

A great deal of work is needed to formulate the appropriate legislation. Close cooperation between physicians, legislators, industry, and other interested people will be required. In this regard, certain members of the Texas Senate and House of

Representatives recently met with members of the Shriners Burns Institute and the University of Texas Medical Branch to discuss the problem and to form a committee to plan the legislation. Appropriate legislation concerning these health hazards would serve as an example to other states that are experiencing a major problem with burn injuries.

The aid of all interested physicians is requested in this endeavor.

Armond S. Goldman, MD; Robert L. Innes; Duane L. Larson, MD; Richard C. Schmitt; Sally Abston, MD; Mario Dobrkovsky, MD, Galveston, Shriners Burns Institute and the Departments of Pediatrics and Surgery of The University of Texas Medical Branch.

REFERENCES

1. Iskrant AP, Joliet PV: Accidents and Homicide. Cambridge, Mass, Harvard University Press, 1968.

2. Vital Statistics of the United States. US Dept of Health, Education and Welfare, National Office of Vital Statistics, vol 2, 1954.

3. Innes RL, Schmitt R, Goldman AS, et al: Proceedings, third annual meeting of the Information Council on Fabric Flammability, New York City, 1970.

4. Colebrook L, Bull JP, Jackson DM: The prevention of burning accidents: a survey of the present position. Brit Med J 1:1379-1386, 1956.

5. Bull JP, Jackson DM, Walton C: Cause and prevention of domestic burning accidents. Brit Med J 2:1421-1427, 1964.

6. Crikelair GF: Chairman's address. Proceedings of the first annual meeting, Information Council on Fabric Flammability, New York City, 1968.

ONE MAN'S IDEA BECOMES POLICY THE SHORT WAY—THROUGH CHANNELS

Recently I was privileged to witness, from its inception, an example of how one local physician conceived and expressed an idea which ultimately was adopted as national policy by the American Medical Association.

Early this year the Federal Drug Administration announced its intention to require a printed insert in each dispensed package of contraceptive pills; furthermore, the FDA released a preliminary version of the mandatory printed insert.

Dr. Joseph W. Goldzieher of San Antonio, like many other physicians, became quite alarmed about this proposed FDA regulation; both the compulsory requirement and the frightening language of the proposed insert were repugnant to him, not only as a dedicated physician but also as a concerned citizen.

Dr. Goldzieher went into action. He first telephoned an officer of his county medical society and voiced his displeasure. He was advised to express his thoughts in writing and he was assured that they would be referred to the proper committee for study and recommendation. Dr. Goldzieher wrote his letter; it was immediately referred to the Family Planning Committee; the committee agreed with Dr. Goldzieher's position and recommended approval by the Executive Board; the Executive Board gave approval; and at a regular meeting the Bexar County Medical Society endorsed Dr. Goldzieher's original suggestion and instructed its delegates to present a resolution for consideration by the Texas Medical Association.

Accordingly, the resolution was duly introduced to the TMA House of Delegates at its 1970 annual session, was sent to a reference committee where it was favorably received, and subsequently was adopted with instructions to the Texas AMA delegates that it be submitted to the American Medical Association.

Similarly, at the June meeting of the AMA in Chicago the resolution was introduced on the floor of the House of Delegates, was sent to and approved by a reference committee, and was subsequently adopted by the AMA House of Delegates as national policy of the AMA.

Meanwhile, the FDA, aware of the physicians' discontent because of the mandatory insert, modified somewhat the frightening language of the original proposed statement; but the wording was still not acceptable to concerned physicians. FDA refused to budge further.

Following the formal adoption of the

resolution by the AMA, however, FDA (having already committed itself to a mandatory printed insert) finally softened the wording so as to be acceptable to physicians, endorsed a pamphlet printed by AMA for distribution by physicians to patients, and assured the AMA that there would be no printed inserts required for any other dispensed drugs.

Thus one lone physician at the grass roots level was able to influence national AMA policy and to convince the FDA to reconsider its original mandate.

It may appear to some physicians that the seemingly lengthy process of submitting an idea through channels is laborious and that too much red tape is involved to be worth the effort. Actually, such is not the case. The purpose of carrying Dr. Goldzieher's idea through careful and deliberate steps was to ascertain its merit; to iron out any kinks; to add new thoughts to the content, particularly in wording; and, if found worthy of endorsement, to give added weight and muscle to such endorsement. This structural procedure through channels functions much like a filter so that the end product is more refined than the original. And this refining process is not nearly as lengthy as it might seem; in fact, only three months elapsed from the inception of Dr. Goldzieher's idea until its ultimate adoption by the AMA.

Perhaps Dr. Goldzieher's experience will encourage other physicians to make known their own ideas and suggestions which might be of benefit to the medical profession and/or to the patients whom we serve. All such ideas and suggestions will be considered and none will be discarded arbitrarily. Not all, of course, will reach the AMA nor even the TMA level; but it is a fact that almost every adopted TMA and AMA policy (including changes and innovations) has its origin in the fertile mind of a grass roots physician.

The county medical societies, the state medical associations, and the AMA are composed only of individual independent physicians with individual independent ideas. A primary goal of these medical organizations is to solicit, to obtain, and to refine all of these independent ideas; an ultimate goal is to adopt, to implement, and to improve the best of such ideas.

Jack B. Lee, MD, San Antonio.

SURGICAL CONTROL OF POPULATION

Population control is the most important problem today. The human reproductive system is geared to people the Earth despite famine, pestilence, and violence. When agriculture and benevolent governments relieve famine, when public health and medical care abate pestilence, and when social and political maturity controls violence, the human reproductive system accelerates out of control. Therefore, population control becomes a necessity with these advances.

Population excess is a major factor in all of our problems today. Poverty is caused by too many uneducated people—where there is education there is no poverty. Crime is caused by too many children whose heredity and environment fail to provide emotional stability. Violence is caused by too many people crowded together, especially in cities. Pollution is caused by too many people unconcerned with the impact of technology on the Earth.

Any consideration of population control must distinguish between two groups of children: (1) those who are desired by their parents, whose heredity is desirable, and whose parents assume responsibility for their nurture; and (2) those who are not desired or desirable, and whose parents are irresponsible. The first group

presents no problem in population control, but the second is threatening our civilization.

The problem is difficult—ignorance, superstition, prejudice, religion, and customs present obstacles—and the economics and logistics are staggering. Yet the problem *must* be solved, and there are time limits. The time is ripe for physicians and others to determine *how* the problem can be solved so that rational plans can be advanced.

Many factors condition the method that can be successful. The method must not require responsibility. It must be permanent. It must present negligible morbidity-mortality. It must enrich the lives of those concerned with benefits to offset discomforts. It must be applicable on a voluntary basis but also, after proper considerations, on an involuntary basis. With these factors in mind, it follows that only *surgery* can meet the requirements.

Nature has discriminated against the woman—only *she* gets pregnant. Therefore, the method must zero in on women—particularly irresponsible ones. The "pill" will not work because it requires daily responsibility, and, if pushed, would result in intellectual suicide of our society. Vas deferens ligation will not work because only responsible males would accept it, and it would not prevent pregnancy in irresponsible women—which is the problem. The intrauterine device will not work because it requires responsible observation and is subject to expulsion, bleeding, and infection. Abortion may solve some individual problems but is not suitable for population control because it is not permanent, and its repeat feature makes it more expensive than other surgery. What would work?

Tubal occlusion would work, but it leaves unsolved the problems of purposeless menstruation which is always a nuisance and sometimes a health hazard particularly at the menopause. It requires laparotomy, and only a few additional minutes of operating time are required to remove the menstruating portion of the uterus—supracervical hysterectomy—with insignificant increase in morbidity-mortality This procedure fell into disrepute with surgeons because of cancer in the remaining cervix, but cautery of the external os plus conization of the upper endocervix plus annual Papanicolaou smears have eliminated this hazard. If the cervix is diseased it should be removed, but total hysterectomy is too formidable for mass application in the absence of disease.

The immediate reply to proposed surgery would be that it could not be delivered to the millions of women, particularly in developing countries. But, remember, this may be the *only* solution and the prime solution to the problems of poverty, famine, crime, and pollution! A world that spends $180 billion yearly on armaments can provide surgery which can liberate women—setting them up for hormonal replacement at the menopause and preserving their minds, hearts, bones, and sex life at the time of their maturity when they are most needed in the home, in society, and in politics. The surgery would not be provided as an isolated procedure, but as an integral part of medical care throughout the world. As for its expense, consider the fantastic welfare costs of a single undesirable pregnancy after several generations!

Medical care is an offshoot of education. Schools established in all nations would prepare qualified personnel to deliver the service. There is a challenge to architects and planners to design institutions for efficient delivery of medical service. Once the ball gets rolling, "peer motiva-

tion" among women will snowball unbelievably. There must be leadership in politics, religion, and legislation. It will require a lot of doing, but it *can* be done!

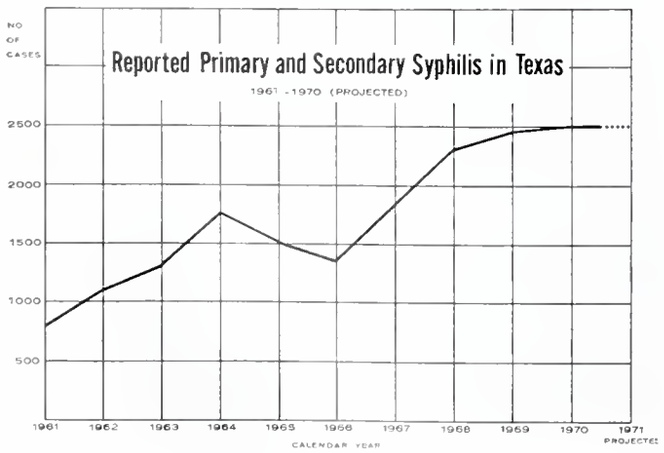
W. E. Lockhart, MD, Alpine.

TRENDS IN EARLY SYPHILIS

The domestic eradication of syphilis in Texas by epidemiological means is the primary goal of the Venereal Disease Program of the Texas State Department of Health. The goal is realistic and the approach is sound. To achieve this, an estimated 80% of all diagnosed cases of early syphilis must be reported, these patients interviewed, and their exposed sexual contacts prophylactically treated.

While some physicians' reluctance to report their cases has impeded the program in years past, skilled investigative management has influenced many physicians to approve interview of their infectious patients.

In 1969, Texas enacted a law providing for the obligatory reporting of positive venereal disease test results by all laboratories, private as well as public. It provides that reports be submitted weekly to the local health officer or to the Texas State Department of Health. Utilizing a carefully constructed system of priorities, the positive reports pertaining to syphilis are rapidly processed, and those indicating the presence of syphilis in an early stage are selected for follow-up by contacting the attending physician for diagnosis. In cases of infectious disease, permission to interview the patient for contact information is requested. Under no circumstances may the patient be contacted until a diagnosis has been reported by the attending physician. Since July of 1969, the Texas Reactor Reporting Program has been implemented in all the metropolitan and many of the rural areas of Texas; generally, it has been well received by physicians and laboratory directors.



In the 12 calendar months following enactment of House Bill 950, almost 50,000 syphilis-reactive reports have been submitted and processed. These have led to 831 cases of primary and secondary syphilis and 888 cases of early latent syphilis, the majority of which were epidemiologically pursued after securing the attending physician's diagnosis and approval for follow-up.

The incidence of early syphilis reported annually in Texas has increased alarmingly since 1958. While some of the increase can be attributed to a more dependable investigative surveillance system and to improved reporting from private physicians, certainly a greater incidence of actual disease is evident. The substantial increments in early syphilis morbidity of previous years notwithstanding, a leveling-off trend has prevailed in Texas since 1967. This plateau has been sustained fairly well through the first seven months of 1970, even though national primary and secondary syphilis morbidity has undergone a 13% upswing in these months as compared with the same period in 1969.

Infectious syphilis detection and surveillance, and private physician reporting, have never been better in the state. Although it is too soon to imply that a true decline in early syphilis morbidity in Texas is probable or even expected, there is cause for guarded optimism.

R. F. Sowell, Jr, MD, Austin.

Insurance Whys & Wherefores

Q When insurance companies write for an attending physician's statement, why aren't they more specific about the information needed? It would save time in replying.

A Companies would like to do so, but they do not always have enough facts. For example, a visit for a checkup in January, 1970, might be reported without any mention of treatment for a coronary occlusion which occurred in November, 1969. To ask for and receive only the results of the January checkup would leave the company poorly informed about the patient's medical history.

Q What can be done about policies that are offered at bargain rates but pay only a small fraction of the patient's hospital bill and nothing to the attending physician?

A For years, ethical insurance companies have encouraged the public to read their policies. Insurers are required to state in the contract what is and is not covered. A patient who finds that his insurance carrier is not meeting the obligations outlined in the contract should refer the matter to his state insurance commissioner. Patients should be advised to shop for quality insurance, not low premiums. Low-premium contracts usually give limited coverage.

Q Why do many health insurance policies require hospitalization for x-ray and other diagnostic services, thus increasing hospital utilizations and costs?

A Outpatient diagnostic services are available with today's modern health insurance contracts. However, when health insurance became available to the public some 40 years ago, the contracts were constructed to reimburse the patient only for the cost of hospital care and surgery; many of the contracts are still in force today. Although insurers would like to upgrade these old policies, the decision to do so rests with the policyholders.

Q Are statistics available on individual employee utilization of group insurance? Are there benefits for less use or a penalty for frequent use?

A Many group insurance contracts are written on a yearly basis. Each year the experience is compared with the profit or loss ratio and calculated against the premium charged. If the group has had low utilization of benefits and expenses have been low, the insurer returns a portion of the premium to the employer or reduces the premium for the coming year. On the other hand, if the group experience shows claims above the premium income for the group, the carrier would request a premium rate increase for the next year because of the higher expenses. This is done on the basis of the particular statistics for each insurance group.

M. E. Rougraff, MD, Medical Director,
Great Southern Life Insurance Company,
Houston.

Q It has been said that the home office medical department keeps a tight rein on information given to it. Is this information as well controlled in regional and local claims offices?

A Control of information is less in local and regional claims offices. Also, in group insurance, many employers file the claim forms for their employees. Under these circumstances, an employee who wishes to submit a claim for payment must recognize that there will be some loss of confidentiality. Attending physicians' statements containing underwriting information always should be sent directly to the insurance company's home office.

Q To fulfill insurance policy requirements for coverage, some patients insist upon being hospitalized for tests which could be done on an outpatient basis. What can physicians do to encourage coverage for outpatient diagnostic services? Would utilization review studies of short-term admissions be helpful in speeding up this coverage?

A Outpatient coverage is now one of the most frequently added riders to group insurance policies. It is, however, a false concept that patients have to be admitted to hospitals for these services. Although hospitalization policies are not designed to cover tests that could be done on an outpatient basis, some insurance companies pay for them in order to stay competitive. Close claim control can solve the abuse problem and the sanction of local utilization review studies would add weight to these decisions. Utilization review studies of short-term admissions are necessary, but whether they would be helpful in speeding up coverage for outpatient service is debatable.

Q Why do some insurance carriers pay the patient instead of the physician for major medical services rendered? The patient may decide not to pay his bill.

A When an assignment is given, the doctor may be paid directly to the extent of the company's liability. However, when coinsurance and deductibles are involved, the patient is reimbursed and he is responsible to the provider of service. Otherwise, the patient would have to instruct the company how to distribute the money and this is cumbersome.

Kenneth F. Schaefer, MD, Medical Director, Prudential Insurance Company, Newark, NJ.

Q When insurance is denied or offered only at a higher rate because of results of physical examination, the irate patient sometimes is told that it is his physician's fault. Would it be ethical for the doctor to show the patient the letter which, as a result of his signed release, was written to the insurance company about him?

A I think it would be ethical, but first the physician should reread the letter carefully to be sure that it contains no medical information which, for sound medical reasons, he would not want the patient to know.

Q In what ways can insurance companies help hospital utilization review committees with general reviews? For instance, could they provide sample reviews required for Medicare and Medicaid, or design studies, suggest sampling methods, etc?

A I am not aware of any situation in which an insurance company is helping a hospital utilization review committee. However, the Commission on Professional and Hospital Activities in Ann Arbor, Mich, has published a book *("Length of Stay in Short-term Hospitals")* on the average days of hospitalization for specific diagnoses, and Dr. Beverly Payne has completed a study of the hospital utilization project of Pittsburgh.

Q What is being done to counteract claims abuses in which patients are admitted for vague problems such as headaches and functional gastrointestinal upset, and subsequently receive a thorough work-up representing an annual physical examination?

A When policies state that reimbursement will be made for illness or injury necessitating hospitalization, claims supervisors are instructed to investigate such claims and, after adequate medical consultation, reject such claims for payment when an abuse is apparent.

Q How is the fee for the surgeon's assistant provided for by health insurance companies?

A This depends on the particular health insurance policy. Usually 15 to 20% of the surgeon's fee is allowed for the surgical assistant, provided his help is necessary for the surgery involved. Some policies, however, provide no coverage for an assistant surgeon.

Frederick J. Newirth, MD, Medical Director, Fireman's Fund American Life Insurance Company, San Francisco, Calif.

Q What is expected when an insurer requests a complete medical history including all laboratory reports for a patient whom the doctor has seen periodically for 10 to 20 years?

A An outline of significant medical history and findings should do. If a summary is too time consuming, photocopies of the records would be satisfactory.

George G. Young, MD, Medical Director, Central Life Assurance Company, Des Moines, Iowa.

Let's Put Ideas Where They Count

The past few "President's Pages" have discussed in some detail the relationship of the Texas Medical Association with the American Medical Association. The various state and territorial associations that make up the AMA send delegations to its House of Delegates which, in turn, makes policy decisions for all of us in "organized medicine."

Last June, the TMA took five resolutions to the AMA House, as well as an outstanding work on the Himler Report and a major candidate, and came home with all five resolutions adopted, with much of our wordage and philosophy used regarding the Report of the Committee on Long-Range Planning, and Dr. James Sammons, our President-elect, elected to the AMA Board of Trustees. We who practice in Texas could *not* have had a more successful meeting.

Recently, in the lay press in Texas, articles have quoted members of our local and state medical societies who felt that "the AMA does not represent our thinking." This is unfortunate, for each county society is represented by its elected delegates to the TMA House of Delegates. Members who air their grievances publicly give much satisfaction to the lay press. They should express themselves where their words and philosophy will help the most—within the confines of their local societies. If they fail to convince their local fellow physicians of the validity of their proposals, they still have channels through which to present their proposals to their state organization committees or councils. Washing our dirty linen in public does immeasurable damage to our profession.

The TMA delegation is preparing now to represent this state in Boston at the AMA Clinical Session, Nov 29 to Dec 2, 1970. We hope that we are carrying forward the philosophies and wishes of the TMA. If we are *not*, communications have broken down between the members of TMA, its House of Delegates, and its delegation to AMA.

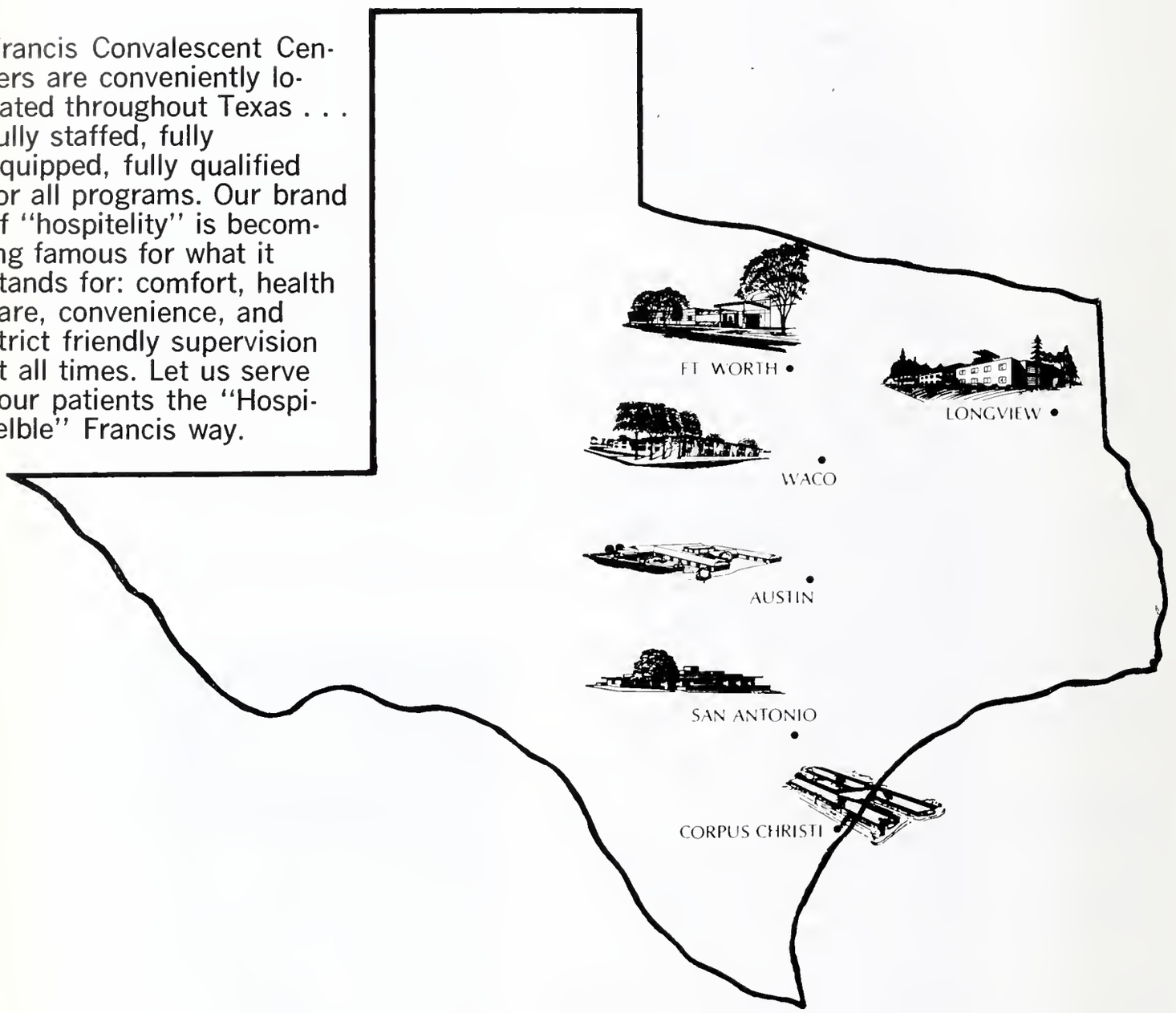
Walter Walthall, M.D.

Walter Walthall, MD, President, Texas Medical Association.

FRANCIS HOSPITELS INCORPORATED

FRANCIS CONVALESCENT CENTERS
DIVISION OF FRANCIS HOSPITELS, INC.

Francis Convalescent Centers are conveniently located throughout Texas . . . fully staffed, fully equipped, fully qualified for all programs. Our brand of "hospitelity" is becoming famous for what it stands for: comfort, health care, convenience, and strict friendly supervision at all times. Let us serve your patients the "Hospitelble" Francis way.



FRANCIS HOSPITELS, INC., 7129 Highway 290 East, Austin, 512 454-2725

FRANCIS CONVALESCENT CENTERS—WACO: Francis Hospitel, 2501 Maple Avenue, Ph. 752-0311; AUSTIN: Retirement Inc., 6909 Burnet Road, Ph. 452-5719; FORT WORTH: Francis Convalescent Center, 1000 6th Avenue, Ph. 335-1903; CORPUS CHRISTI: Francis Convalescent Center, 3050 Sunnybrook, Ph. 853-9981; LONGVIEW: Highland Pines, 1100 N. 4th Street, Ph. 753-7661; SAN ANTONIO: San Pedro Manor, 616 West Russell, Ph. 732-5181.

Smiles speak louder than words

for the good taste of Soyalac

Milk-free, hypo-allergenic Soyalac has a pleasing taste that is eagerly accepted by most infants. It's similar to mother's milk in composition and assimilation, much like cow's milk in consistency and completely free of fibre. Extensive clinical data support Soyalac's value in promoting growth and development. Soyalac is also excellent for growing children and adults.

Available in
Concentrated Liquid or Powdered

Free Booklet and Samples

A request on your professional letterhead or prescription form will bring to you complete information and a supply of samples.

Soyalac

a product of

LOMA LINDA FOODS

MEDICAL PRODUCTS DIVISION

RIVERSIDE, CALIFORNIA

Mount Vernon, Ohio, U.S.A.

Mead Johnson–pharmaceuticals created for your specialized clinical needs

new 10% solution...
particularly convenient for home use

MUCOMYST®-10
(ACETYLCYSTEINE)

liquefies thick, viscid mucus in chronic bronchitis and emphysema

Mucomyst, as 20% acetylcysteine, has been used with safety and effectiveness in hospitals for over five years.

Now a new 10% solution, Mucomyst-10, offers you the choice of prescribing a lesser concentration whenever you feel this is desirable. It provides added convenience and simplicity, particularly for your patients using nebulizing units at home.

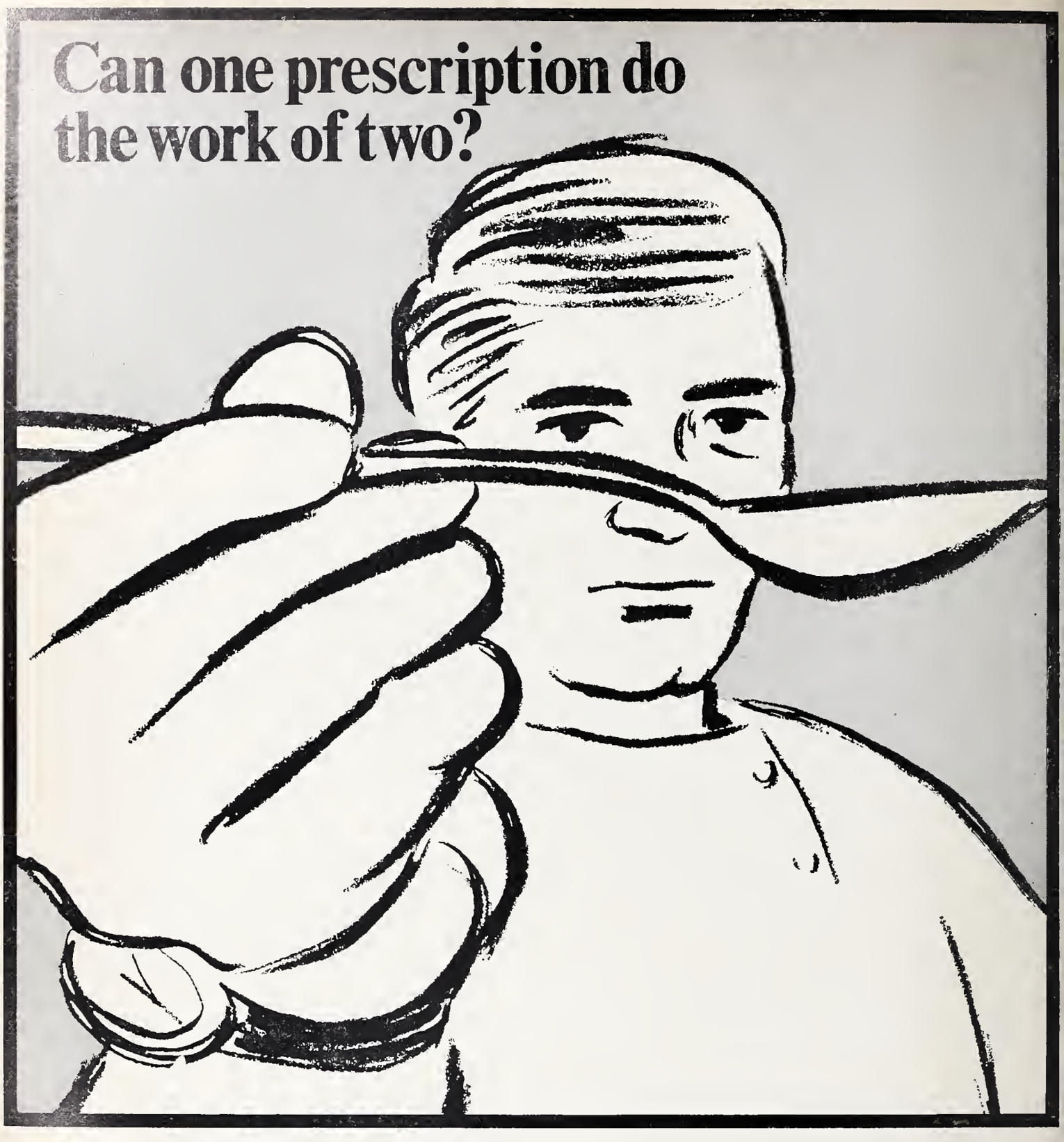
By including Mucomyst-10 in the home management regimen, you can provide full mucolytic benefits for many of your patients with chronic bronchitis and emphysema complicated by tenacious secretions.

Indications: Mucomyst has been demonstrated to be clinically effective as adjuvant therapy in a wide range of conditions in which thick, viscous mucus is a problem, including: postoperative atelectasis and pneumonia; chronic bronchopulmonary disease (emphysema, chronic bronchitis, asthma, and bronchiectasis); acute bronchopulmonary disease (pneumonia, bronchitis, and tracheobronchitis); tracheostomy care; facilitation of bronchial studies; maintenance of an open airway during anesthesia; and to help control pulmonary complications of cystic fibrosis. **Contraindications:** Mucomyst is contraindicated in those patients who are sensitive or who have developed a sensitivity to it. **Warnings: After proper administration of acetylcysteine, an increased volume of liquefied bronchial secretions may occur. When cough is inadequate, the open airway must be maintained by mechanical suction if necessary. When there is a large mechanical block due to foreign body or local accumulation, the airway should be cleared by endotracheal aspiration, with or without bronchoscopy. Asthmatics under treatment with Mucomyst should be watched carefully. If bronchospasm progresses, this medication should be immediately discontinued. Adverse Effects:** Adverse effects have included stomatitis, nausea and rhinorrhea. Sensitivity and sensitization to Mucomyst have been reported very rarely. A few susceptible patients, particularly asthmatics (see **Warnings**), may experience varying degrees of bronchospasm associated with the administration of nebulized acetylcysteine. Most patients with bronchospasm are quickly relieved by the use of a bronchodilator given by nebulization. **Administration & Dosage:** Mucomyst may be administered by nebulization into a tent, Croupette, face mask, or mouthpiece; or by direct instillation. **Mucomyst should not be placed directly into the chamber of a heated (hot-pot) nebulizer.** Complete details on dosage, administration, and compatibility are included in the package insert. Additional information may be obtained from Mead Johnson Laboratories. **Supplied: Mucomyst-10 (acetylcysteine)**, a sterile 10% solution, in vials of 10 ml. and 30 ml.; **Mucomyst (acetylcysteine)**, a sterile 20% solution, in vials of 10 ml. and 30 ml.

Mead Johnson
LABORATORIES

1969 MEAD JOHNSON & COMPANY • EVANSVILLE, INDIANA 47721 70469

Can one prescription do the work of two?



Yes, Kolantyl®.

Kolantyl Gel/Wafers contain antacids, and Bentyl® (dicyclomine hydrochloride) too.

Merrell

The Wm. S. Merrell Company
Division of Richardson-Merrell Inc.
Cincinnati, Ohio 45215

0-2102 (1832)

The girth control pill

Tepanil® Ten-tab

(continuous release form)

(diethylpropion hydrochloride)

works on the appetite not on the 'nerves'

When girth gets out of control, TEPANIL can provide sound support for the weight control program you recommend. TEPANIL reduces the appetite—patients enjoy food but eat less. Weight loss is significant—gradual—yet there is a relatively low incidence of CNS stimulation.

Contraindications: Concurrently with MAO inhibitors, in patients hypersensitive to this drug; in emotionally unstable patients susceptible to drug abuse.

Warning: Although generally safer than the amphetamines, use with great caution in patients with severe hypertension or severe cardiovascular disease. Do not use during first trimester of pregnancy unless potential benefits outweigh potential risks.

Adverse Reactions: Rarely severe enough to require discontinuation of therapy, unpleasant symptoms with diethylpropion hydrochloride have been reported to occur in relatively low incidence. As is characteristic of sympathomimetic agents, it may occasionally cause *CNS effects* such as insomnia, nervousness, dizziness, anxiety, and jitteriness. In contrast, CNS depression has been reported. In a few epileptics an increase in convulsive episodes has been reported. *Sympathomimetic cardiovascular effects* reported include ones such as tachycardia, precordial pain, arrhythmia, palpitation, and increased blood pressure. One published report described T-wave changes in the ECG of a healthy young male after ingestion of diethylpropion hydrochloride; this was an isolated experience, which has not been reported by others. *Allergic phenomena* reported include such conditions as rash, urticaria, ecchymosis, and erythema. *Gastrointestinal effects* such as diarrhea, constipation, nausea, vomiting, and abdominal discomfort have been reported. Specific reports on the hematopoietic system include two each of bone marrow depression, agranulocytosis, and leukopenia. A variety of miscellaneous adverse reactions have been reported by physicians. These include complaints such as dry mouth, headache, dyspnea, menstrual upset, hair loss, muscle pain, decreased libido, dysuria, and polyuria.

Convenience of two dosage forms: TEPANIL Ten-tab tablets: One 75 mg. tablet daily, swallowed whole, in midmorning (10 a.m.); TEPANIL: One 25 mg. tablet three times daily, one hour before meals. If desired, on additional tablet may be given in midevening to overcome night hunger. Use in children under 12 years of age is not recommended.

T-006A / 1/70 / U.S. PATENT NO. 3,001,910

THE NATIONAL DRUG COMPANY
DIVISION OF RICHARDSON-MERRELL INC.
PHILADELPHIA, PENNSYLVANIA 19144

Painful night leg cramps...

unwelcome bedfellow for any patient– including those with arthritis, diabetes or PVD

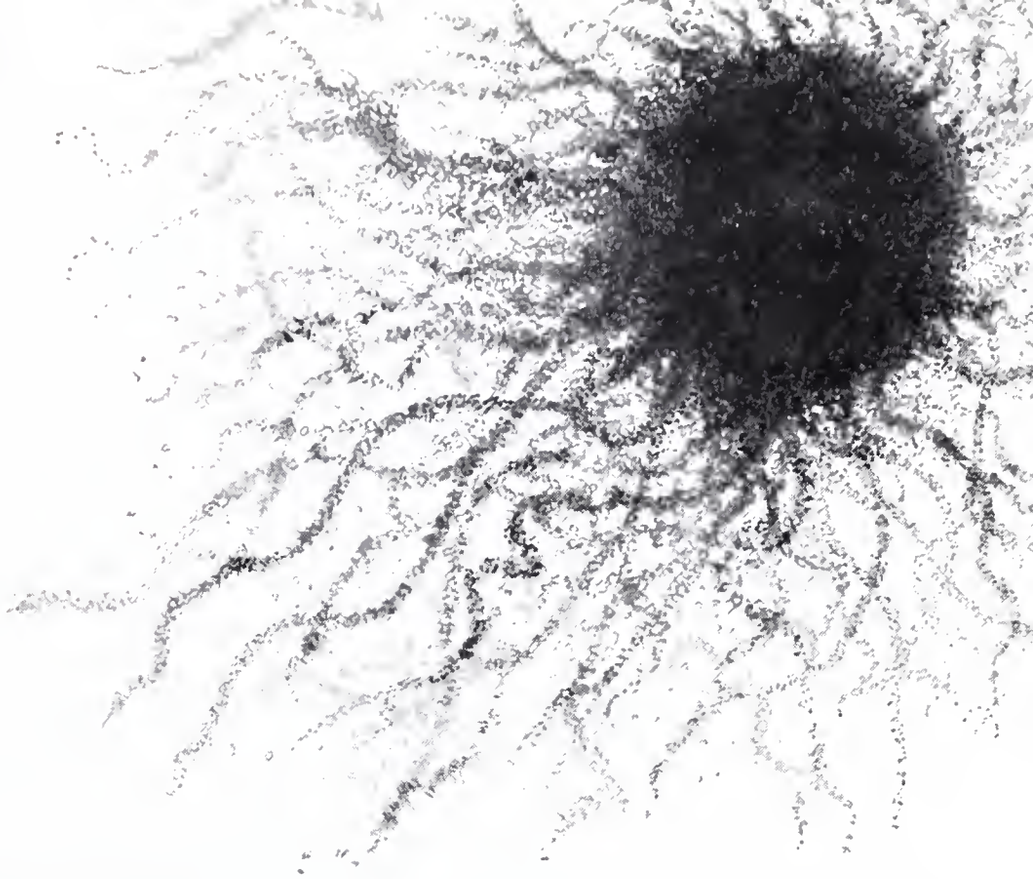
One thing patients can sleep without, particularly patients with chronic disease conditions such as arthritis, diabetes or PVD, is painful night leg cramps. Although seldom the presenting complaint, night leg cramps can tie your patients up in painful knots. Now, just one tablet of QUINAMM at bedtime can usually bring an end to shattered sleep and needless suffering. Your patients will sleep restfully—gratefully—with QUINAMM, specific therapy to prevent painful night leg cramps.

Prescribing Information—Composition: Each white, beveled, compressed tablet contoins: Quinine sulfote, 260 mg., Aminophylline, 195 mg. **Indications:** For the prevention and treotment of nocturnol ond recumbency leg muscle cromps, including those associated with orthritis, diabetes, voricose veins, thrambophlebitis, arteriosclerosis ond static foot deformities. **Contraindications:** QUINAMM is controindicated in pregnancy because of its quinine content. **Precautions/Adverse Reactions:** Aminophylline may produce intestinal cramps In same instances, and quinine may produce symptoms of cinchonism, such as tinnitus, dizziness, and gastrointestinal disturbance. Discontinue use if ringing in the ears, deafness, skin rash, or visuol disturbances accur. **Dosage:** One tablet upon retiring. Where necessary, dosoge may be increased to one tablet following the evening meol and one toblet upon retiring. **Supplied:** Bottles of 100 and 500 toblets.

THE NATIONAL DRUG COMPANY
DIVISION OF RICHARDSON-MERRELL INC.
PHILADELPHIA, PENNSYLVANIA 19144

Quinamm™
(quinine sulfate 260 mg., aminophylline 195 mg.)

Specific therapy for night leg cramps



Corticosteroid therapy week after week.

then antibiotic therapy last week.

and monilial overgrowth this week.

For many patients on long-term corticosteroid therapy, the addition of oral antibiotic therapy may trigger monilial overgrowth in the intestine. When you anticipate such a problem, take action with DECLOSTATIN 300. It combines the broad-spectrum potency of demethylchlortetracycline with the antifungal effectiveness of nystatin—it helps avoid monilial take-over. Experience has shown DECLOSTATIN to be highly useful for many women patients; individual culture studies will show exactly where this usefulness may best be applied.

it doesn't let monilia begin where bacteria end.

Declostatin® 300

Demethylchlortetracycline HCl 300 mg and Nystatin 500,000 units Capsule-Shaped Tablets Lederle

Effectiveness: Because its antibacterial component is DECLOMYCIN® Demethylchlortetracycline, DECLOSTATIN should be equally or more effective therapeutically than other tetracyclines in infections caused by tetracycline-sensitive organisms. The antifungal component, nystatin, protects against superinfection by antibiotic-resistant fungal overgrowth (particularly monilia) in the intestinal tract.

Contraindication: History of hypersensitivity to demethylchlortetracycline or nystatin.

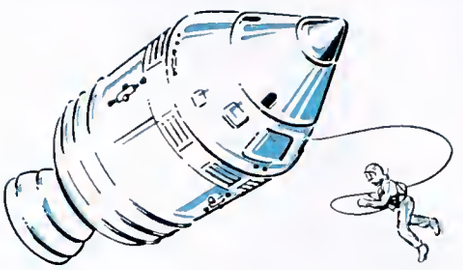
Warning: In renal impairment, usual doses may lead to excessive accumulation and liver toxicity. Under such conditions, lower than usual doses are indicated and, if therapy is prolonged, serum level determinations may be advisable. A photodynamic reaction to natural or artificial sunlight has been observed. Small amounts of drug and short exposure may produce an exaggerated sunburn reaction which may range from erythema to severe skin manifestations. In a smaller proportion, photoallergic reactions have been reported. Patients should avoid direct exposure to sunlight and discontinue drug at the first evidence of skin discomfort. Necessary subsequent courses of treatment with tetracyclines should be carefully observed.

Precautions: Overgrowth of nonsusceptible organisms may occur. Constant observation is essential. If new infections appear, appropriate measures should be taken. In infants, increased intracranial pressure with bulging fontanels has been observed. All signs and symptoms have disappeared rapidly upon cessation of treatment.

Side Effects: Gastrointestinal system—anorexia, nausea, vomiting, diarrhea, stomatitis, glossitis, enterocolitis, pruritus ani. Skin—maculopapular and erythematous rashes; a rare case of exfoliative dermatitis has been reported. Photosensitivity; onycholysis and discoloration of the nails (rare). Kidney—rise in BUN, apparently dose-related. Transient, reversible, nephrogenic diabetes insipidus with excessive thirst and polyuria (rare). Hypersensitivity reactions—urticaria, angioneurotic edema, anaphylaxis. Teeth—dental staining (yellow-brown) in children of mothers given this drug during the latter half of pregnancy, and in children given the drug during the neonatal period, infancy and early childhood. Enamel hypoplasia has been seen in a few children. If adverse reaction or idiosyncrasy occurs, discontinue medication and institute appropriate therapy. Demethylchlortetracycline may form a stable calcium complex in any bone-forming tissue with no serious harmful effects reported thus far in humans.

Average Adult Daily Dosage: One tablet b.i.d. Should be given 1 hour before or 2 hours after meals, since absorption is impaired by the concomitant administration of high calcium content drugs, foods and some dairy products. Treatment of streptococcal infections should continue for 10 days, even though symptoms have subsided.

Lederle LEDERLE LABORATORIES, A Division of American Cyanamid Company, Pearl River, New York 448-9



Man in space, now fait accompli, re-emphasizes the importance of Uro-Phosphate therapy. Research into the effect of space travel on the astronaut reveals that weightlessness causes loss of bone calcium. As the bones are required to bear less and less of the weight of the body they lose calcium, increasing the calcium content of the urine. When physical activity is reduced, the acidity of the urine should be adjusted to keep increased calcium in solution . . . . a prophylaxis to prevent kidney or bladder calculi.

Uro-Phosphate®

NOW A SUGAR-COATED TABLET

Each tablet contains: METHENAMINE, 300 mg.; SODIUM ACID PHOSPHATE, 500 mg.

Uro-Phosphate gives comfort and protection when inactivity causes discomfort in the urinary function. It keeps calcium in solution, preventing calculi; it maintains clear, acid, sterile urine; it encourages complete voiding and lessens frequency when residual urine is present.

Uro-Phosphate contains sodium acid phosphate, a natural urinary acidifier. This component is fortified with methenamine which is inert until it reaches the acid urinary bladder. In this environment it releases a mild antiseptic keeping the urine sterile.

Uro-Phosphate is safe for continuous use. There are no contra-indications other than acidosis. It can be given in sufficient amount to keep the urine clear, acid and sterile. A heavy sugar coating protects its potency.

Dosage:

For protection of the inactive patient 1 or 2 tablets every 4 to 6 hours is usually sufficient to keep the urine clear, acid and sterile.

2 tablets on retiring will keep residual urine acid and sterile, contributing to comfort and rest.

A clinical supply will be sent to physicians and hospitals on request.

WILLIAM P. POYTHRESS & COMPANY, INC., RICHMOND, VIRGINIA 23217

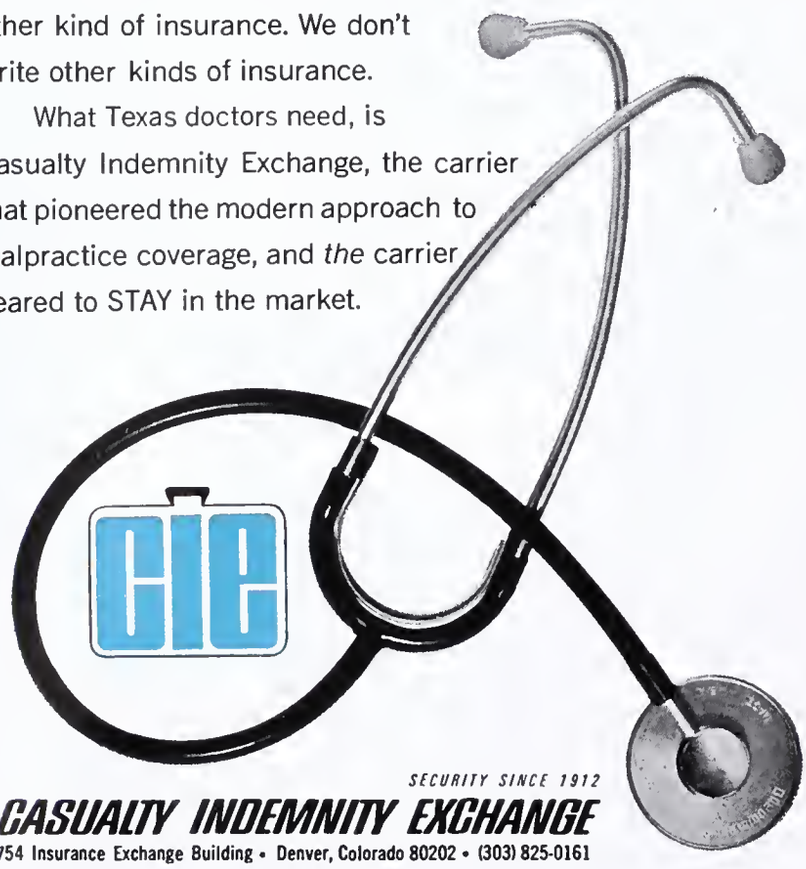
Manufacturers of Ethical Pharmaceuticals

What Texas doctors need, is a Malpractice Liability Carrier that won't fade when trouble comes.

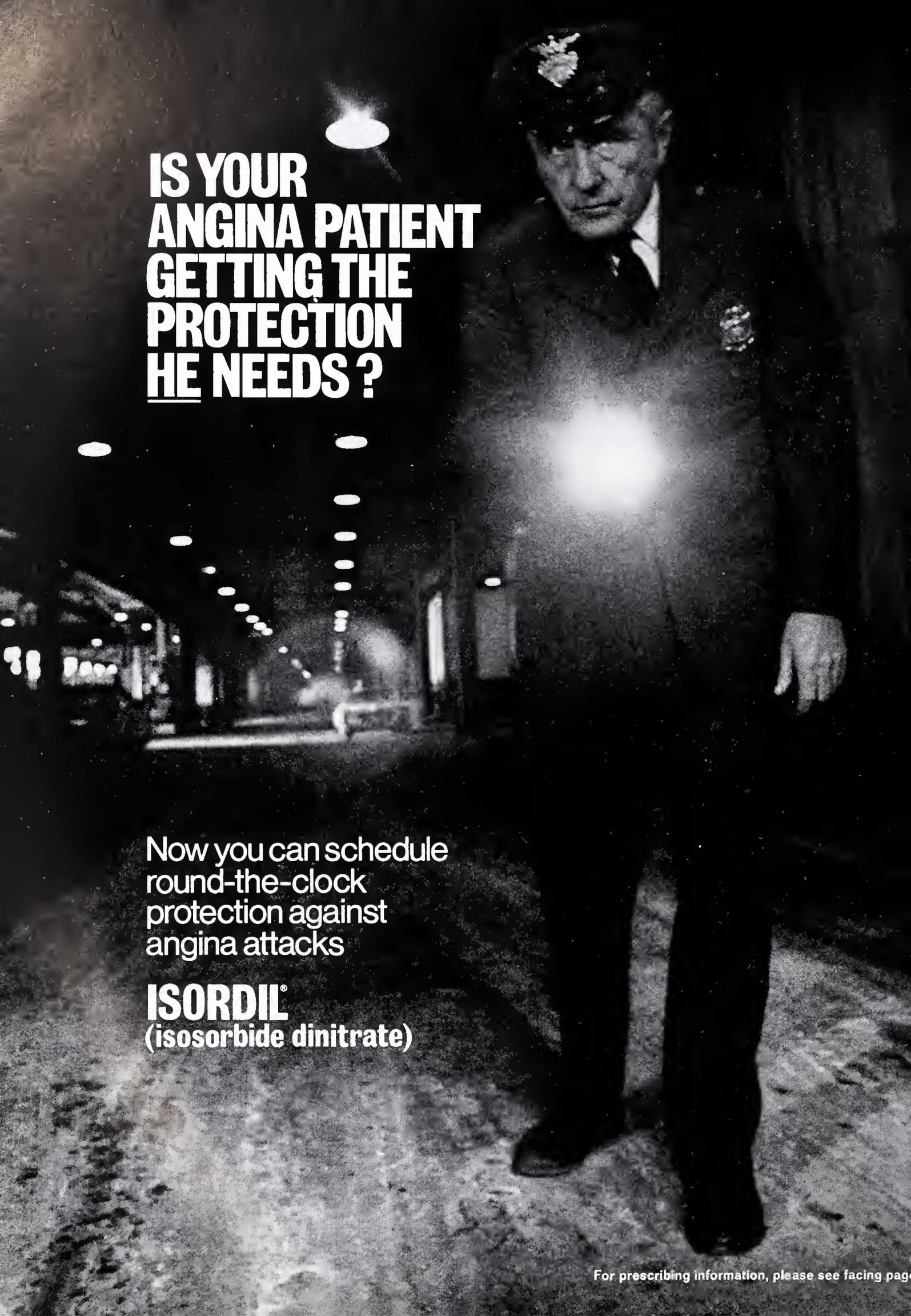
This means the up-to-date carrier. The one that's replete with innovations and new developments in this clouded, sensitive area of liability protection. And the one that doesn't talk malpractice coverage just to get a foot in the door for every other kind of insurance. We don't write other kinds of insurance.

What Texas doctors need, is Casualty Indemnity Exchange, the carrier that pioneered the modern approach to malpractice coverage, and *the* carrier geared to STAY in the market.

Contact your local agent or
RUSSELL GRACE INSURANCE
2304 W. 7th St.
Ft. Worth, Texas 76107
(817) 332-9269
In Dallas, Call
(214) 264-4300



SECURITY SINCE 1912
CASUALTY INDEMNITY EXCHANGE
754 Insurance Exchange Building • Denver, Colorado 80202 • (303) 825-0161


IS YOUR
ANGINA PATIENT
GETTING THE
PROTECTION
HE NEEDS?
Now you can schedule
round-the-clock
protection against
angina attacks
ISORDIL®
(isosorbide dinitrate)
For prescribing information, please see facing page

ISORDIL®
(isosorbide dinitrate)

He's 55 years old. All his life his job has been protecting others. When angina struck two years ago he was a city policeman. Semi-retired, he is now a night watchman. He worries a lot... about the future, about making ends meet, and especially about his angina.

When an acute attack occurs, ISORDIL SUBLINGUAL acts almost as quickly as nitroglycerin—yet lasts for hours. The oral forms of ISORDIL taken routinely reduce the chances of an acute attack. The prolonged action of ISORDIL TEMBIDS® often provides a full night's protection.

With ISORDIL therapy, there is often a significant reduction in the number, duration, and severity of angina attacks. ISORDIL is available in the six following formulations to meet the needs of most angina patients and allow full 24-hour protection:

ISORDIL SUBLINGUAL (2.5-mg. and 5-mg. tablets) for treatment of acute attacks or prophylaxis. ISORDIL 10 mg. (scored, oral tablets) or ISORDIL TEMBIDS (40-mg. sustained action tablets) for basic prophylactic treatment of angina pectoris.

ISORDIL ORAL 5 mg. (scored, oral tablets) to facilitate small adjustments in dosage.

ISORDIL with PHENOBARBITAL (10 mg. isosorbide dinitrate and 15 mg. [¼ gr.] phenobarbital, U.S.P., [*Warning:* Phenobarbital may be habit forming]) when anxiety or emotional disturbances are important factors in the clinical picture.

ISORDIL®(isosorbide dinitrate)

Indications: *Sublingual*—for prevention and treatment of angina pectoris. *Oral*—for relief of angina pectoris (pain of coronary artery disease); the oral dosage forms are not intended to abort the acute anginal episode, but are widely regarded as useful in the prophylactic treatment of angina pectoris.

Contraindication: Idiosyncrasy to this drug.

Warning: Data supporting the use of nitrites during the early days of the acute phase of myocardial infarction (the period during which clinical and laboratory findings are unstable) are insufficient to establish safety.

Precautions: Intraocular pressure is increased; therefore, caution is required in administering to patients with glaucoma. Tolerance to this drug and cross-tolerance to other nitrites and nitrates may occur. In patients with functional or organic gastrointestinal hypermotility or malabsorption syndrome, it is suggested that either the ISORDIL ORAL 5 mg. or ISORDIL 10 mg. oral tablet or ISORDIL SUBLINGUAL be the preferred therapy. The reason for this is that a few patients have reported passing partially dissolved ISORDIL TEMBIDS in their stools. This phenomenon is believed to be on the basis of physiologic variability and to reflect rapid gastrointestinal transit of the sustained action tablet. *ISORDIL TEMBIDS should not be chewed.*

Adverse Reactions: Cutaneous vasodilation with flushing. Headache is common and may be severe and persistent. Transient episodes of dizziness and weakness as well as other signs of cerebral ischemia associated with postural hypotension may occasionally develop. This drug can act as a physiological antagonist to norepinephrine, acetylcholine, histamine, and many other agents. An occasional individual exhibits marked sensitivity to the hypotensive effects of nitrite, and severe responses (nausea, vomiting, weakness, restlessness, pallor, perspiration and collapse) can occur even with the usual therapeutic dose. Alcohol may enhance this effect. Drug rash and/or exfoliative dermatitis may occasionally occur.

Consult direction circular before prescribing.

May we send you reprints, detailed information and/or professional samples?

TEMBIDS®—TRADEMARK FOR SUSTAINED ACTION TABLETS

IVES LABORATORIES INC.
685 Third Avenue, New York, N.Y. 10017

MAKERS OF ISORDIL, THE ORIGINAL ISOSORBIDE DINITRATE

Ec-
on-
omy!

Dicarbosil®
ANTACID

Your ulcer patients and others will appreciate it. Specify DICARBOSIL 144's—144 tablets in 12 rolls.

ARCH LABORATORIES
319 South Fourth Street, St. Louis, Missouri 63102

T. ROWE PRICE GROWTH STOCK FUND, INC.

Est. 1950

A NO-LOAD FUND

Investing in stocks selected for long term growth possibilities

Individuals & institutions are invited to request free prospectus

NO SALES CHARGE

T. Rowe Price Growth Stock Fund, Inc.
One Charles Center, Dept. F-1
Baltimore, Md. 21201 Phone (301) 539-1992

Name _____

Address _____

_____ Zip _____

1971
PHYSICIANS'
AND
WIVES'
ART EXHIBIT
May 6 - 7 - 8
Shamrock Hilton Hotel
Houston, Texas

Oil Paintings
Water Colors
Sculpture
Drawings & Prints
Arts & Crafts
Photography

For information and applications write:
Art Exhibit
Texas Medical Assn.
1801 N. Lamar
Austin, Texas 78701

Vasomist

(ANTIHISTAMINIC)

VASOCONSTRICTOR, NASAL DECONGESTANT AND LOCAL ANTIHISTAMINIC

Active Ingredients:
Phenylephrine Hcl **0.25%**
Phenylpropanolamine Hcl ... **0.50%**
Chlorobutanol **0.15%**
Tripelennamine Hcl **0.50%**
In Isotonic Solution

Vasomist

(PLAIN)

VASOCONSTRICTOR AND NASAL DECONGESTANT

Active Ingredients:
Phenylephrine Hcl **0.25%**
Phenylpropanolamine Hcl ... **0.50%**
Chlorobutanol **0.15%**
In Isotonic Solution

USE: Temporary relief of nasal congestion due to colds and hay fever.

DIRECTIONS: Adults and Children: Instill two or three drops into each nostril, using no more than needed to provide relief. Repeat every three to four hours as needed but not oftener.

AVAILABILITY

In plastic squeeze bottles containing ¾ fluid oz. and in dropper bottles containing 1 fluid oz.

HUMCO LABORATORY
TEXARKANA, ARK.-TEX.

HUMCO LABORATORY
TEXARKANA, ARK.-TEX.
Our Integrity is Your Guarantee

QUIET: AMYLOFENE® WORKING

(chloral hydrate with glycine)

When insomnia is the problem, AMYLOFENE may be the answer. A formulation of Chloral Hydrate and Glycine, it contains *no barbiturates.* This makes it safe and effective for virtually all ages.

As a basic sedative-hypnotic, Chloral Hydrate has been in use *more than a century.* And in AMYLOFENE tablets, Chloral Hydrate is better than ever. Easier and more pleasant to take. No disagreeable odor or taste. Buffered with Glycine.

Fast action is another feature. With onset of 30 to 60 minutes, AMYLOFENE helps patients get to sleep easily. And with duration of 4 to 8 hours, it helps them *stay* asleep . . . a "natural" sleep with refreshed awakening.

For any type of simple insomnia: AMYLOFENE. It works.

First Texas Pharmaceuticals, Inc. Dallas, Texas 75222

the Concern for Care

Amylofene® Tablets (Chloral Hydrate, U.S.P.) Buffered with Glycine.
Each tablet contains:
Chloral Hydrate, U.S.P. .....486 mg.
(Warning: May be habit forming)
Aminoacetic Acid .....243 mg.
AMYLOFENE TABLETS (Chloral Hydrate, U.S.P.) is an effective sedative-hypnotic drug in stable coated tablet form, buffered with aminoacetic acid.

ACTION: Onset of action is from 30 minutes to 1 hour with duration of 4 to 8 hours.

CONTRAINDICATIONS: Chloral Hydrate is contraindicated in patients with hepatic or renal impairment. Larger doses should be avoided in individuals with cardiac disease.

WARNINGS: Concomitant chloral hydrate and coumarin anticoagulant therapy should be administered with caution. Chloral hydrate may cause an increase or decrease in expected anticoagulant action.

ADVERSE REACTIONS: Chloral hydrate may cause gastric irritation, nausea and vomiting in some patients. Occasionally skin eruptions may occur.

ADMINISTRATION AND DOSAGE: Orally: Adults, as a hypnotic, 1 or 2 tablets taken one-half hour before bedtime. Caution: Federal law prohibits dispensing without a prescription.

Someone acutely ill needs this bed.

It's available because of Medicenter.

Because of Medicenter, this hospital bed can be used by someone who needs it. That's what Medicenter is all about. A recuperative care facility specializing in the needs of patients who no longer require the intensive care of a general hospital and who are on the road to recovery.

But that's only part of the Medicenter story . . . Beautifully carpeted and draped patient rooms, tasty foods, recreation facilities, physical and inhalation therapy are just a few of many luxurious health care features that make recovery in the Medicenter as pleasant and rapid as possible. The Medicenter is within minutes of acute care facilities. A professional medical staff supervises all recuperative care under the direct orders of each patient's personal physician. Room rates are nominal — about one-half the cost of general hospitals. And there's a growing list of insurance companies that already provide coverage for Medicenter recuperation.

The Medicenter is a vital addition to our community's health care system. Get to know the Medicenter soon. Your visit or inquiry is welcome anytime.

MEDICENTER OF AMERICA ®

A Nice Place to Get Well

Medicenter of America / Arlington • Corpus Christi • El Paso • Fort Worth, Texas

—The lowest priced tetracycline–nystatin combination available—

Serving Texas Physicians for Over Forty Years

Precision-engineered, functionally-built equipment

SMR keeps you and your patients' comfort and satisfaction in mind . . . a room that reflects professional good taste.

SMR has manufactured medical and Dental equipment for over forty years on a direct to user basis.

STAINLESS STEEL POLISH
SMR Stainless Steel Polish cleans, and preserves with superior results —ends fingerprints, watermarks and surface stains. 22 oz. economy $2.75 F.O.B. Plant

Factory Direct Sales

NEW CATALOG NOW AVAILABLE

SMR

SURGICAL MECHANICAL RESEARCH, INC.

Post Office Box 1185 • (714) 646-4405

960 W. 16th St., Newport Beach, Calif. 92663

Established Over 40 Years

Please visit our TMA Booth No. 73, Houston, May 6-8, 1971.

Why do pregnant women die?

The irony and tragedy of deaths associated with new life make maternal deaths dramatic and feared. For more than a generation, careful analysis of the circumstances surrounding each such case has been a common peer review mechanism. Hospitals, medical societies, and health departments have formed maternal mortality committees to ascertain the causes of death, determine avoidable factors, and make recommendations for improvement in obstetrical care. The Texas Medical Association's Committee on Maternal Health ranks eighth in seniority among state groups, having begun its work in 1935. During the 1970 annual session of the TMA, the committee sponsored a symposium, "Why Do Pregnant Women Die?" This article, and the one beginning on page 50, are edited excerpts from this symposium.

JAMES T. DOWNS, III, MD

WHY DO PREGNANT WOMEN DIE? It is appropriate that Texas physicians should ask, because the rate of maternal deaths per live births is higher in Texas—probably in excess of 4/10,000—than in the nation as a whole which has a ratio of slightly fewer than 3/10,000. These are 1968 figures. There is at least one Texas city in which the ratio was 9.7/10,000 in 1967, and 7.7/10,000 in 1968. Another recorded 6/10,000. Rural Texas also contributes to the problem, for 59 of the 94 reported maternal deaths in 1965 occurred outside the six major metropolitan areas.

Of course, pregnant women die of various pathological processes which can be described and named. In Texas in 1965, for example, 25 maternal deaths were caused by hemorrhage, 20 by toxemia of pregnancy, and 19 by infection. Complications of abortion were responsible for 15% of the 94 deaths reported in that year. Other causes include pulmonary emboli, heart disease, and complications of anesthesia.

Equally important, however, is the shameful fact than many pregnant women die because of deficiencies in medical care. For some, modern obstetrical care either is not available or is not sought. For others, diagnostic or therapeutic measures are applied too little and/or too late. For a few, the impact of pregnancy on acute or chronic illness is not appreciated by the patient and/or her physicians. By seeking to understand what happens in the care of patients who die from conditions which most patients survive, we can materially assist in the prevention of such deaths in the future.

—C. E. Gibbs, MD, San Antonio,
Chairman, TMA Committee on Maternal Health.

ANESTHESIA: A small but steady number of maternal deaths result from use of anesthetic agents. The frequency varies between 2 and 5% of deaths, is divided more or less evenly between inhalation agents and various conduction techniques, and has generally declined during the past three decades. In addition, there are a small number of cases in which anesthesia contributes to but is not the sole cause of death. Deaths also have resulted from individual sensitivity to local anesthetics, whatever the method of administration. As yet, we have not developed a perfect method.

A compilation of 172 maternal deaths in Dallas County (1948-1962) contained only three that were assessed as being caused by anesthesia. In one case, an obese patient had cardiac arrest associated with administration of anesthesia for a dilation and curettage. A second was due to cardiac arrest in a patient who was thought to be getting oxygen but cyclopropane was turned on instead. The third case involved a spinal anesthesia for a cesarean section-hysterectomy with considerable blood loss and eventual cardiac arrest. At one Dallas hospital, the last death from anesthesia was in 1946; the patient vomited and a large bolus lodged in the trachea, and attempts to remove it were futile.

In deaths from inhalation anesthesia, the typical story is that of aspiration either of solid particles of food or liquid stomach contents with a high hydrochloric acid level. The solid particle will wedge in the bronchial tree or trachea, depending on its size, and soon produce a fatal anoxic state unless it is promptly

removed or dislodged. In such a situation, prompt access to a bronchoscope or a tracheotomy is often life-saving. In the event that highly acid stomach contents are aspirated, blockage also may occur and death ensue. More usually, a severe inflammatory reaction of the entire tracheobronchial tree results and, unless promptly and vigorously treated, it causes death in several hours from pneumonitis and shock. Treatment consists of suction, assisted respiration with oxygen, lavage of the tracheobronchial tree, high doses of corticosteroids and antibiotics, Isuprel, and aminophylline, and must be instituted as soon as possible. Prevention of aspiration plays an important role in avoiding these disasters and the patient should be instructed not to eat solids if labor is beginning, as the emptying time of the stomach is greatly prolonged in labor, varying from 6 to 12 hours, and is further delayed by sedation.

In addition to aspiration, occasional cases of cardiac arrest have been reported, and except in the gravely ill patient these can be attributed to poor oxygenation—or in other words, to improperly performed induction and maintenance of anesthesia.

Of recent interest is the possibility of liver necrosis and death following repeated exposure to halothane anesthetics, and much discussion has revolved around this problem. In obstetrics, the problem of repeated anesthetic exposure arises in the performance of encirclement for incompetent cervix and its subsequent removal at a later date.

Deaths resulting from conduction anesthesia are usually from peripheral vascular collapse, proceeding to shock and cardiac arrest. This situation is more frequently encountered with excessive doses of the anesthetic agent when an anesthetist or obstetrician is not in attendance. This is considered to be avoidable in most cases, as hypotension is frequent and expected with conduction anesthesia and usually can be corrected by prompt use of vasopressors. Difficulties also are probable when peripheral resistance is further decreased in the patient who already has mild hypotension resulting from shock due to blood loss.

As most physicians have found, any local anesthetic agent can produce an anaphylactoid reaction, and although fatalities are rare, they do occur. It is unrewarding to attempt skin testing because interpretation is difficult, but small test doses may be helpful. Other preventive measures include the immediate availability of vasopressors and corticosteroids.

The small but steady toll of maternal deaths from anesthesia generally can be prevented by strict attention to detail in usage and dosage, consideration of the associated problems of the patient, and the availability of the proper agents to counteract the known hazards.

Other Causes of Death: Other causes of maternal death include the not-too-infrequent embolization of clots or amniotic fluid. In pulmonary embolus, the source of the clot usually is the pelvic veins, and it often occurs without warning several days after delivery. The exact mechanism of death is not clear, but apparently depends on the amount of lung tissue rendered inoperative: the larger the clot, the more likely that death will occur. The possibility of emboli-

zation in the grossly infected pelvis can be anticipated, but it is not likely that the usually fatal, so-called bland, embolus can be predicted, although it could be prevented by the use of anticoagulants.

Amniotic fluid embolization occurs in certain conditions of trauma, such as version, but it too is largely unpredictable. In addition to the direct effect—blockage of oxygenation—there often is an accompanying loss of blood-clotting ability due to hypofibrinogenemia with resulting hemorrhage and exsanguination. It is difficult to prove the diagnosis of nonfatal cases, as the presence of squames in the circulating blood of normal mothers has been commonly noted, and the absolute diagnosis depends on the demonstration of amniotic fluid in the pulmonary capillaries. However, during the past decade the increasing familiarity with this disease has clarified the clinical course to the point where a presumptive diagnosis can be made in survivors. The management of this disaster is not too successful, but blood replacement, fibrinogen, and careful monitoring to avoid hypervolemia are useful measures.

Other problems that occasionally appear in maternal mortality reports include associated heart or renal disease, cancer, suicide, homicide, and accidents. The latter cause of death is reasonably common and usually is associated with the automobile. Although uterine ruptures have occurred because of seat belts, I am not aware of any maternal death reported from this cause.

Dr. Downs, The University of Texas (Southwestern) Medical School, 5323 Harry Hines Blvd, Dallas, Tex 75235.

Obstetric

Frequency, Etiology, and Prevention of Deaths

The frequency, etiology, prevention, early diagnosis, and management of obstetric hemorrhage are discussed in relation to findiugs in the Franklin County (Ohio) Maternal Mortality Study (21 years) and the Ohio Maternal Mortality Study (12 years). With regard to avoidability, personnel factors exceed patient factors.

OBSTETRIC HEMORRHAGE CANNOT be defined by *quantity* of blood visualized! Occasionally hemorrhage is concealed, and yet postpartum hemorrhage has been defined as a loss of 500 to 600 cc of blood. Furthermore, we must differentiate between the primary cause of maternal death (hemorrhage), and the contributing cause of death (abortion, atony, ectopic pregnancy, etc).

In the Ohio Maternal Mortality Study, we solve this problem by using a code sheet (Fig 1) with suitable listings.[1] A sheet is completed on every case before data processing is attempted.

Frequency: In Ohio, within the 12 years from 1955 through 1966, among 2,662,120 live births, there were 886 maternal deaths (Fig 2). Accounting for 237 cases, hemorrhage was the *leading* cause of death (Fig 3). Three additional patients sustained rupture of the uterus, but died of "other causes."

In contradistinction, the *frequency* of maternal deaths from hemorrhage was diminished in areas where a blood center was located! For example, in 21 years (1948-1968, inclusive), the Franklin County Maternal Mortality Study recorded only 36 deaths due to hemorrhage among 207 maternal deaths (Fig 4).

Etiology: Searching the Ohio Maternal Mortality Study reports for 12 years, we found that ruptured uterus was the leading *contributory* factor in deaths due to hemorrhage, being involved in 72 of the 237 cases (Fig 5). Eighteen of these patients (24%) were defibrinated! Three additional patients died from "other causes."[2-5]

Contrary to current opinion, shoulder dystocia, large fetus, version and breech extraction[3,4] accounted for most of the 75 ruptures (Figs 6, 7). Only 11 occurred after administration of an oxytocic drug.

More than two-thirds of the patients (54) were delivered by the vaginal route, yet 10 of the remaining 21 patients died undelivered (Fig 8).

Coagulation Problems: Although 18 of the 78 patients dying from hemorrhage due to ruptured uterus displayed some degree of clotting defect[5] (afibrinogenemia), there was no indication that any of the patients had a concomitant amniotic fluid pulmonary embolism, as reported by Sznejder.[6]

Coagulation problems should be *anticipated* in obstetric hemorrhage associated with (1) abruptio placentae, (2) amniotic fluid pulmonary embolus, (3) intrauterine fetal death, and (4) ruptured uterus. As a sequel, afibrinogenemia is a wicked paradox for hemorrhage!

Messer[7] has written a magnificent monograph covering the mechanisms of normal blood coagulation, defects, their causes, and management in obstetric patients. Likewise, Cyr and Mehta[8] have meticulously differentiated the diagnosis of disseminated intravascular clotting from ordinary clotting defects, advocating the indications for the use of heparin.

Hemorrhage

ANTHONY RUPPERSBERG, JR, MD

0. Abortion, without sepsis	
1. Abruptio placentae	
2. Afibrinogenemia after abruptio	
3. Afibrinogenemia after amniotic fluid embolism	
4. Afibrinogenemia after fetal death	
5. Atony, uterine, postpartum	
6. Ectopic pregnancy, without sepsis	
7. Laceration, extrauterine	
8. Placenta previa	
9. Retained placenta	
X. Ruptured uterus	
Y. Other	

1. Principal causes of death, hemorrhage. Obstetrical code sheet, Committee on Maternal Health, Ohio State Medical Association.

Ohio live births	2,652,120
*Total maternal deaths	886
Nonmaternal deaths	263
Undetermined	6
Incomplete	32

2. Ohio live births; maternal and nonmaternal deaths from the Ohio Maternal Mortality Study, 1955-1966.*

Hemorrhage	237
Infection	176
Toxemia	96
*Other causes	377

*Three patients had hemorrhage with ruptured uterus.

3. Primary causes of 886 maternal deaths, Ohio Maternal Mortality Study, 1955-1966.

Hemorrhage	36
Infection	49
Toxemia	25
Other causes	97

4. Primary causes of 207 maternal deaths, Franklin County, Ohio, 1948-1968.

Abortion, no sepsis	6
Abruptio placentae	9
Afibrinogenemia/Abruptio	21
Afibrinogenemia/Amniotic fluid embolism	13
Afibrinogenemia/Fetal death	6
Atony, uterine, postpartum	24
Ectopic pregnancy	46
Laceration, extrauterine	13
Placenta previa	8
Retained placenta	3
*Ruptured uterus	72†
Other	16

*18 with afibrinogenemia.
†Add three, from "other causes."

5. Contributing causes, 237 maternal deaths due to hemorrhage, Ohio Maternal Mortality Study, 1955-1966.

Maternal deaths			886
Ruptured uterus		75	
Spontaneous	4		
After oxytocic	11		
Previous surgery	19		
Gynecologic	7		
Cesarean section	12		
Version & extraction		11	
Breech extraction		8	
Dystocia (shoulder, large fetus, etc)		22	

6. Associated conditions, 886 maternal deaths, with 75 cases of ruptured uterus, Ohio Maternal Mortality Study, 1955-1966.

Weight (gm)	No.
> 5,000	3
4,501-5,000	4
4,001-4,500	10
3,501-4,000	6
< 3,500	29
Not recorded	23

7. Large infant weights, 75 maternal deaths with ruptured uterus, Ohio Maternal Mortality Study, 1955-1966.

Vaginal	54
Cesarean section	11
Died undelivered	10

8. Route of delivery, 75 maternal deaths with ruptured uterus, Ohio Maternal Mortality Study, 1955-1966.

Nonpreventable		5
Preventable		70
Patient	4	
Personnel	52	
Patient and personnel	13	
Miscellaneous	1	

9. Preventability, avoidable factors, in 75 maternal deaths with ruptured uterus, Ohio Maternal Mortality Study, 1955-1966.

Total maternal deaths, hemorrhage		240
No high-risk factors	165	
Patients with high-risk factors	75	
Related to death	36	

10. High-risk obstetric patients among 240 maternal deaths due to hemorrhage, Ohio Maternal Mortality Study, 1955-1966.

*Nonpreventable		56
Preventable		184
Patient	29	
Personnel	125	
Both patient & personnel	29	
Miscellaneous	1	

*Unavoidable catastrophe.

11. Preventability in 240 maternal deaths due to hemorrhage, Ohio Maternal Mortality Study, 1955-1966.

Patient		29
Inadequate prenatal care	6	
Patient error	23	
Personnel		125
Inadequate prenatal care	1	
Error in judgment	119	
Error in technique	3	
Intercurrent disease	1	
Family error	1	
Patient & personnel		29
Inadequate care	14	
Patient error	12	
Error in judgment	3	
Miscellaneous		1
Inadequate supplies	1	

12. Avoidable factors, 184 preventable maternal deaths due to hemorrhage, Ohio Maternal Mortality Study, 1955-1966.

Prevention: Primarily, the prevention of obstetric hemorrhage lies in the obstetrician's high index of suspicion and his knowledge or anticipation of contributing complications in his patient. The tremendous responsibility of personnel in handling the patient with ruptured uterus is reflected in Fig 9.

Adequate prenatal care is mandatory! Hemoglobin and hematocrit values should be recorded at the first visit, and repeated in the 36th or 37th week, for all patients. Anemias should be treated vigorously!

The high-risk obstetric patient must be identified early and placed upon intensive care! Nesbitt and Aubry[9] have devised an excellent system of grading and identifying this vulnerable group of high-risk pregnant women. We have paid particular attention to the early identification of the "high-risk obstetric patient" in our "Maternal Health in Ohio" educational program, through lectures, exhibits, etc.

In our Ohio Study, 36 patients (15%) demonstrated high-risk factors which were related to the 240 maternal deaths due to hemorrhage (Fig 10).

Early Diagnosis: Ectopic pregnancy, abruptio placentae, uterine atony, lacerations, and uterine rupture comprise the major *contributing* causes in our series (Fig 5). Of these, the latter three may be discovered early by routine postpartum exploration of the uterus and vaginal canal. Chai and Birkam[10] reported 18 uterine ruptures in 50,658 deliveries during ten years; there were no maternal deaths! Routine uterine exploration was employed in 10 of the 18 patients; 5 patients demonstrated vaginal bleeding while 7 were in shock.

In *every* patient, when the diagnosis is obscure or the complication looms up as a formidable problem, *consultation is indicated!*

Management: From the Ohio Maternal Mortality Study we learned many lessons in practical obstetrics. Conversely, we also learned that personnel (human) factors predominate in the pre-

ventability of maternal deaths due to hemorrhage; 62.5% (125) of the 184 preventable deaths were attributed to personnel alone (Fig 11).

Examining *avoidable* factors in the "personnel responsibility" category, we noted that 119 of the 125 cases involved an "error in judgment" (Fig 12).

From these observations, it seems imperative that the obstetrician remember the *sequelae* of obstetric hemorrhage in order of their anticipated appearance: shock, afibrinogenemia, lower nephron nephrosis, sepsis, and the more remote Sheehan's syndrome.

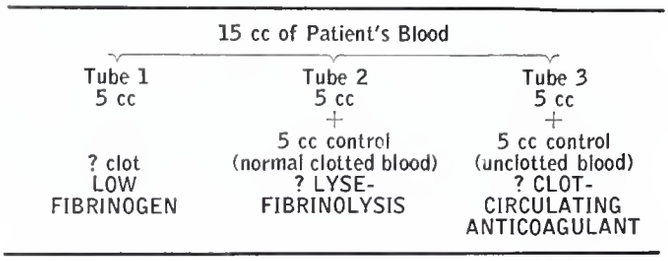
In general, initial measures should *promptly* include: (1) insertion of a needle in the vein with parenteral fluids (18-gauge or Mayo needle); (2) obtain blood for a hemogram and to match whole blood; (3) test for coagulation defect (Fig 13); (4) treat shock; and (5) have fibrinogen or aminocaproic acid available. Avoid attachment of the old adage, "Too little; too late."

When uterine hemorrhage prevails and persists, prompt hysterectomy (with or without bilateral salpingo-oophorectomy) is recommended.[10]

In retrospect, close adherence to *Guiding Principles for Obstetric Care* and establishment of ideal obstetric care for every maternity patient provide generally acceptable standards for both prevention and management of obstetric hemorrhage.[11]

Conclusion: The importance of maintaining a *continuous* study of maternal deaths cannot be overemphasized. Trends in the predominating causes of maternal mortality must be the target of education and training programs for all personnel who attend pregnant women. Error in judgment (Fig 12) as a factor in avoidability should be reduced.

The Ohio Maternal Mortality Study has served well to provide a wealth of valuable information and experiences. We shall continue to utilize them in various education programs.



13. A simple technique for bedside blood coagulation screening.[7]

REFERENCES

1. OSMA Committee on Maternal Health: Maternal mortality report for Ohio; a 10-year survey, 1955-1964. Ohio State Med J 63:323-332, 1967.

2. OSMA Committee on Maternal Health: Maternal deaths from hemorrhage due to abruptio placenta and associated afibrinogenemia. Ohio State Med J 65:918-929, 1969.

3. OSMA Committee on Maternal Health: Maternal deaths involving ruptured uterus. Ohio State Med J 58:316-318, 1962.

4. OSMA Committee on Maternal Health: Maternal deaths involving ruptured uterus (version and extraction). Ohio State Med J 57:547-548, 1961.

5. OSMA Committee on Maternal Health: Maternal deaths from hemorrhage due to ruptured uterus and associated afibrinogenemia, with statistical analysis of 75 cases. Ohio State Med J 65:1240-1242, 1969.

6. Sznejder MA: Maternal death from rupture of the uterus and amniotic fluid embolism. Amer J Obstet Gynec 84:249-250, 1962.

7. Messer RH: Coagulation problems in obstetrics. Med Clin N Amer 53:1085-1096, 1969.

8. Cyr DP, Mehta VB: Disseminated intravascular clotting. Med Clin N Amer 53:301-307, 1969.

9. Nesbitt REL, Aubry RH: High-risk obstetrics; value of semiobjective grading system in identifying the vulnerable group. Amer J Obstet Gynec 103:972-985, 1969.

10. Chai HSY, Birkam FF, Pichette JW, et al: Rupture of pregnant uterus. Mich Med J 67:955-960, 1968.

11. Committee on Maternal Health, Ohio State Medical Association: Guiding principles for obstetric care. Ohio State Med J 63:1612-1614, 1967.

Dr. Ruppersberg, 336 East State Street, Columbus, Ohio 43215.

Guiding principles for obstetric care

ANTHONY RUPPERSBERG, JR, MD

IT IS ESSENTIAL that every group studying maternal mortality and morbidity establish a set of principles delineating at least a *safe* level of satisfactory obstetric care. This article reviews the origin and development of a set of minimum standards known as *Guiding Principles for Obstetric Care,* devised by the Committee on Maternal Health, Ohio State Medical Association, after three years of intensive study and deliberation.

Perhaps the first such set of standards to be published was "Minimum Standards for Prenatal Care" issued by Kings County Medical Society's Maternal Welfare Committee in 1936.[1] Several years later the Kansas Medical Society's Committee on Maternal Welfare published an excellent treatise on the subject.[2]

In 1955, "Minimum Standards of Obstetric Care" emanated from the Massachusetts Medical Society's Committee on Maternal Welfare.[3] These three documents formed a nucleus for study in developing *Guiding Principles for Obstetric Care* in its original format, which appeared in 1957.[4]

Methodology included revision of basic principles in order to adapt them for use among practitioners in Ohio. Additions were made to allow conformity to sections of the Ohio law. Above all, the Committee realized that the final brochure must be concise, practical, and available!

Philosophical Aspects: Our committee was impressed with a fundamental philosophy contained in "Minimum Standards of Obstetrical Care" published by the Kansas committee:[2]

"The loss of a mother *rarely* develops from any unusual or bizarre complication. In the majority of cases the abnormality which ultimately leads to the death of the mother originates as a small deviation, from a simple and well-known warning, ignored or discounted until an irreversible state develops.

"The normality of obstetrics is its most dangerous feature. It demands that the physician be constantly on the alert."

To this we might add the thought from Tennyson in *Locksley Hall,* "Knowledge comes, but wisdom lingers."

Object of Guiding Principles: In developing these principles the committee resolved its aims into a threefold clause: (1) No patient will die a preventable maternal death, if these standards are met; (2) we employ the principles in an extensive educational program of ideal care; and (3) use the principles as a uniform guide in studying maternal death cases, in assessing responsibility, and in establishing avoidability factors.

Actually, then, the guiding principles are minimum standards for *ideal* obstetric *care,* based upon the committee's experience in maternal death studies. They prescribe the *minimum allowed* for ideal care!

Ideal Obstetric Care: Next on the committee's program of planning was the establishment of a concise set of features defining ideal obstetric care. These must be clear and applicable to a number of different situations. The following six features comprise these standards:

1. Patient cooperation. (Prompt and regular visits; notifying physician of danger signs; following instructions; no intervention as in case of criminal abortion).

2. Physician's knowledge. The physician has

Described is the development of a simple but sound set of minimum standards of obstetric care, and its aims and uses are established. Criteria for ideal obstetric care are defined; further education in this area is needed. Maternal mortality studies based on the principles for obstetric care demonstrate a need for better education in obstetric problems, early diagnosis of complications, more adequate consultation, proper facilities for appropriate treatment, and better records. They also show the hazards of unwarranted obstetrical and surgical intervention.

knowledge generally available relative to factors involved in maternal deaths.

3. Physician's experience. The physician's experience has enabled him to reach a high level of technical ability; he seeks consultation for complications arising in his patient.

4. Competent personnel. Personnel (consultants, house staff, nurses, aides, etc) are completely trained and experienced.

5. Adherence to well-established principles of obstetrics, currently published.

6. Facilities readily available. Resources and equipment of modern type are easily accessible for use. (A well-directed maternity section; 24-hour blood bank; adequate 24-hour laboratory service; 24-hour anesthesia service; suitable x-ray facilities).

Publication: After all of its elements were assembled, copies of the proposed document were submitted to various authorities for approval or correction. Eventually it was approved by the Ohio State Medical Association, obstetric-gynecology societies in Ohio, and the Maternal and Child Welfare Division, Ohio Department of Health.

The first edition of *Guiding Principles for Obstetric Care* was published in the November 1957 issue of the *Ohio State Medical Journal*.[4] Reprints were made available to various medical groups in Ohio which attended obstetric patients, to medical schools, schools of nursing, and maternity departments of Ohio hospitals. Of course members of the committee, elated by the conciseness of the published document, were eager to put it into use in cases of the Ohio Maternal Mortality Study.

Since its initial publication, the document has been revised three times to meet the technical changes in obstetric practice. The latest revision introduced a section on the *high-risk* obstetric patient.

Contents: Strangely enough, the committee admits that the material and recommendations contained in *Guiding Principles for Obstetric Care* are neither revolutionary nor mysterious; but they are sound, simple, and clear-cut! They were tailored to meet Ohio's problems, many of which are found in other states as well.

Briefly, several items which bear clinical importance, from our experience, may be emphasized in the following:

Prenatal Care: Early registration of the obstetric patient is emphasized, as are obtaining a good history and a complete physical examination. We have found that it is imperative to obtain hemoglobin and hematocrit values on the *first visit* and *repeat* these studies at least in the 36th to 38th week of gestation. Detection and treatment of anemias is important! Obesity and weight gain are defined. The high-risk obstetric patient and her early identification are emphasized together with required intensive care. The *number* of antepartum visits is not as important as the *quality* of observation and care rendered by the physician.

Intrapartum Care: Continuity of prenatal care and discovery of abnormal findings are stressed. The use of oxytocic drugs antepartum, precipitate delivery, and administration of an anesthetic (Ohio Code) are briefly treated with recommendations. Version and extraction and high forceps application are decried. (Ruptured uterus contributes to many maternal deaths in

*Nonpreventable		59
Preventable (71.4%)		148
Patient (P-1)	26	
Personnel (P-2)	99	
Both P-1 and P-2	23	
Other (P-3)	0	

*Unavoidable catastrophe.

1. Preventability in 207 maternal deaths, Franklin County Maternal Mortality Study, 1948-1968.

*Nonpreventable		56
Preventable		184
Patient (P-1)	29	
Personnel (P-2)	125	
Both P-1 and P-2	29	
Other (P-3)	1	

*Unavoidable catastrophe.

2. Preventability in 240 maternal deaths from hemorrhage, Ohio Maternal Mortality Study, 1955-1966.

Ohio, due to hemorrhage.) Consultation is recommended, in complications.

Postpartum Care: Procedures to prevent hemorrhage are advocated briefly. Likewise, a schedule of procedures to diagnose puerperal sepsis is defined. Follow-up examinations and instructions for family planning, especially for the high-risk patient, are advocated.

Use in Case Study: The Committee on Maternal Health, Ohio State Medical Association, meets three or four times each year. At each session a part of the meeting is devoted to a thorough study of individual cases reported on an anonymous basis.

The procedure is as follows:

1. Cases are classified by the simple majority vote of the committee as being either *nonmaternal* or *maternal* deaths (the latter related directly or indirectly to the pregnant state).

2. Maternal deaths are further classified as being nonpreventable (unavoidable catastrophe) or preventable (less than ideal care).

3. Preventable maternal deaths are then considered and classified further as to the factors involved. P-1 (patient factors) denotes patient error or omission, including criminal abortion. P-2 (personnel factors) refers to all individuals who attended the patient; in the case of a physician, it involves the assumptions that (a) he possessed all the knowledge currently available relating to factors involved in the death; (b) by experience he had reached a high level of technical ability; and (c) that he had available to him all the facilities present in a properly equipped hospital. P-3 (other factors) indicates miscellaneous factors involving resources or hospital equipment. In certain cases, more than one of these three factors may be assigned.

The factors in establishing preventability and avoidability have proven their significance in classifying each case. Furthermore, from a statistical evaluation, trends indicating a presence or lack of ideal care may be portrayed, as in the 21-year-old Franklin County Maternal Mortality Study (Fig 1).

Of the 207 maternal deaths, 71.4% were considered preventable, with *personnel* factors assigned in the great majority of cases.

In the Ohio study, 125 (76.6%) of the 240 maternal deaths resulting from hemorrhage were preventable, and again the personnel responsibility factor was predominant (Fig 2).

Sifting the statistics further, the avoidable factors of personnel responsibility focus upon the second and third principles of ideal obstetric care (Fig 3); further education in the problems related to obstetrics is indicated.

Other Publications: In the past decade many more sets of guides and standards of practice have been published. Obviously these emphasize facets in a laudable trend to improve *edu-*

cation and perfect the *practice* of obstetrics throughout the United States.

One of the first such standards especially directed toward hospital practice emanated from the Committee on Maternal Health, Minnesota State Medical Association.[5] In 1963 the Kansas Medical Society's Maternal Welfare Committee revised its original publication with admirable facets added to the State Maternal Death Study.[6] A booklet containing excellent details regarding both obstetric and gynecologic practice appeared in 1963. This was the first edition of the American College of Obstetricians and Gynecologists' *Manual of Standards*.[7] The second edition was updated and improved in many ways.[8] In 1965 obstetricians in connection with the Florida State Board of Health issued a brief but comprehensive booklet, *A Ready Reference to Current Obstetric Practice*.[9] The third revision of our *Guiding Principles for Obstetric Care* was published in 1967.[10]

The most distinguished directive for hospitals came in 1969; this ACOG booklet, *Standards for Obstetric-Gynecologic Hospital Services*,[11] is a miniature masterpiece, and promises to achieve universal usage in hospitals throughout the United States.

Conclusion: Adherence to well-established and medically accepted principles of obstetrics is the foundation for good maternal health. After extensive analysis and evaluation of maternal mortality data, the Committee on Maternal Health, Ohio State Medical Association, recommends *Guiding Principles for Obstetric Care*[10] to all members of the medical profession. Copies may be obtained upon request to the Association, 17 South High Street, Columbus, Ohio 43215.

Patient (P-1)		29
Inadequate prenatal care	6	
Patient error	23	
Personnel (P-2)		125
Inadequate prenatal care	1	
Error in judgment	119	
Error in technique	3	
Intercurrent disease	1	
Family error	1	
Patient & personnel (P-1, P-2)		29
Inadequate care	14	
Patient error	12	
Error in judgment	3	
Miscellaneous (P-3)		1
Inadequate supplies	1	

3. Avoidable factors, 184 preventable maternal deaths from hemorrhage, Ohio Maternal Mortality Study, 1955-1966.

REFERENCES

1. Kings County Society Maternal Welfare Committee: Minimum standards for prenatal care. Ohio State Med J 32:762-763, 1936.

2. Committee on Maternal Welfare, Kansas Medical Society: Minimum standards of obstetrical care. J Kansas Med Soc 54:51-61 (Feb), 1953.

3. Committee on Maternal Welfare, Massachusetts Medical Society: Minimum standards of obstetric care. New Eng J Med 252:739-740, 1955.

4. Committee on Maternal Health, Ohio State Medical Association: Principles of obstetric care. Ohio State Med J 53:1328-1329, 1957.

5. Committee on Maternal Health, Minnesota State Medical Association: Suggested Guide for Obstetric Hospital Practice. Minnesota Department of Health, Section on Maternal and Child Health, 1959.

6. Maternal Welfare Committee, Kansas Medical Society: Obstetric practice guide. J Kansas Med Soc 64:450-455, 1963.

7. Manual of Standards in Obstetric-Gynecologic Practice, ed 1. Chicago, American College of Obstetricians and Gynecologists, 1959.

8. Manual of Standards in Obstetric-Gynecologic Practice, ed 2. Chicago, American College of Obstetricians and Gynecologists, 1965.

9. Florida Medical Association: A Ready Reference to Current Obstetric Practice. Jacksonville, Florida State Board of Health, 1965.

10. Committee on Maternal Health, Ohio State Medical Association: Guiding principles for obstetric care. Ohio State Med J 63:1612-1614, 1967.

11. Standards for Obstetric-Gynecologic Hospital Services. Chicago, American College of Obstetricians and Gynecologists, 1969.

Dr. Ruppersberg, 336 East State Street, Columbus, Ohio 43215.

Obstetric

This article concerns observations of biochemical and physiologic effects on the mother and newborn of various anesthetics used during cesarean section. Further research is needed in the field of obstetric anesthesia; a researcher's approach to the problem is not only an academic but also an intensely practical one.

MATERIALS AND METHODS: Only patients delivered by cesarean section are included. Vaginal delivery is excluded, for it is most difficult to evaluate the data collected when they are complicated by the many unmeasurable changes which occur in a parturient. Furthermore, at cesarean it is easier to develop an experimental approach. The basic design of each observation was to collect the physiological and biochemical data considered to be important to answer certain questions. The former consisted of a continuous recording of intra-arterial blood pressure, subclavian venous pressure, pulse rate, electrocardiogram, and repetitive determinations of cardiac output. Biochemical determinations included the respiratory gases and certain metabolites such as glucose, lactic acid, pyruvic acid, sodium, potassium, and the plasma total osmotic pressure. In appropriate experiments the concentrations of Pentothal sodium and nitrous oxide were measured.

Maternal arterial blood was first collected and used as a control. Thence, maternal arterial blood and uterine venous blood were drawn simultaneously after inducing anesthesia and prior to emptying the uterus. At the moment of delivery, samples of umbilical vein and artery bloods were obtained. Via an indwelling catheter, newborns' blood specimens were collected shortly after birth and at the age of 1 hour.

In this manner physiologic and biochemical measurements were performed on the mother and newborn. There were no complications.

Results: *Spinal anesthesia*[1]*:* The most common physiologic pattern is a profound drop in blood pressure, bradycardia, reduction in subclavian venous pressure, and significant decrease in cardiac output. These physiologic changes are associated with increased arteriovenous oxygen difference across the uterus and increased venoarterial carbon dioxide difference. These changes in the two major maternal vessels apparently affect the umbilical vessels, for in both artery and vein a low-percentage saturation, decrease in pH, and elevation in carbon dioxide pressure are noted.

Single-Injection Caudal Anesthesia[2]*:* Several important differences are noted when comparing caudal to spinal blockade. With the former there is less decrease in intra-arterial blood pressure; pulse rate is not affected appreciably; cardiac output is not reduced, and venous pressure is not affected. Biochemically, the coefficient of oxygen utilization and carbon dioxide production across the uterus are less than with spinal anesthesia; fetal blood is not affected to the degree noted with subarachnoid blockade.

Cyclopropane Anesthesia[3]*:* The predominant physiologic pattern is an increase in intra-arterial blood pressure, venous pressure, and cardiac output. Pulse rate is affected little. Biochemically, uterine studies look "respectable," and there is no evidence of fetal and/or newborn hypoxemia. Further, data pertaining to glucose, lactic acid, and pyruvic acid fall within the limits considered to be normal in our experimental model.

Pentothal, Nitrous Oxide, Succinylcholine[4]*:* Our results indicate that the levels of the various metabolites measured are at least as close to the accepted normal ranges as those found in women undergoing cesarean section and exposed to epidural or cyclopropane anesthesia. Further analysis of the data suggests that nitrous oxide diffuses rapidly across the human placenta.[5]

Discussion: These observations provide information on the concentrations of various metabolites in the blood entering and leaving the pregnant human uterus, in the umbilical blood at birth, and in the blood of newborns of moth-

HARRY PRYSTOWSKY, MD

Anesthesia

ers receiving various types of anesthesia and at the time of cesarean section.

In regard to spinal anesthesia, several points are worthy of mention. The level of denervation may extend to two or as many as six spinal segments beyond the level of sensory anesthesia. Aiso, in pregnant women the response to autonomic blockade is aggravated, for it has been shown that in normal gestation the blood pressure is maintained mainly by neurogenic impulses. Finally, for the safe management of the patient, the maintenance of an adequate venous return is essential. The accepted method of accomplishing this is to employ a vasoconstrictor drug, and yet there is no information to suggest that such therapy is associated with a reduction in blood flow to the uterus. This effect might well be a real disadvantage to an organ that may already have its blood flow compromised—an assumption at the moment, but a reasonable one since it is the most likely explanation for the biochemical findings we have noted.

Single-injection caudal anesthesia is fundamentally different from spinal anesthesia in various ways. In addition to those already mentioned, its resultant hypotension is easier to correct (it may correct itself spontaneously), thereby minimizing the need for vasoconstrictor therapy. The biochemical findings suggest little or no interference with the flow of blood to the uterus.

Our studies show that the pregnant woman's response to cyclopropane anesthesia is the same as that of the nonpregnant adult. On the basis of physiologic data, we share the thinking of investigators who believe that it possesses a margin of safety.

In regard to Pentothal, nitrous oxide, and succinylcholine anesthesia, it appears that a rush approach to surgery is not mandatory; we have noted no obvious complications, clinical or biochemical, employing our present technique.

Conclusion: For both the mother and the fetus, there are real dangers associated with spinal anesthesia. Extradural anesthesia offers certain advantages not afforded by the spinal technique. The short duration of anesthesia obtained and accidents due to inadvertent insertion of the needle into the spinal canal seem to be drawbacks to its general usage. The hazards of cyclopropane anesthesia have been overemphasized. We cannot support the recommendation that it be used only in those circumstances where its advantage to the patient are outstanding. Until our knowledge is much expanded, and with due reservation for the limitations of our own studies, we favor Pentothal, nitrous oxide, and succinylcholine anesthesia; we avoid the hypotension induced by autonomic blockade and the incidence of depression in newborns associated with cyclopropane anesthesia.

Obstetric anesthesia is an important subject, and the choice of a given agent is of real significance. The unique sensitivity of the fetus to the effects of almost all forms of maternal anesthesia poses one of the most difficult problems in obstetrics. The purpose of this article is neither to advocate nor to belittle a given technique, but to point out that this subject requires further study.

REFERENCES

1. Stenger V, Andersen T, De Padua C, et al: Spinal anesthesia for cesarean section: physiological and biochemical observations. Amer J Obstet Gynec 90:51-63, 1964.

2. Stenger V, Andersen T, Eitzman D, et al: Extradural anesthesia for cesarean section: physiologic and biochemical observations. Obstet Gynec 25:802-809, 1965.

3. Stenger V, Andersen T, Eitzman D, et al: Cyclopropane anesthesia: physiologic and biochemical effects in human pregnancy. Amer J Obstet Gynec 96:201-212, 1966.

4. Stenger V, Blechner J, Andersen T, et al: Observations on pentothal, nitrous oxide, and succinylcholine anesthesia at cesarean section. Amer J Obstet Gynec 99:690-701, 1967.

5. Stenger V, Blechner J, Prystowsky H: A study of prolongation of obstetric anesthesia. Amer J Obstet Gynec 103: 901-907, 1969.

Dr. Prystowsky, Department of Obstetrics and Gynecology, University of Florida College of Medicine, Gainesville, Fla 32601.

This research was supported in part by USPHS grant HD-00546.

Experiences with IUD Complications

The complications of the intrauterine devices, both major and minor, are listed. The authors report their experiences with five patients in whom complications developed.

AMONG THE VARIOUS means available for contraception, the intrauterine device (IUD) is finding an important and useful place. However, there have been many reports of complications, and the physician who inserts the device should be aware of the potential problems it may cause.

The complications may be listed as follows:

Minor, Not Necessarily Serious: (1) Bleeding and spotting; (2) cramping; (3) expulsion of the IUD; (4) retraction of the IUD strings into the uterus; (5) dyspareunia; (6) intrauterine pregnancy; and (7) endometritis.

Major, Potentially Serious: (1) Ectopic pregnancy, tube; (2) ectopic pregnancy, ovary; (3) uterine perforation, occasionally causing intestinal obstruction; (4) parametritis, occasionally with phlebitis; and (5) hemorrhage, uncontrolled.

Case Reports: The overall complication rate seems sufficiently small to permit continued use of this contraceptive means. Several of our recent experiences are examples of problems that may be encountered.

Ectopic Pregnancy—Ovarian: During her routine checkup, a 24-year-old patient was found to have a cystic mass in the right adnexal region. Her only previous pregnancy resulted in a normal infant born four years ago. Her physician had inserted a Safticoil one year ago, and it caused no serious problems.

She gave no history of disturbed or missed menstrual periods, but she was admitted because the mass, 7 cm in diameter, was noted on several examinations. At laparotomy the uterus, both tubes, and left ovary were normal. The right ovary was converted to a chocolate colored, cystic mass in which normal ovarian tissue was not recognized. A right oophorectomy was performed.

The pathologist reported identifiable chorionic villi lined by single and double layers of trophoblasts (Fig 1). Fetal tissue was not seen in any of the sections. The final diagnosis was ovarian ectopic pregnancy.

Uterine Perforation: The patient was a 29-year-old white woman, gravida 2, para 2, whose last baby was delivered in April 1969. Her first delivery was in May 1966, and a Lippes Loop was inserted without difficulty in August 1966. This caused no problems, and it was later removed in order to permit the second pregnancy as planned.

In July 1969, three months after the last delivery, a Lippes Loop was easily reinserted. At routine checkup a month later, the strings attached to the IUD could not be seen. A roentgenogram showed the IUD to be lying in the cul-de-sac. The examiner thought he could palpate it even before the x-ray confirmation.

Under general anesthesia, a small colpotomy was adequate to locate and remove the IUD. Recovery was rapid and free of complications.

Two other patients have been seen with uterine perforation and, in both, the IUDs were

STEPHEN C. GREEN, MD
DAN C. HINKLE, MD
HERMAN I. KANTOR, MD

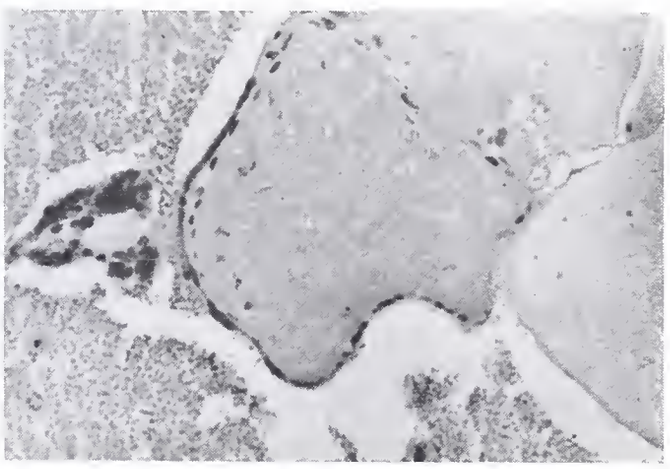
partially buried in the omentum. It was necessary to free them by sharp dissection before they were removed through wide colpotomy incisions.

The question regarding the absolute need for removal of an IUD which has perforated through the uterus and remains asymptomatically within the abdominal cavity has not been completely resolved. It would seem preferable to remove them before additional complications arise. However, with the patient's knowledge of their potential problems, they may be carefully watched.

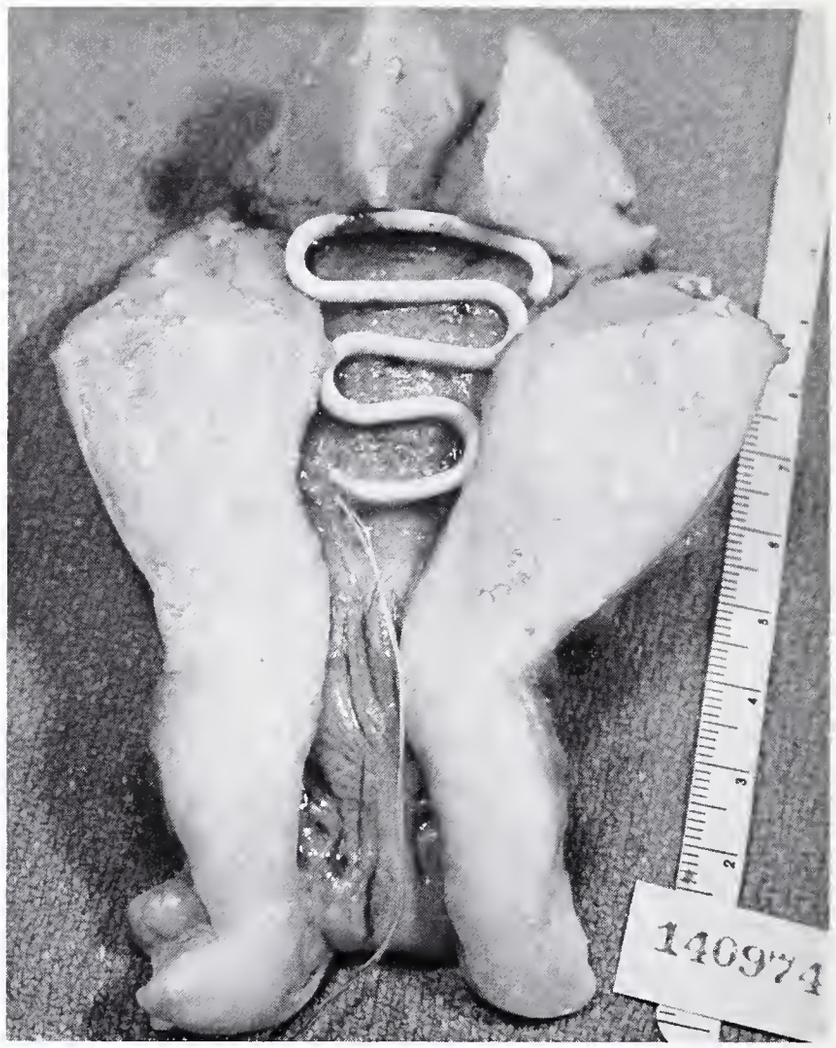
Ectopic Pregnancy—Tubal: A 26-year-old patient, gravida 2, para 2, had been delivered of her last baby in 1962 and had taken contraceptive pills until 1967, when her physician discovered a fibroid tumor in her uterus. In July 1967, a Lippes Loop was inserted without difficulty, and subsequently caused no unusual problems.

On Oct 7, 1969, she was admitted because of severe lower abdominal pain and weakness. Her previous menstrual period began on Sept 8, and she described it as being quite normal. Pelvic examination revealed the IUD strings in their usual place, but a tender mass was palpated in the left adnexal area. At laparotomy, the left tube was distended by hematosalpinx without leakage into the peritoneal cavity, and salpingectomy was performed.

The pathologist reported an ectopic tubal pregnancy with hematosalpinx. Chorionic villi, many of which were edematous and degenerating, were identified. No fetal tissues were found.



1. High-power view of degenerating villus with recognizable, persisting trophoblast tissue on its surface.



2. Position of IUD in the uterus.

Endometritis: The patient, gravida 3, para 3, was 30 years old; her youngest child was 6. Four years ago a Lippes Loop was inserted and the device had been in place since, exhibiting no symptoms.

The patient had recent complaints of dysmenorrhea and menometrorrhagia. Her uterus was enlarged, irregular, tender to touch, and not freely movable. The diagnosis was uterine fibroids, possible with adenomyosis, and a total hysterectomy was performed.

The uterus was opened carefully in order to leave the IUD undisturbed (Fig 2). Sections of the endometrium immediately adjacent to the IUD were studied. The pathologist reported that the endometrial tissue showed local atrophy with chronic inflammation (Figs 3, 4). The reaction of the endometrium, for many years in contact with this IUD, was astonishingly minimal.

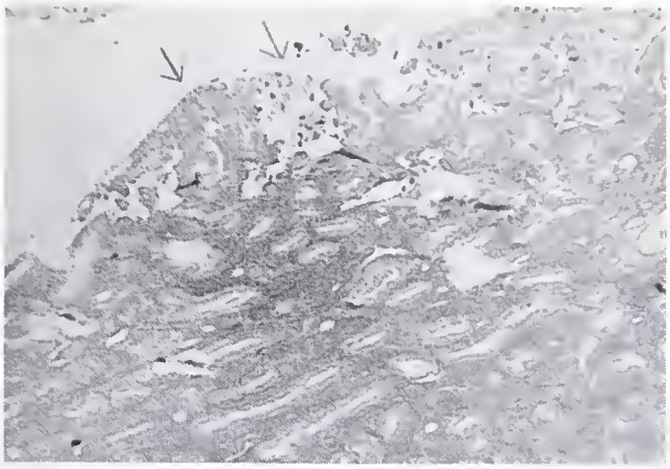
Dyspareunia: This patient was a 24-year-old. gravida 1, para 1, whose baby was born three months ago. A Lippes Loop was inserted with ease, and the string was cut fairly long to permit the patient to perform self-examination in order to ascertain the presence of the IUD. When she returned in two weeks for routine check, she stated that her husband complained of feeling the string during intercourse.

Assuming that the string was left too long, the examiner cut a piece off, leaving about 3 cm protruding from the cervix. One week later the patient returned stating that the string now scratched her husband's penis. Examination revealed that the string did indeed have a stiff, starchy feel, and, in sympathy with her husband, this IUD was removed and replaced with an older edition of the Lippes Loop with softer strings.

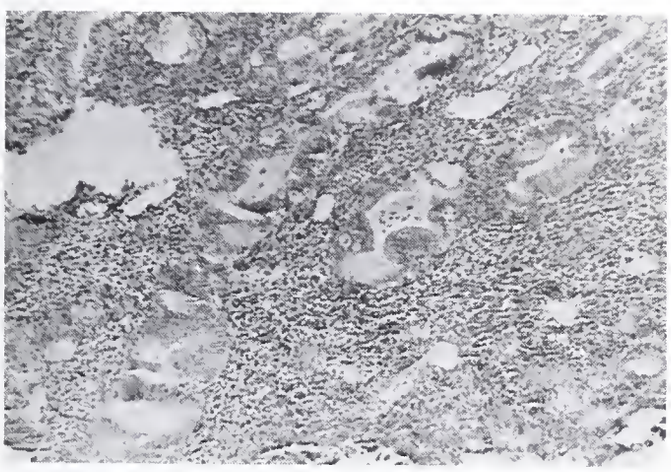
Discussion: The IUD may be called a contraceptive chastity belt for the uterus. Like all chastity belts, occasional failure may be anticipated, and does occur.

Our overall rate of effectiveness in preventing pregnancy, expressed not as women-years but as a percentage figure, is about 93% for the IUD, and more than 99% for the combined pill.

The IUD which is lying within the peritoneal cavity, asymptomatic and freely movable, may offer a problem in proper treatment. It would seem the better part of valor to remove the



3. Low-power view of the endometrial surface showing its irregularity where it conformed to the shape of the intrauterine device.



4. High-power view of the midportion of the functionalis of the endometrium in contact with the IUD which shows infiltration of lymphocytes in glands and among stromal cells.

IUD, even when laparotomy may be required. It is often impossible to coax the IUD toward the cul-de-sac where colpotomy may provide access to it. However, some patients insist on accepting the risk of retaining the IUD as long as it causes no symptoms or complications.

When intrauterine pregnancy occurs with the IUD in place, its retention usually does not interfere with the progress of the pregnancy. The strings are drawn into the uterus as it enlarges. At the time of the delivery, the IUD may be expressed with the placenta, or it may be found lying within the uterine cavity. Perforation as a result of the pregnancy probably is extremely rare if it does occur. Alteration of fetal growth or development is not anticipated.

The IUD is a useful addition to the gynecologist's contraceptive aids.

Dr. Green, Headquarters, 854th Medical Group (SAC), Malmstrom AFB, Great Falls, Mont.

Dr. Hinkle, USAF Hospital, Warren AFB, Wyoming.

Dr. Kantor, 8210 Walnut Hill Lane, Dallas, Tex 75231.

CERVICAL CONE, FROZEN SECTION DIAGNOSIS

REVIEW OF 210 CASES

BYRON B. HOLT, MD; J. T. ARMSTRONG, MD

In 210 cases, frozen section diagnosis of a cervical cone specimen showed a 93% accuracy rate. Where there was disparity between the preliminary and permanent diagnoses, it was not of sufficient degree to alter the treatment or jeopardize the patient. In this series, carcinoma in situ was prevalent in the 25-30 year age group, and predominant in the 30-35 year age group.

THE AMERICAN CANCER Society estimates that cancer of the cervix accounts for 10,000 deaths a year in the United States. Considering the age group in which carcinoma of the cervix is most prevalent, this would be equivalent to annihilating annually every mother in a town the size of Longview, Harlingen, or Arlington, Texas.[11]

The only satisfactory cure for cancer is early detection and surgical excision of premalignant and noninvasive lesions. Because of the treacherous and often unpredictable nature of cancer, the diagnosis must be accurate and the treatment swift. The past decade has seen the progressive development of diagnostic tools and skills utilized by the pathologists and gynecologist in evaluating the cervix uteri. Each new diagnostic tool must prove its accuracy before it can be accepted.

The cone, frozen section diagnosis of lesions of the cervix uteri has become an established surgical procedure at Hermann Hospital in Houston. The frozen section diagnosis as the primary pathological criterion for deciding the nature and the degree of surgery for a cervical lesion has been progressively accepted. However, the frozen section diagnosis is not accepted with equal enthusiasm and confidence by all physicians. There are those who view this procedure with skepticism and distrust.

The purpose of this article is to review a series of frozen section diagnoses and to accumulate data that might increase our knowledge concerning the diagnosis and treatment of cervical lesions. It will give us the opportunity to evaluate the cone, frozen section technique to see if our confidence is justifiable.

Methods and Materials: Two hundred and ten cervical cone specimens were accumulated at Hermann Hospital over a four-year period from January 1965 through December 1968. Hermann Hospital, a combined service of private and part-pay clinic patients, is in the Texas Medical Center in Houston.

The cervical cone specimen is obtained by gentle application of Lugol's or Schiller's stain to the visible endocervix and pars vaginalis. Any suspected area is outlined and included in the cold-knife cervical specimen. The specimen is sent immediately to the pathologist where blocks of tissue 3 to 4 mm thick are placed on microtome platform disks and rapidly frozen with carbon dioxide spray. The microtome platform disks are inserted into a rotary microtome where 8 to 12 sections are cut. These sections, averaging 5 to 7 μ in thickness, are placed on a glass slide for rapid hematoxylin and eosin staining.

The pathologist reviews the slides and, if

Age	Cervicitis	Cervical Dysplasia	Carcinoma In Situ	Invasive Carcinoma*
20-30	0	22	22	0
30-40	0	25	27	7
40-50	3	18	19	1
50-60	0	8	2	1
60-over	2	2	3	4

*Five of the 13 invasive carcinomas were microinvasion.

1. Review of 167 cervical cone diagnoses, private patients.

Age	Cervicitis	Cervical Dysplasia	Carcinoma In Situ	Invasive Carcinoma*
20-30	0	8	13	3
30-40	0	5	4	0
40-50	0	1	2	0
50-60	0	1	1	0
60-over	0	1	3	1

*Three of the four invasive carcinomas were microinvasion.

2. Review of 43 cervical cone diagnoses, clinic patients.

necessary, cuts additional sections. The surgeon then receives a preliminary report. The process of cutting sections, freezing, staining, and interpretation requires about 20 minutes.

The preliminary frozen section diagnosis allows the surgeon to make a decision in treating the cervical lesion while the patient is still anesthetized and on the operating table. The permanent diagnosis is then obtained by cutting additional sections from the same cone specimen and from the hysterectomy specimen. The sections are fixed in permanent paraffin blocks where later they can be studied extensively.

Results: Eighty percent of the cases reviewed were private patients and 20% were clinic patients; 70% were Anglo and 30% were Negro, and their ages ranged from 19 to 84 years. Fifteen patients had never been pregnant; nine were grand multigravidas having had more than seven pregnancies.

Cervical Smears: There were 202 cervical Papanicolaou smears reported. Of these, 7 were class 2, having atypical cells present; 174 were class 3, with cells arousing a suspicion of malignant neoplasm; 19 were class 4, with fairly conclusive evidence of a malignant neoplasm; and 2 were class 5, with conclusive evidence of a malignant neoplasm.

Cervical Biopsies: Cervical biopsies had been performed in 36 cases. Most were office procedures and had been performed a few days to six weeks prior to admission. The biopsy diagnosis in 27 of these cases was identical to the diagnosis rendered after study of the permanent surgical specimens. In nine cases, the diagnoses were different.

Permanent Diagnosis: Cervical lesions have been divided into four major categories as proposed by the Cancer Committee of the International Federation of Gynecology and Obstetrics.[1] These categories are cervicitis, dysplasia, carcinoma in situ, and invasive carcinoma. Depending on the degree of cellular dyskaryosis, cervical dysplasia has been further divided into mild, moderate, and severe dysplasia. In recent years the ambiguous zone between carcinoma in situ and invasive carcinomas has become recognized by pathologists as microinvasion or superficial invasion.

Of the 210 specimens examined, the diagnoses were as follows: 4 cervicitis (2%); 90 cervical dysplasia (43%); 99 carcinoma in situ (47%); and 17 invasive carcinoma (8%). Of the 90 specimens with cervical dysplasia, 63 showed mild to moderate dysplasia and 27 showed severe dysplasia. Of the 17 specimens of invasive carcinoma, 11 were classified as microinvasion and 6 as frank invasion of the cervix.

Regarding the age distribution and socioeconomic status of the patients, Fig 1 shows diagnoses according to age group in 167 private patients. Cervical dysplasia was diagnosed frequently and distributed equally among all age groups between 20 and 50 years. Note that 7 of the 13 patients with invasive carcinoma were in the 30-40 year age range; 4 had frank invasion and 3 had microinvasion. Fig 2

Age Group	Carcinoma In Situ	
	Clinic Patients %	Private Patients %
20-30	57	30
30-40	16	36
40-50	8	27
50-60	3	3
60-over	13	4

3. Age distribution of carcinoma in situ among clinic and private patients.

Diagnosis	Nulligravidas	Grand Multigravidas
Cervicitis	0	0
Cervical dysplasia	5	3
Carcinoma in situ	8	6
Invasive carcinoma	2*	0
Total	15	9

*Microinvasion.

4. Cervical cone, frozen section diagnoses among nulligravidas and grand multigravidas.

shows the data for 43 clinic patients. Of the 23 cases of carcinoma in situ, 13 were in the 20-30 year age range. Of the 4 cases of invasive carcinoma, 3 had microinvasion and were in the 20-30 year age range.

Fig 3 shows the age distribution of carcinoma in situ among clinic and private patients. Note the early age at which carcinoma in situ has been found in both groups; 57% of all carcinoma in situ among clinic patients occurred between 20 and 30 years of age, and 30% of the carcinoma in situ among private patients was found in that age group.

These statistics illustrate the shift of cervical carcinoma in situ to a younger population. This disease has most often been diagnosed in patients betwen 35 and 40 years of age, but in this series, it was prevalent in a much younger age group (28-33 years).

Pregnancies: In the 20-30 year age range, the average number of pregnancies was 4.2 per clinic patient and 2.3 per private patient—a ratio of 2:1. In the 30-40 year age range, clinic patients averaged 2.2 pregnancies and private patients averaged 2.3 pregnancies—a ratio of 1:1.

Fifteen nulligravida patients were reported, an incidence of 1 per 14 cervical conizations; eight cases of carcinoma in situ and two cases of microinvasion of the cervix were noted. Only nine grand multigravida patients were reported; six cases of carcinoma in situ were recorded, but no invasive carcinoma was reported (Fig 4). The average age of the nulligravidas was 33.2 years, and the average age of the grand multigravidas was 42 years.

Treatment: After reviewing the frozen section diagnosis, the surgeon must proceed with the proper course of therapy. Many variables are involved in making a decision, such as the patient's age, parity, and degree of pathology. Procedures used in the 210 cases in this series are listed in Fig 5, which also gives the average length of hospitalization following each procedure.

Each hysterectomy specimen was evaluated for possible residual pathology not included in the cone specimen. Of the 159 hysterectomy specimens evaluated, 43, or roughly one-fourth, showed residual pathology.

Fifty, or about one-third, of the surgical specimens examined showed concomitant uterine and cervical disease such as leiomyomata, endometriosis, and adenomyosis. Three incidental low-grade leiomyosarcomas were found among the hysterectomy specimens.

Frozen Section Diagnosis Versus Permanent Surgical Diagnosis: In 194 of the 210 cases reviewed, the pathologic diagnoses from the frozen section specimens and the permanent surgical specimens were identical. In 16 cases the diagnoses were not identical, but in 14 of these cases the diagnoses were changed when additional permanent sections of the cone specimen were cut and reviewed by the pathologist. All 14 diagnoses were upgraded to a more advanced cervical lesion (Fig 6).

Procedure	Number	Average Hospital Stay (Days)
Cervical cone only	51	2.5
Vaginal hysterectomy	98	6.7
Vaginal hysterectomy with colporrhaphy	27	7.9
Abdominal hysterectomy	22	7.8
Abdominal hysterectomy with bilateral salpingo-oophorectomy	12	7.8

5. Treatment and hospital stay following cervical conization, 210 cases.

Frozen Section Diagnosis	No. Cases	Permanent Surgical Diagnosis	No. Cases
Cervicitis	3	Cervical dysplasia*	2
		Cervical dysplasia†	1
Cervical dysplasia*	2	Carcinoma in situ	2
Cervical dysplasia†	7	Carcinoma in situ	6
		Invasive carcinoma‡	1
Carcinoma in situ	2	Invasive carcinoma‡	2

*Mild to moderate. †Severe. ‡Microinvasion.

6. Differences in preliminary frozen section and permanent surgical diagnoses.

The cytological findings which were most often misinterpreted were in the area of cervical dysplasia. As a pathologist poetically stated, "One man's carcinoma in situ is another man's dysplasia."[3]

In two of the 16 cases there was a disparity between the frozen section diagnosis and the permanent diagnosis. The disparity occurred not with the permanent sections of the cone specimen, but with the permanent sections of the hysterectomy specimen. Both cases had preliminary class 3 Papanicolaou smears, and both had a preliminary frozen section diagnosis of cervicitis with the cone specimen. In one case a dilatation and curettage of the endocervical canal above the cone area was performed. Examination of curetted tissue revealed frank invasive carcinoma. In the second case a vaginal hysterectomy was performed, and carcinoma in situ was found above the cone area high in the endocervical canal.

The frozen section diagnosis was correct in 196 of 210 cases, or 93%. These statistics are similar to those of Kaufman, Powell, and Kolstad who reported accuracy rates of 90, 91, and 88% respectively.

The paramount value in reviewing these statistics is to note any significant change in the frozen section diagnosis and the permanent diagnosis. What effect would these changes have on the course of treatment and subsequent outcome of existing disease of the cervix? When a premalignant lesion, carcinoma in situ, or microinvasion of the cervix exist, hysterectomy with wide cuff excision is the accepted mode of treatment. Only the diagnosis of frank invasion needs to be excluded. Distinguishing between degrees of cervical dysplasia, carcinoma in situ, and microinvasion becomes an academic point.

Of the 210 cervical conizations reviewed, frank invasion was diagnosed correctly nine times, and the proper course of treatment was begun. No frank invasive carcinoma of the cervix was misdiagnosed. In the 14 cases in which a more advanced cervical lesion was diagnosed after the permanent sections of the cervical cone had been reviewed, carcinoma in situ was diagnosed eight times and microinvasion was diagnosed four times. In each case a vaginal or abdominal hysterectomy was performed, which would be the treatment of choice. At no time was the change in diagnosis sufficient to alter the course of treatment or jeopardize the patient.

Summary and Observations: Review of 210 cervical conizations with frozen section diagnosis showed the following:

1. One of every four preoperative cervical biopsies was inaccurate and in disagreement with the permanent diagnosis of the cervical lesion.

2. Cervical lesions were associated with a high degree of concomitant uterine and cervical pathology.

3. The nulligravida is not exempt from cervical cancer. One of every 14 cases reported

was a nulligravida with an average age of 33 years.

4. Patients with advanced cervical lesions at an early age were noted to have had numerous pregnancies.

5. One of every four hysterectomy specimens examined had *residual disease* which was not included in the cervical cone specimen.

6. If the cervical cone specimen does not correlate with the degree of cellular pathology as demonstrated by the Papanicolaou smear, the surgeon should suspect that a lesion exists above the boundaries of the cervical cone.

7. Carcinoma in situ was prevalent in the 25-30 year age group and predominant in the 30-35 year age group. This lowers the age of incidence of carcinoma in situ almost five years, particularly in the clinic population.

8. No case of frank invasive carcinoma was misdiagnosed.

9. The frozen section diagnosis was accurate in 93% of the cases. When a disparity in the diagnosis did exist, the disparity was not sufficiently significant to alter the treatment nor jeopardize the patient.

10. These statistics justify our confidence in the cone, frozen section technique as a reliable and useful procedure.

REFERENCES

1. Adelman HC, Hajdu SI: Role of conization in the treatment of cervical carcinoma in situ. Amer J Obstet Gynec 98:173-179, 1967.

2. Cavanagh D, Rutledge F: The cervical cone biopsy-hysterectomy sequence and factors affecting the febrile morbidity. Amer J. Obstet Gynec 80:53-59, 1960.

3. Hulme GW, Eisenberg HS: Carcinoma in situ of the cervix in Connecticut. A review, 1949-1962. Amer J Obstet Gynec 102:415-425, 1968.

4. Kaufman RH: Frozen section evaluation of the cervical conization specimen. Clin Obstet Gynec 10:837-852, 1967.

5. Kaufman RH, Jones OG, Cox HA: Cervical conization with frozen section diagnosis. Amer J Obstet Gynec 92:71-77, 1965.

6. Kolstad P: Carcinoma of the cervix, stage 0. Amer J Obstet Gynec 96:1098-1111, 1966.

7. Le Maire WJ, Ferguson JH: Conization of the cervix—a supplement to curettage for diagnosis in postmenopausal bleeding. Obstet Gynec 28:704-706, 1966.

8. Malinak LR, Jeffrey RA, Dunn WJ: The conization-hysterectomy time interval: a clinical and pathologic study. Obstet Gynec 23:317-329, 1964.

9. Margulis RR, Ely CW, Ladd JE: Diagnosis and management of stage IA (microinvasive) carcinoma of the cervix. Obstet Gynec 29:529-538, 1967.

10. McCann SW, Mickal A, Crapanzano JR: Sharp conization of the cervix; observations of 501 consecutive patients. Obstet Gynec 33:470-475, 1969.

11. Novak ER, Woodruff JD: Gynecologic and Obstetric Pathology. Philadelphia, WB Saunders Co, 1967.

12. Powell JM, Jones FS, Dougherty RE, et al: Cervical carcinoma: correlation of microtome cryostat, cytologic, and histologic diagnoses. Obstet Gynec 33:476-481, 1969.

13. Wied GL: Proceedings, first international congress of exfoliative cytology. Philadelphia, J B Lippincott Company, 1961.

Dr. Holt, 9320 Westview, Houston, Tex 77055.

Dr. Armstrong, Department of Obstetrics and Gynecology, Hermann Hospital, Houston, Tex 77025.

CALORIES / 7 oz. Serving*

Beef Broth	22	Vegetable	68
Consommé	29	Tomato	69
Chicken with Rice	43	Cream of Asparagus	70
Chicken Gumbo	48	Cream of Chicken	76
Chicken Noodle	54	Cream of Mushroom	115
Cream of Potato	58	Green Pea	116
Chicken Vegetable	60	Cream of Shrimp (Frozen)	132
Vegetable Beef	66	Bean with Bacon	133

In planning high or low calorie diets, Campbell's more than 50 different soups offer you a wide choice. And, most of Campbell's Soups contain a wide variety of ingredients that can serve as supplementary sources of many essential nutrients.

* From "Nutritive Composition of Campbell's Products" which gives values of important nutritive constituents of all Campbell's Products. For your copy, write to Campbell Soup Company, Dept. 536, Camden, New Jersey 08101.

There's a soup for almost every patient and diet ..for every meal and, it's made by *Campbell*

A fresh choice
in oral contraception
Demulen®
Each tablet contains 1 mg ethynodiol diacetate/50 mcg ethinyl estradiol
A distinctive combination containing 1 mg. of ethynodiol diacetate,
Searle's unique progestin with an unmatched record of
acceptance in oral contraception, and 50 mcg. of ethinyl estradiol.
The same low incidence of breakthrough bleeding and of other side effects you have
come to appreciate with ethynodiol diacetate and mestranol plus
all the convenient dosage schedule and packaging features you expect from Searle.
The choice is yours!

A fresh choice in oral contraception

Demulen®

Each tablet contains 1 mg ethynodiol diacetate/50 mcg ethinyl estradiol

Actions—Demulen acts to prevent ovulation by inhibiting the output of gonadotropins from the pituitary gland. Demulen depresses the output of both the follicle-stimulating hormone (FSH) and the luteinizing hormone (LH).

Special note: Oral contraceptives have been marketed in the United States since 1960. Reported pregnancy rates vary from product to product. The effectiveness of the sequential products appears to be somewhat lower than that of the combination products. Both types provide almost completely effective contraception.

An increased risk of thromboembolic disease associated with the use of hormonal contraceptives has now been shown in studies conducted in both Great Britain and the United States. Other risks, such as those of elevated blood pressure, liver disease and reduced tolerance to carbohydrates, have not been quantitated with precision. Long-term administration of both natural and synthetic estrogens in subprimate animal species in multiples of the human dose increases the frequency of some animal carcinomas. These data cannot be transposed directly to man. The possible carcinogenicity due to the estrogens can be neither affirmed nor refuted at this time. Close clinical surveillance of all women taking oral contraceptives must be continued.

Indication—Demulen is indicated for oral contraception.

Contraindications—Patients with thrombophlebitis, thromboembolic disorders, cerebral apoplexy or a past history of these conditions, markedly impaired liver function, known or suspected carcinoma of the breast, known or suspected estrogen-dependent neoplasia and undiagnosed abnormal genital bleeding.

Warnings—The physician should be alert to the earliest manifestations of thrombotic disorders (thrombophlebitis, cerebrovascular disorders, pulmonary embolism and retinal thrombosis). Should any of these occur or be suspected the drug should be discontinued immediately.

Retrospective studies of morbidity and mortality in Great Britain and studies of morbidity in the United States have shown a statistically significant association between thrombophlebitis, pulmonary embolism, and cerebral thrombosis and embolism and the use of oral contraceptives. There have been three principal studies in Britain[1-3] leading to this conclusion, and one[4] in this country. The estimate of the relative risk of thromboembolism in the study by Vessey and Doll[3] was about sevenfold, while Sartwell and associates[4] in the United States found a relative risk of 4.4, meaning that the users are several times as likely to undergo thromboembolic disease without evident cause as nonusers. The American study also indicated that the risk did not persist after discontinuation of administration, and that it was not enhanced by long-continued administration. The American study was not designed to evaluate a difference between products. However, the study suggested that there might be an increased risk of thromboembolic disease in users of sequential products. This risk cannot be quantitated, and further studies to confirm this finding are desirable.

Discontinue medication pending examination if there is sudden partial or complete loss of vision, or if there is a sudden onset of proptosis, diplopia or migraine. If examination reveals papilledema or retinal vascular lesions medication should be withdrawn.

Since the safety of Demulen in pregnancy has not been demonstrated, it is recommended that for any patient who has missed two consecutive periods pregnancy should be ruled out before continuing the contraceptive regimen. If the patient has not adhered to the prescribed schedule the possibility of pregnancy should be considered at the time of the first missed period.

A small fraction of the hormonal agents in oral contraceptives has been identified in the milk of mothers receiving these drugs. The long-range effect to the nursing infant cannot be determined at this time.

Precautions—The pretreatment and periodic physical examinations should include special reference to the breasts and pelvic organs, including a Papanicolaou smear, since estrogens have been known to produce tumors, some of them malignant, in five species of subprimate animals. Endocrine and possibly liver function tests may be affected by treatment with Demulen. Therefore, if such tests are abnormal in a patient taking Demulen, it is recommended that they be repeated after the drug has been withdrawn for two months. Under the influence of progestogen-estrogen preparations preexisting uterine fibromyomas may increase in size. Because these agents may cause some degree of fluid retention, conditions which might be influenced by this factor, such as epilepsy, migraine, asthma, cardiac or renal dysfunction, require careful observation. In breakthrough bleeding, and in all cases of irregular bleeding per vaginam, nonfunctional causes should be borne in mind. In undiagnosed bleeding per vaginam adequate diagnostic measures are indicated. Patients with a history of psychic depression should be carefully observed and the drug discontinued if the depression recurs to a serious degree. Any possible influence of prolonged Demulen therapy on pituitary, ovarian, adrenal, hepatic or uterine function awaits further study. A decrease in glucose tolerance has been observed in a significant percentage of patients on oral contraceptives. The mechanism of this decrease is obscure. For this reason, diabetic patients should be carefully observed while receiving Demulen therapy. The age of the patient constitutes no absolute limiting factor, although treatment with Demulen may mask the onset of the climacteric. The pathologist should be advised of Demulen therapy when relevant specimens are submitted. Susceptible women may experience an increase in blood pressure following administration of contraceptive steroids.

Adverse reactions observed in patients receiving oral contraceptives—A statistically significant association has been demonstrated between use of oral contraceptives and the following serious adverse reactions: thrombophlebitis, pulmonary embolism and cerebral thrombosis.

Although available evidence is suggestive of an association, such a relationship has been neither confirmed nor refuted for the following serious adverse reactions; neuro-ocular lesions, e.g., retinal thrombosis and optic neuritis.

The following adverse reactions are known to occur in patients receiving oral contraceptives: nausea, vomiting, gastrointestinal symptoms (such as abdominal cramps and bloating), breakthrough bleeding, spotting, change in menstrual flow, amenorrhea during and after treatment, edema, chloasma or melasma, breast changes (tenderness, enlargement and secretion), change in weight (increase or decrease), changes in cervical erosion and cervical secretions, suppression of lactation when given immediately post partum, cholestatic jaundice, migraine, rash (allergic), rise in blood pressure in susceptible individuals and mental depression.

Although the following adverse reactions have been reported in users of oral contraceptives, an association has been neither confirmed nor refuted: anovulation post treatment, premenstrual-like syndrome, changes in libido, changes in appetite, cystitis-like syndrome, headache, nervousness, dizziness, fatigue, backache, hirsutism, loss of scalp hair, erythema multiforme, erythema nodosum, hemorrhagic eruption and itching.

The following laboratory results may be altered by the use of oral contraceptives: hepatic function: increased sulfobromophthalein retention and other tests; coagulation tests: increase in prothrombin, Factors VII, VIII, IX and X; thyroid function: increase in PBI and butanol extractable protein bound iodine, and decrease in T^3 uptake values; metyrapone test and pregnanediol determination.

References: 1. Royal College of General Practitioners: Oral Contraception and Thrombo-Embolic Disease, J. Coll. Gen. Pract. *13*: 267-279 (May) 1967. *2.* Inman, W. H. W., and Vessey, M. P.: Investigation of Deaths from Pulmonary, Coronary, and Cerebral Thrombosis and Embolism in Women of Child-Bearing Age, Brit. Med. J. *2*:193-199 (April 27) 1968. *3.* Vessey, M. P., and Doll, R.: Investigation of Relation Between Use of Oral Contraceptives and Thromboembolic Disease. A Further Report, Brit. Med. J. *2*:651-657 (June 14) 1969. *4.* Sartwell, P. E.; Masi, A. T.; Arthes, F. G.; Greene, G. R., and Smith, H. E.: Thromboembolism and Oral Contraceptives: An Epidemiologic Case-Control Study, Amer. J. Epidem. *90*:365-380 (Nov.) 1969.

0A4

SEARLE Where "The Pill" Began

G. D. Searle & Co., P.O. Box 5110, Chicago, Illinois 60680

Mylanta®
24 million hours a day.

Through the day, every day,
ulcer patients take
one million doses of Mylanta
for relief of ulcer pain.

Mylanta®
LIQUID/TABLETS

aluminum and magnesium hydroxides plus simethicone

Good taste = patient acceptance
Relieves G.I. gas distress*
Non-constipating

*with the defoaming action of simethicone

Stuart PHARMACEUTICALS Pasadena, Calif. 91109
Division of Atlas Chemical Industries, Inc., Wilmington, Del. 19899

Porfirio Salinas puts finishing touches "Bluebonnets in Shadow"

The world of Porfirio Salinas is as big and as beautiful as the great Southwest.

The works of Salinas have captured a great, wild, restless land in its Nostalgic Charm and tranquility. There is power in Salinas's calm. A game trail picks its way through the brush; clear, shallow streams tumble over limestone; a buck watches while a doe drinks; willows and thorny huisache dip their feet in the water; velvet bluebonnets mingle with pale green prickly pear; a dry dirt road wanders through sunshine and shadows to a distant house. From the tip of Texas to The White House . . . internationally acclaimed . . . now you can have Salinas lithographs which painstakingly reflect the color and texture, the bold and delicate strokes, of the original canvas.

Choose any or all of the paintings illustrated here . . . simply check your selection(s) on the coupon, enclose check or money order and mail today. If you are not completely satisfied, you may return your picture to us in good condition for full refund.

$15

Each plus 4.25% sales tax for Texas residents, (except Nos. 8 and 9—$19.50 each)

Expand the walls of your home or office with Salinas's majestic distances. Remember someone very special at Christmas time.

Bluebonnets in Shadow 24"x16" **$15.00**

2. *Lazy Afternoon* 24"x16" **$15.00**

3. *Rio Frio* 24"x18" **$15.00**

4. *Deer Country* 24"x16" **$15.00**

SOCIAL NOTES . . . 4¼" x 5½" of assorted color illustrations are available at $2.00 per box of ten. A memorable gift for all ages.

LAP KITS . . . 20 notes and 20 envelopes with "Bluebonnet Time in Texas" on the cover. $1.50

5. *Breath of Spring—Texas Bluebonnets* 24"x18" **$15.00**

6. *Pedernales Country* 24"x18" **$15.00**

7. *Bluebonnet Time in Texas* 24"x18" **$15.00**

8. *Bluebonnets and Oaks* 24"x36" **$19.50**

9. *Rocky Creek* 24"x36" **$19.50**

Two NEW Salinas Lithographs!

"Bluebonnets and Oaks" and "Rocky Creek" (shown above) most recently authorized for reproduction, are larger than the others (36" x 24") and are available at $19.50 each.

A Christmas Gift of Lasting Beauty . . . nine of Salinas's favorite paintings. The only series of Salinas's works to be reproduced and offered to the public. Full color lithographs in all the wonder of the original art make a special Christmas gift for a special person.

WALLACE ENGRAVING CO.

P.O. Box 1485 Austin, Texas 78767

Please send the following reproductions:

- ☐ *1. Bluebonnets in Shadow $15.00*
- ☐ *2. Lazy Afternoon $15.00*
- ☐ *3. Rio Frio $15.00*
- ☐ *4. Deer Country $15.00*
- ☐ *5. Breath of Spring $15.00*
- ☐ *6. Pedernales Country $15.00*
- ☐ *7. Bluebonnet Time in Texas $15.00*
- ☐ *8. Bluebonnets and Oaks $19.50*
- ☐ *9. Rocky Creek $19.50*
- ☐ *Social Notes @ $2.00 per box*
- ☐ *Lap Kits @ $1.50*

☐ *Check Enclosed* ☐ *Money Order* ☐ *Cash*

Add 4.25% sales tax to total amount of order

Name_____

Street_____

City_____ **State**_____ **Zip**_____

TM - TBJ

COMPLETE OFFICE SCREENING FOR PORPHYRIA

FRED F. CASTROW II, MD
DONALD F. FINCHER, MD
GORDON C. MILLS, PhD
J. FRED MULLINS, MD

All varieties of porphyria can be detected by the office screening methods described herein. Patients with photosensitive eruptions should be evaluated for porphyria. When any of the three screening tests is positive, appropriate quantitative tests should be performed on urine[6-8] and blood.[4] The main advantages offered by this three-step technique are economy, reliability, and ease of performance.

A THREE-STEP PROCEDURE FOR complete office screening for all varieties of porphyria is presented. Disposable plastic columns charged with anion exchange resins are used. The resins will differentially absorb and elute urinary porphobilinogen and porphyrins from interfering urinary materials. The Rimington and Cripps screening test for blood protoporphyrins completes the simplified detection of the porphyria spectrum. Classification of porphyria and laboratory findings in the various types are shown in Fig 1.

Urinary Porphobilinogen Screening Test (Modified Mauzerall and Granick Method[1]): A disposable plastic column (Fig 2) charged with anion exchange resin (Dowex 1-X8, 100/200 mesh, acetate ionic form) is the basis for this procedure. The resin is moistened with 1 ml of distilled water. A 4 ml aliquot of fresh urine is poured into the reservoir of the column and allowed to drip through the anion exchange resin. The unabsorbed materials are washed from the column with 7.5 ml of distilled water (full reservoir). After the water has flowed through the column, porphobilinogen is eluted from the column by the addition of 2 ml of 1 M acetic acid (1:17.4 dilution of glacial acetic acid) and 2 ml of 0.2 M acetic acid (1.5 dilution of 1 M acetic acid).

These two elutions are collected in a test tube to which is added 4 ml of Ehrlich's reagent III (15 gm of p-dimethyl-aminobenzaldehyde dissolved in 65.6 ml concentrated hydrochloric acid and 194.4 ml of glacial acetic acid).

Color formation is maximal in about five minutes; red indicates positive results. Distilled water is carried through the same procedure if a control is desired for comparison.

Urinary Porphyrin Screening Test[2]: A disposable plastic column (Fig 2) charged with anion exchange resin (Dowex 1-X8, 50/100 mesh, chloride form) is used. Approximately 1 ml of distilled water is poured into the reservoir of the column to moisten the resin and to ensure that the column is properly packed. A 4 ml aliquot of urine (mixed well if any precipitate is present) is then poured into the reservoir of the column and allowed to drip through the anion exchange resin. The unabsorbed materials are washed through the column with 7.5 ml of distilled water (full reservoir).

After the water has flowed through the column, porphyrins are eluted by the addition of two 2-ml portions of 3 N hydrochloric acid (1:4 dilution of concentrated HCl), and both portions of the HCl eluate are collected in a test tube.

The eluate is examined under Wood's ultraviolet light in a darkened room. A reddish-pink fluorescence indicates positive results. A normal urine sample is carried though the same procedure as a control.

Blood Porphyrin Screening Test (Rimington and Cripps Method[3,4]): Five ml of a fresh diethyl ether-glacial acetic acid mixture (5:1) is placed in a test tube. Four drops of blood (0.2 ml) are added and thoroughly mixed with a stirring rod. The supernatant is decanted into a second test tube, to which 1 ml of 3 N HCl is added and mixed thoroughly.

The test tube is examined under a Wood's ultraviolet light in a darkened room. The result is considered positive when a reddish-pink fluorescence is present in the lower aqueous layer. The lower aqueous layer can be pipetted off and examined spectro-photofluorometrically for a semiquantitation of the amount of blood porphyrins.[5] If 0.1 N HCl is used rather than 3 N HCl, coproporphyrin only is extracted.

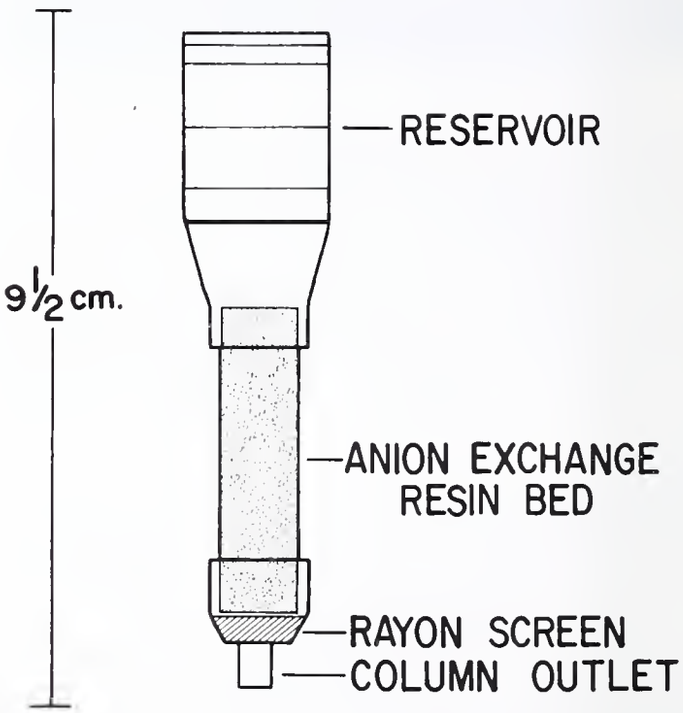
If an ultraviolet fluorescence microscope is available, peripheral blood (1:5 dilution) can be examined for fluorescence of erythrocytes (fluorocytes).

Type	Urine Porphobilinogen	Urine Porphyrins	Blood Porphyrins
Congenital erythropoietic porphyria*	N	↑	↑
Erythrohepatic protoporphyria*	N	N	↑
Hepatic porphyria:			
Acute intermittent porphyria	↑	N	N
Porphyria cutanea tarda*	N	↑	N
Mixed porphyria†	↑ ±	↑ ±	N

↑: Increase. N: Normal. ±: Variable.
*Photosensitivity.
†Photosensitivity is variable.

1. Laboratory findings in porphyria.

2. Schematic diagram of disposable plastic column prepacked with anion exchange resin.



REFERENCES

1. Castrow FF, II: New urinary porphobilinogen screening test, modified Mauzerall and Granick method. Southern Med J 63:514-516, 1970.
2. Castrow FF, II, Mullins JF, Mills GC: Newer screening test for porphyria. J Invest Derm 50:340-342, 1968.
3. Rimington C, Cripps DJ: Biochemical and fluorescence-microscopy screening-tests for erythropoietic protoporphyria. Lancet 1:624-626, 1965.
4. Cripps DJ, Peters HA: Fluorescing erythrocytes and porphyrin screening tests on urine, stool, and blood. Investigation of photosensitivity. Arch Derm 96:712-720, 1967.
5. Castrow FF, II: Complete office screening for porphyria. Cutis 4:695-698, 1968.
6. Mills GC: Routine analysis of porphyrins in urine. Clin Chem 7:165-174, 1961.
7. Schwartz S, et al: "Determinations of Porphyrins in Biologic Materials," in Glick D (Ed): Methods of Biochemical Analysis, vol 8. New York, Interscience Publishers, 1960, pp 221-294.
8. Mauzerall D, Granick S: The occurrence and determination of delta-aminolevulinic acid and porphobilinogen in urine. J Biol Chem 219:433-446, 1956.

Dr. Castrow, Suite D, 6720 Bellaire Blvd, Houston, Tex 77036.

Dr. Fincher, 207 Grayson County Bank Bldg, Sherman, Tex 75090.

Drs. Mills and Mullins, The University of Texas Medical Branch, Galveston, Tex 77550.

Senior Consultants
Perry C. Talkington, M.D.
Charles L. Bloss, M.D.

Psychiatrist-in-Chief
Howard M. Burkett, M.D.

Medical Director
James K. Peden, M.D.

Associate Psychiatrists
Jerry M. Lewis, M.D.
Claude L. Jackson, M.D.
Dode Mae Hanke, M.D.
Thomas H. Allison, M.D.
Maurice S. Green, M.D.
Doyle I. Carson, M.D.
Stanley L. Seaton, M.D.
Keith H. Johansen, M.D.
Charles G. Markward, M.D.
Joe W. King, M.D.
Claude R. Nichols, M.D.
Larry E. Tripp, M.D.
Aretta J. Rathmell, M.D.
Donald N. Offutt, M.D.

Clinical Psychology
David H. Lipsher, Ph.D.
John T. Gossett, Ph.D.
Dale R. Turner, Ph.D.
Robert W. Hagebak, Ph.D.

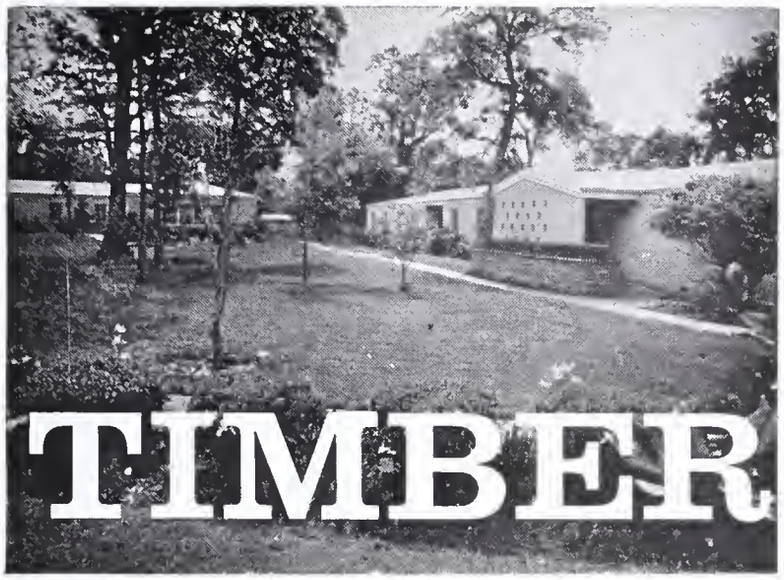
Social Work
Sally Stansfield, M.S.W.
Kathleen Wood, M.S.W.
Robert P. Stewart, M.S.S.W.
Margie W. Buell, M.S.S.W.
Cecilla Coffelt, M.S.S.W.
Lionel C. Landry, M.S.W.

Occupational Therapy
Geraldine Skinner, B.S., O.T.R., Director

Recreational Therapy
Lois Timmins, Ed.D., Director

Director of Nurses
Mae Belle James, R.N.

Administrator
Ralph M. Barnette, B.B.A.



PSYCHIATRIC HOSPITAL

DAY HOSPITAL

DEPARTMENT OF OUT PATIENT PSYCHIATRY

DEPARTMENT OF ADOLESCENT PSYCHIATRY

Narcotic Cases Not Admitted

TIMBERLAWN
PSYCHIATRIC HOSPITAL

381-7181 Dallas, Texas 75223 P. O. Box 11288

KELSEY-SEYBOLD CLINIC

6624 FANNIN STREET HOUSTON, TEXAS 77025

AC (713) 526-2671

INTERNAL MEDICINE

Endocrine and Metabolic Diseases
Mavis P. Kelsey, M.D., F.A.C.P.
Alfred E. Leiser, M.D., F.A.C.P.
Joy Mackay, M.D.

Pulmonary Diseases
Stanton P. Fischer, M.D., F.A.C.P.

Gastrointestinal Diseases, Gastroscopy
John R. Kelsey, M.D., F.A.C.P.
Philip S. Bentlif, M.D., F.A.C.P.
Ralph D. Eichhorn, M.D., F.A.C.P.
F. Scott O'Neil, M.D., F.A.C.P.
James W. McBee, M.D., F.A.C.P.

Heart Disease and Cardiac Catheterization
Earl F. Beard, M.D., F.A.C.P.
Efrain Garcia, M.D., F.A.C.P.

Arthritis and Rheumatic Diseases
James W. Kemper, M.D., F.A.C.P.
Martin S. Fischer, M.D.

Hypertension and Peripheral Vascular Diseases
Gene E. Burke, M.D.

Oncology
Carlos F. Taboada, M.D.

Nephrology
Francis X. Schloeder, M.D., F.A.C.P.

Hematology
Jerome B. Bart, M.D.

Infectious Diseases
Stuart Riggs, M.D., F.A.C.P.

Occupational Health Services
Paul E. Wright, M.D., M.P.H., F.A.C.P.
Maurice B. Johnston, M.D., F.A.C.Pr.M.
Richard M. Fenno, M.D., M.P.H., F.A.C.P.
Cannon A. Owen, M.D., F.A.C.S.
William E. Froemming, M.D., F.A.C.Pr.M.

GENERAL & THORACIC SURGERY
William D. Seybold, M.D., F.A.C.S.
James D. McMurrey, M.D., F.A.C.S.
Jerry L. Doggett, M.D., F.A.C.S.
Michael F. Appel, M.D.

OBSTETRICS & GYNECOLOGY
Melville L. Cody, M.D., F.A.C.O.G., F.A.C.S.
William A. Johnson, III, M.D., F.A.C.O.G.

PSYCHIATRY
Chester G. Cochran, M.D.
*Ricardo Daichman, M.D.
William H. Boylston, M.D.
Manuel C. Ramirez, M.D.

PEDIATRICS

Rheumatology
Earl J. Brewer, Jr., M.D., F.A.A.P.

Allergy
Charles W. Ewing, M.D., F.A.A.P.

Gastroenterology
George D. Ferry, M.D., F.A.A.P.

OTO-LARYNGOLOGY
J. Charles Dickson, M.D., F.A.C.S.
James L. Smith, M.D., F.A.C.S.

NEUROLOGY
Robert R. Pierce, M.D.

DERMATOLOGY
Wilson M. Fraser, M.D., F.A.A.D.
Donald W. Owens, M.D., F.A.A.D.

UROLOGY
Don W. Pranke, M.D., F.A.C.S.

ORTHOPEDIC SURGERY
W. Malcolm Granberry, M.D.
Jesse H. Dickson, M.D.

OPHTHALMOLOGY
Henry E. Wahlen, M.D., D.A.B.O.

RADIOLOGY
Robert J. Kurth, M.D., F.A.C.R.
David M. Rulfs, M.D.

PATHOLOGY
Robert A. Jordan, Ph.D., M.D., F.A.S.C.P.

DENTISTRY
Eugene W. Gray, D.D.S.

PSYCHOLOGY
Mrs. Ruth Blackman, M.A.
Cheryl Greathouse, M.A.
Educational Diagnostician
Mrs. Jean F. White, M.Ed.

SPEECH PATHOLOGY AND AUDIOLOGY
Donna R. Fox Ph.D.
Carolyn C. Garcia, M.S.

CONSULTANTS

Maxillo Facial Surgery
Edward C. Hinds, M.D., D.D.S., F.A.C.S.
John N. Kent, D.D.S.

Psychiatry
Albert Owers, M.D.

Pulmonary Diseases
H. Irving Schweppe, Jr., M.D., F.A.C.P.

Nuclear Medicine
John A. Burdine, Jr., M.D.

Occupational Medicine
Valliant C. Baird, M.D., F.A.C.Pr.M.

Podiatry
Levitt A. Peters, D.P.M.

SPECIAL FACILITIES
Radioisotope Laboratory
Registered Dietitian
Electroencephalography
Electrocardiography
Vectorcardiography
Registered Physiotherapist
Pulmonary Function Laboratory
Regional Immunization Center
FAA Examinations
Complete Endoscopy
Audiology Laboratory
Electrolysis

ADMINISTRATOR
James A. Bakken

*Military Service

Thymic hyperplasia simulating mediastinal metastasis

CHARLES A. HILL, MD

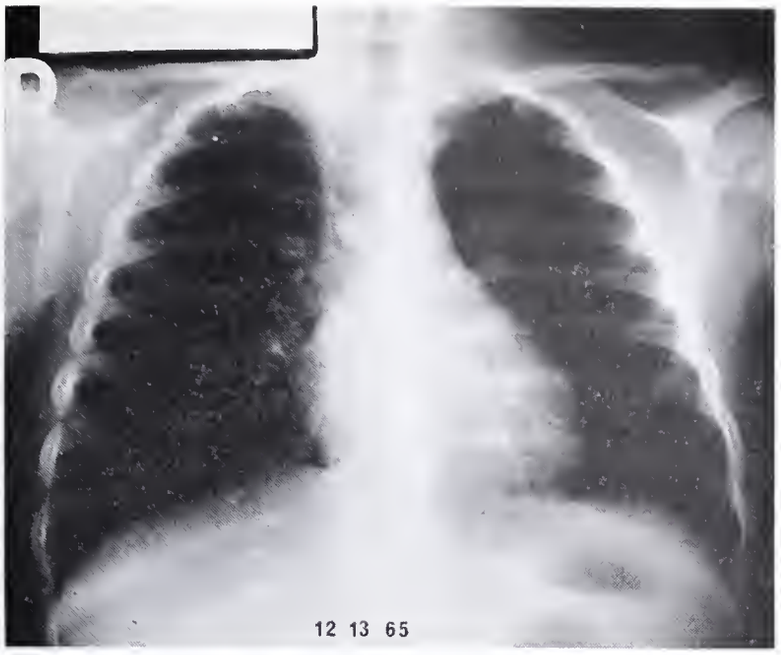
GERALD D. DODD, MD, Guest Editor

CASE REPORT: This was the 4½-month-old boy's second hospital admission. Previously, his left kidney had been removed and Wilms' tumor was diagnosed. This had been followed by radiotherapy with a tumor dose of 3,500 roentgens to the left kidney bed over a 34-day period. In addition, vincristine was administered from Oct 27, 1965 through Jan 24, 1966. Roentgenograms of the chest were considered normal as late as Dec 13, 1965 (Fig 1). However, a widening of the mediastinum became evident on chest roentgenograms made in August 1966 (Fig 2). Body section radiographs confirmed the presence of a lobulated mass in the mediastinum (Fig 3). The child was asymptomatic except for microscopic hematuria. An intravenous pyelogram of the remaining kidney was normal. On admission for exploratory thoracotomy, the hemoglobin value was 11.8 gm/100 ml and the white blood cell count was 6,590/cu mm. Exploratory thoracotomy was carried out on Nov 28, 1966 with the excision of a lobulated mediastinal mass and two adjacent lymph nodes (Fig 4). The postoperative recovery was uneventful and the child was discharged in good condition on Dec 19, 1966. To date he has remained healthy and without evidence of metastatic disease.

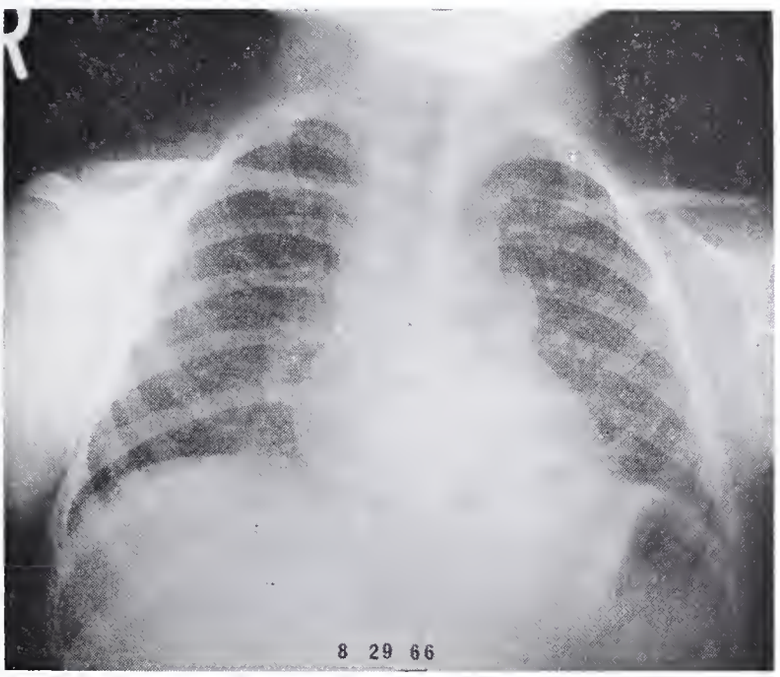
Histopathologic Diagnosis: Histologic examination of the excised mediastinal mass showed normal thymic lobules with the cortex containing densely packed, small lymphocytes and the medulla consisting of epithelioid cells, a few lymphocytes, normal appearing Hassel's corpuscles, and no germinal centers. The surgically removed lymph nodes were also normal in appearance. No metastatic infiltrates could be found.

Discussion: In a review of 73 patients with Wilms' tumors seen at The University of Texas MD Anderson Hospital, no instance of survival following the identification of mediastinal metastasis was found. It was of interest that in one patient, a lobular mass in the mediastinum was thought to represent metastatic disease, but was found at thoracotomy to be an enlarged thymus gland. The findings in this case prompted a retrospective review of the chest radiographs of 15 patients with verified Wilms' tumors followed closely for several years. In all cases, the most recent examination was in 1968. Four were interpreted as having thymic shadows at the upper limits of normal. In no instance was there asymmetric or progressive enlargement to suggest metastatic disease. All of these patients had received surgical, radiotherapeutic and chemotherapeutic treatment.

The wide variations in size and configuration of the normal thymus gland are well known.[1,2,5] Rapid changes in size are frequent. The thymus is a densely cellular organ and size must be determined by the balance of the cellular dynamics (Fig 5). It has been concluded, on the basis of experimental evidence, that the thymus is a composite of autonomous subunits, each of which is independent of the other. Regulation is to some extent afforded by hormonal influences and those conditions which directly affect mitotic and metabolic activity. Factors regulating the influx and egress of lymphoid cells are not known. The proliferative activity of lymphoid cells in the thymus is five



1. Normal post-nephrectomy roentgenogram of the chest.



2. Some eight months later, mediastinal mass is evident.

3. Body section tomogram.

to ten times that found in other lymphoid tissue. Proliferation and differentiation of cells within the thymus are not affected by antigenic stimulation. The thymus must be considered as the producer or modifier of immunologically competent cells which are capable of responding to antigenic stimulation only after migration of peripheral lymphoid tissue.[3,5,6]

The proliferation of lymphoid cells following removal of the inhibitory influence of an antimitotic chemotherapeutic agent of proliferation, following the subsidence of a stressful illness such as Wilms' tumor, and subsequent treatment offer equally attractive hypothetical explanations of the events observed in this patient.

Finally, the possibility of an unknown interrelationship between Wilms' tumor and the thymus gland cannot be excluded. Of interest in this regard is the report of a death due to myasthenia gravis, 11 years after treatment for a Wilms' tumor. Certainly it would be of value to examine the thymus gland in all cases of death resulting from Wilms' tumor.

Conclusions: Mediastinal metastasis has grave prognostic significance for patients with Wilms' tumor. The possibility of asymmetrical thymic hyperplasia, though rare, must be considered. Exploratory thoracotomy and excision biopsy represent the only definitive method of diagnosis. When satisfactory diagnostic criteria have been established by experience, selective thymic venography and anterior mediastinal pneumography may prove helpful.

4. Tumor in situ and removed specimen.

A. Causes for a small or absent thymic shadow:

1. Failure of lymphoid cell precursors (reticular dysgenesis, thymic alymphoplasia, Swiss-type agammaglobulinemia.[3,4,8]

2. Failure of epithelioid cell precursors (thymic aplasia of DeGeorge, thymic dysplasia of Nezelof).[3,7]

3. Depressed proliferation and differentiation or accelerated release of cells (adrenal corticosteroid administration irradiation or stressful illness such as severe inflammatory disease, starvation, cyanotic congenital heart disease).[1,2,4-6]

B. Normal-sized thymic shadow components:[2]

1. Great variation at any age:

   a. Early embryonic (epithelioid tissue).

   b. Late embryonic—childhood (additional lymphoid tissue most densely packed in cortical zone).

   c. Adult (additional fatty tissue).

2. Best correlated pathologically with surgical specimens and instances of sudden death.

C. Causes for enlargement of the thymic shadow:

1. Hyperplasia (thyrotoxicosis, acromegaly, occasionally in myasthenia gravis, and following cessation of corticosteroid administration, irradiation, or stress).[1,2,5,6]

2. Cyst (following severe infection such as congenital lues).[2]

3. Neoplasia (thymoma, intrathymic teratoma or germinoma, and occasionally in lymphocytic leukemia or Hodgkin's disease).[2]

5. Thymic size related to cellular processes.

REFERENCES

1. Caffey J: Pediatric X-Ray Diagnosis. Chicago, Year Book Medical Publishers, Inc, 1961, pp 393-427.

2. Castleman B: Tumors of the Thymus Gland. Washington, DC, Armed Forces Institute of Pathology, sec V, Fasc 19, 1955.

3. Cooper MD, Gabrielsen AE, Good RA: "Central and Peripheral Lymphoid Tissues in Immunologic Processes and Human Disease," in Mayerson HS, Ed: Lymph and the Lymphatic System, Springfield, Ill, Charles C Thomas, 1968, pp 276-305.

4. Good RA, Martinez C, Gabrielsen AE: "Clinical Considerations of the Thymus in Immunology," in Good RA, Gabrielsen AE, Eds: The Thymus in Immunobiology. Scranton, Pa, Hoeber Medical Division, Harper & Row, 1964, pp 3-47.

5. Law LW: Studies of thymic function with emphasis on the role of the thymus in oncogenesis. Cancer Res 26:551-574, 1966.

6. Miller JF, Osoba D: Current concepts of the immunological function of the thymus. Physiol Rev 47:437-520, 1967.

7. Platt BB, Linden G: Wilms' tumor—a comparison of 2 criteria for survival. Cancer 17:1573-1578, 1964.

8. Sell S: Immunological defiency diseases. Arch Path 86: 95-107, 1968.

The authors, The University of Texas MD Anderson Hospital and Tumor Institute, Texas Medical Center, Houston, Tex 77025.

Series sponsored by the Texas Radiological Society.

HIGHLAND HOSPITAL

ASHEVILLE, NORTH CAROLINA

Founded 1904

A DIVISION OF THE DEPARTMENT OF PSYCHIATRY OF DUKE UNIVERSITY

Accredited by the Joint Commission on Accreditation and Certified for Medicare

Complete facilities for evaluation and intensive treatment of psychiatric patients, including individual psychotherapy, group therapy, psychodrama, electro-convulsive therapy, Indoklon convulsive therapy, drugs, social service work with families, family therapy, and an extensive and well organized activities program, including occupational therapy, art therapy, music therapy, athletic activities and games, recreational activities and outings. The treatment program of each patient is carefully supervised in order that the therapeutic needs of each patient may be realized.

High school facilities for a limited number of appropriate patients are now available on grounds. The School Program is fully integrated into the hospital treatment program and is accredited through the Asheville School System.

Complete modern facilities with 85 acres of landscaped and wooded grounds in the City of Asheville.

Brochures and information on financial arrangements available

Contact: (1) Mrs. Elizabeth Harkins, ACSW, Coordinator of Admissions

or

(2) Samuel N. Workman, M.D.
Chief of Clinical Services

(3) Charles W. Neville, Jr., M.D.
Assistant Professor of Psychiatry and Medical Director

Area Code 704 - 254-3201

ORTHO COMFORT PRODUCTS
HELP YOU FEEL BETTER EVERY DAY

READING
WATCHING TV
SLEEPING

The only adjustable bed with coil box springs.

Drop foot angle adjustable. Electric High Low optional.

Dual side controls and optional remote control.

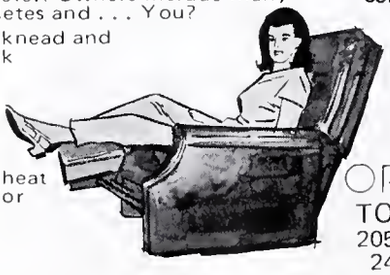
Electrically adjustable beds in any size or style that you prefer. Owners include many of the best known people in America, leading doctors, athletes and . . . You?

Roller massage chairs with built-in rotating massagers that knead and massage your back from the base of spine to the lower neck area. Extra massage unit in the foot rest. Choice of fabric and color.

Unique Car Pal that plugs into your car or home with an optional accessory. Has deep massage, soothing action. Drive refreshed. Avoid accidents.

Also Duomatic electric sleeper sofas, action baths, saunas, heat and massage cushions and other Ortho Comfort Products for home and professional use.

We Honor American Express, Bank Americard and Master Charge Credit Cards.



ORTHO COMFORT STORES
TOWN & COUNTRY SHOPPING RESORT
2051 E. Camelback Rd. • Phoenix, Arizona 85016
24 Hour Nationwide Service At (602) 955-7600

ASK ABOUT BEDS UNDER MEDICARE & VETERANS PLANS

A
BUILDING BLOCK
TO RECOVERY

One tablet q.i.d.

Indications: When used as adjunctive therapy for the rapid resolution of inflammation and edema, good results have been obtained in:
□ Accidental Trauma □ Postoperative Tissue Reactions.
Other conventional measures of treatment should be used as indicated. In infection, appropriate anti-infective therapy should be given.
Contraindications: ORENZYME BiTABS should not be given to patients with a known sensitivity to trypsin or chymotrypsin.
Precautions: It should be used with caution in patients with abnormality of the blood clotting mechanism such as hemophilia, or with severe hepatic or renal disease. Safe use in pregnancy has not been established.
Adverse Reactions: Adverse reactions with ORENZYME have been reported infrequently. Reports include allergic manifestations (rash, urticaria, itching), gastrointestinal upset and increased speed of dissolution of animal-origin surgical sutures. There have been isolated reports of anaphylactic shock, albuminuria and hematuria. Increased tendency to bleed has also been reported but, in controlled studies, it has been seen with equal incidence in placebo-treated groups. (See Precautions.) It is recommended that if side effects occur medication be discontinued.
Dosage: One tablet q.i.d.

THE NATIONAL DRUG COMPANY
DIVISION OF RICHARDSON MERRELL INC.
PHILADELPHIA, PENNSYLVANIA 19144

TRADEMARK: BITABS U.S. PATENT NO. 3,004,893 9/70 0-009A 161

Orenzyme® Bitabs

Trypsin: 100,000 N.F. Units, Chymotrypsin: 8,000 N.F. Units; equivalent in tryptic activity to 40 mg. of N.F. trypsin

The causes of vaginitis are multiple

Trichomonads... monilia... bacteria
You can depend on AVC—comprehensive therapy that combats all three major vaginal pathogens, alone or in combination.

AVC
Cream (aminacrine hydrachlaride 0.2%, sulfanilamide 15.0%, allantain 2.0%)

Suppositories (aminacrine hydrochloride 0.014 Gm., sulfanilamide 1.05 Gm., allantain 0.14 Gm.)

Contraindications: Known sensitivity to sulfonamides.
Precautions/Adverse Reactions: The usual precautions for topical and systemic sulfanamides should be observed becouse of the possibility of absorption. Burning, increased local discomfort, skin rash, urticaria or other manifestations of sulfanamide toxicity are reasons to discontinue treatment.
Dosage: One applicatorful or one suppository intravaginally once or twice daily.
Supplied: Cream – Four-ounce tube with or without applicator. Suppositories – Box of 12 with applicator.

TRADEMARK: AVC AV-007A 7/70 Y-149

THE NATIONAL DRUG COMPANY
DIVISION OF RICHARDSON-MERRELL INC
PHILADELPHIA, PENNSYLVANIA 19144

AVC
The treatment is singular

Clinical Extension of a pure Smooth Muscle Relaxant

TROCINATE®

Brand THIPHENAMIL HCl

400 mg./100 mg. S/C tablets

Trocinate relaxes all smooth muscles. Its direct action (musculotropic) does not involve the autonomic nervous system and it is not mydriatic. It is metabolized by the body and eliminated in the urine as harmless degradation products. Trocinate has a remarkable history of freedom from side-effects.

When a pure direct-acting smooth muscle relaxant is indicated, Trocinate is the drug of choice.

DIARRHEA (functional) . . . *the first 400 mg. tablet usually relieves the discomfort of diarrhea so promptly that it ceases to be a bother.*

DIVERTICULITIS—MUCOUS COLITIS . . . *the accompanying discomforts can be relieved by this direct smooth muscle relaxant.*

BLADDER SPASM . . . *relaxation is immediate. One or two tablets condition the bladder for cystoscopy in one hour.*

SPASTIC URETER . . . *the specific relaxing effect of Trocinate on the spastic ureter has been proven by animal studies and affirmed clinically.* (*J. Urol. 73:487-93*)

PRESCRIBING INFORMATION

WARNING: Do not give in advanced kidney or liver disease. PRECAUTIONS: Trocinate relaxes all smooth muscles. Large dosage or prolonged usage may cause feeling of weakness or can theoretically precipitate gall-bladder colic, due to relaxing the vascular and duct systems. Caution should be observed in patients with urinary bladder obstruction. DOSAGE: 400 mg. May be repeated in 4 hours. After relief, lengthen the dose frequency. (see side note)

WILLIAM P. POYTHRESS & CO., INC.
RICHMOND, VIRGINIA 23217
Manufacturers of Ethical Pharmaceuticals

NOTE: *The high therapeutic index of Trocinate permits its administration in dosage sufficient to relieve smooth muscle spasm promptly. 400 mg. dosage usually creates a therapeutic blood level. In reducing dosage after relief, lengthening the time between dosage rather than lessening the recommended dose is preferable. The prompt direct action allows a consciousness of the first suggestion of return of symptom . . . a guide to dose spacing and to determining when treatment is complete. A prescription for twelve or sixteen 400 mg. tablets will usually correct spasm and leave a few tablets for a reserve.*

Clinicopathologic

A chronically alcoholic man had clinical evidence of acute renal failure and of muscle weakness and tenderness. The patient was oliguric, with his blood urea nitrogen level rising to 156 mg/100 ml and serum creatinine to 17.7 mg/100 ml. Peritoneal dialysis was carried out, but the patient died on the 13th hospital day.

PROTOCOL: *Dr. Dichoso:* A 67-year-old white man presented with a three-week history of progressive generalized weakness and difficulty with starting micturition, dribbling, and occasional inability to void. For the two days preceding admission he had felt vague abdominal discomfort and had three to four soft stools daily.

He had a long history of heavy alcohol intake, averaging one fifth of whiskey per day for about four to five years. In 1953 he had required hospitalization for his excessive drinking. In 1963 he had been hospitalized because of weakness in his upper extremities which, after evaluation including normal skull series, electroencephalogram, and lumbar puncture, was thought to be secondary to chronic alcoholism. During that admission he was found to be a chronic paranoid schizophrenic and had been discharged on a regimen of phenothiazines. He had discontinued these shortly after discharge and denied taking any medication during his recent illness.

Family history was essentially negative.

Physical Examination: On admission the patient's temperature was 100.4 F, pulse rate 100/minute and regular, and blood pressure 140/90 mm Hg. He was obese and slightly disoriented. No scleral icterus was present; his fundi were normal. The neck was supple, and the jugular venous pressure was not elevated. The chest was clear to percussion and auscultation; the heart was not enlarged and was normal to auscultation. The abdomen was soft and nontender, with no palpable masses or organs. Bowel sounds were normal. Peripheral pulses were good. No peripheral edema was present. The prostate felt normal. Neurologic examination revealed tenderness of the proximal muscle groups, uniform weakness of all extremities, absent deep tendon reflexes except for the radial pronator reflexes, which were 1+ bilaterally, and normal sensation.

Laboratory Data: Laboratory studies disclosed the following values: white blood cell count 15,000/cu mm with 48% neutrophils, 29% bands, 8% monocytes, and 15% lymphocytes; hematocrit 52%; and hemoglobin 16.1 gm/100 ml.

Urinalysis: The urine was smoky brown and showed pH 7.0 and proteinuria (4+). There were numerous white blood cells and red blood cells per high-power field; occasional granular casts and bacteria were present.

Other values were: urine sodium 93 mEq/liter; urine potassium 16 mEq/liter; fasting blood sugar 105 mg/100 ml; blood urea nitrogen (BUN) 59 mg/100 ml; creatinine 6.3 mg/100 ml; carbon dioxide content 16 mEq/liter; chlorides 90 mEq/liter; sodium 132 mEq/liter; potassium 4.6 mEq/liter; calcium 8.9 mg/100 ml; phosphorus 5.2 mg/100 ml; and serum alkaline phosphatase 4.4 Bodansky units. Total protein was 5.9 gm/100 ml with albumin 2.8, alpha-1 globulin 0.4, alpha-2 globulin 1.1, beta globulin 0.7, and gamma globulin 0.9 gm/100 ml. Urine culture grew "many" *Escherichia coli,* sensitive to tetracycline as well as several other antibiotics. Serum uric acid was 17.5 mg/100 ml. Blood cultures were negative. LE preparations were negative. The antistreptolysin O titer was 333 Todd units.

Roentgenograms and Electrocardiogram: The ECG showed normal sinus rhythm and border-

Conference

CARMELO C. DICHOSO, MD
ROBERT O. MORGEN, MD
JOHN O. F. ROEHM, JR, MD
WADI N. SUKI, MD
FERENC GYORKEY, MD
MONTAGUE LANE, MD, Guest Editor
HARLAN J. SPJUT, MD, Guest Editor

line left axis deviation. The kidneys, ureters, and bladder roentgenogram was normal; chest roentgenogram showed elevation of the right hemidiaphragm but was otherwise normal. Renal arteriograms and renal venograms demonstrated patent renal arteries and veins. Retrograde pyelography demonstrated bilaterally unobstructed lower tracts.

Course in the Hospital: Throughout his hospital stay, this patient was severely oliguric. On the first day, because of no urinary output, he underwent bladder catheterization which yielded 10-20 ml of smoky brown urine. His central venous pressure, which was initially 2-3 cm of H_20, was raised to 10 cm with intravenous infusion of normal salt solution. At this point, furosemide was administered intravenously but the oliguria remained uncorrected. By the eighth hospital day the patient's BUN and serum creatinine levels had risen to 156 and 17.7 mg/100 ml, respectively, and peritoneal dialysis was begun. The patient's rectal temperature rose to 101 F on the second day of peritoneal dialysis; and he became confused and disoriented. Gram stain and culture of the peritoneal fluid were negative. Achromycin V, 250 mg orally every six hours, was started but was discontinued the following day. The peritoneal dialysis was completed on Jan 1 with the BUN and serum creatinine levels having dropped to 73 and 10.4 mg/100 ml, respectively. The patient remained febrile (101-102 F) and confused. On the 12th hospital day, he died.

Discussion: *Dr. Morgen:* This 67-year-old white man was obviously ill when admitted to the Veterans Administration Hospital on Dec 22, 1968, with a three-week history of progressive generalized weakness and a two-day history of vague abdominal discomfort. He related that he had three to four soft stools daily. The past history and the family history were not particularly striking. He was known to have had a heavy alcohol intake for many years. He was admitted in 1963, with some type of polyneuropathy, considered to be of the alcoholic type. Also, paranoid schizophrenia was diagnosed at that time. On admission, physical examination showed some apparent degree of obesity, low-grade fever, and blood pressure of 140/90 mm Hg. The protocol states that the patient was slightly disoriented, that he had tenderness of proximal muscle groups (which I take to mean muscle weakness of all extremities), and that he was virtually, but not completely, areflexic. He remained in the hospital until he died, 13 days later. At the time of admittance he was virtually anuric; he remained severely oliguric with approximate or average urine flow rates of 150 to 200 cc/day. On and shortly following the day of admittance the patient had mild leukocytosis with a slight shift to the left, hematocrit of 52%, and hemoglobin value of 16 gm/100 ml. The urine was reported as being smoky brown with 4+ protein concentration, numerous white cells, and red blood cells and "an occasional granular cast." Another urinalysis showed few white cells but still heavy microhematuria. These reports did not mention any red blood cell casts, white blood cell casts, or pigmented renal failure casts. The patient had moderately severe hyperazotemia at the time of admission. He became progressively more hyperazotemic until the eighth hospital day, with reduction of the hyperazotemia. On admission he had moderate metabolic acidosis commensurate with his degree of renal failure. The serum electrophoresis showed only a mild reduction of total and serum albumin concentrations and otherwise was not remarkable. Urine culture was said to show many *E coli*. The serum uric acid level (17.5 mg/100 ml) was nearly three times the maximum normal value.

The blood cultures were negative and LE cell preparation was negative. The antistreptolysin O titer was elevated to 333 Todd units. The ECG was unremarkable. A KUB roentgenogram was reported as normal. A roentgenogram of the chest was unremarkable except for some elevation of the right hemidiaphragm. The patient had a renal arteriogram which I saw, and which didn't help me a bit.

Dr. Roehm: On admission, the patient had an anteroposterior roentgenogram of the chest that showed localized diaphragmatic eventration of the right hemidiaphragm, unchanged since 1963. Three days later, repeat frontal chest roentgenogram showed pulmonary vascular congestion and no other abnormality. On Dec 24, an excretory urogram was performed with no visualization of the urinary collecting system through an interval of 30 minutes; bilateral nephrogram was present. On Dec 25, approximately 24 hours later, a film of the abdomen showed persistent nephrogram and opacification of the gallbladder, indicating impaired ability of the kidneys to excrete the opaque medium with resultant excretion via the liver.

Dr. Suki: What about the kidney size?

Dr. Roehm: The renal size was within normal limits.

On Dec 24, the day of the excretory urogram, a bilateral bulb pyelogram showed no evidence of ureteral obstruction. The infundibula appeared somewhat stretched, possibly a reflection of renal edema, but there was no evidence of renal enlargement. The calyces appeared normal, being well cupped, and their fornices were sharp. In the upper pole of the left kidney the opaque medium in the collecting system was slightly hazy, probably because of incomplete filling of the calyces. On Dec 27, approximately five days after admission, a retrograde abdominal aortogram showed patent renal arteries. There were multiple arteries to the right kidney and a single major artery to the left kidney. Mild stenosis was identifiable at the origin of the left renal artery. A venogram of the inferior vena cava showed slight reflux of opaque medium into the left renal vein. There was no "negative jet" of unopacified blood into the vena cava, but the findings were nonspecific and insufficient to exclude renal vein thrombosis. Again at this time, the gallbladder remained opacified.

Dr. Morgen: To complete a description of his clinical course, the patient remained oliguric throughout. He apparently had a low-grade to moderate fever throughout. Few, if any, follow-up laboratory studies were reported except as we have summarized. The patient was supported with peritoneal dialysis for several days and he died on the 13th hospital day. There were no comments in the protocol as to the events immediately leading up to his death.

I would precede my analysis of the case by saying candidly that I don't know what underlying kidney disease this patient had because he presented with catastrophic renal failure, and I'm not sure that the clinical information was sufficient to arrive at a definite diagnosis. For the sake of the CPC, it might be worthwhile to analyze the data. (I was going to say that the clinical clues were as scant as his urine volume, but my resident told me that it was such a bad joke that I should leave it out.) My first question was whether the underlying renal disease was an acute fulminant process or simply the terminal anuric phase of some long-standing chronic renal disease. Naturally, the former seems much more likely because of what appears to be an acute anuric course on the one hand, and because of an absence of most, if not all, stigmata of long-standing chronic progessive renal disease on the other. For example, he had no history of chronic renal disease. Dr. Dichoso says that in 1963, results of urinalysis and BUN values were normal. The patient was normotensive on admission, and he had no stigmata of long-standing hypertension such as retinal vascular changes or left ventricular hypertrophy. He wasn't anemic; quite to the contrary, he had high normal hemoglobin and hematocrit values without any clues in the protocol to suggest hemoconcentration as the cause, although one wonders. He had only milk tachycardia consistent with his fever, and his central venous pressure was 2 to 3 cm of H_2O. Finally, the kidneys were not only within normal limits but seemed to be slightly enlarged. There certainly was no pyelographic or arteriographic stigmata of long-standing chronic renal disease, so I assume that the patient had an acute fulminant process.

The next question was whether the catastrophic renal failure was basically acute in nature, reflecting an extrinsic mechanism, or whether it reflected an intrinsic renal process. The latter seemed more likely because the two main types of acute extrinsic renal failure—acute circulatory renal failure and acute obstructive renal failure—appeared to have been excluded. Acute circulatory renal failure was excluded by a therapeutic trial of acute expansion of effective blood volume to a central venous pressure of 10 or 12 cm of H_2O followed immediately by a major intravenous furosemide challenge with no response. Acute obstructive uropathy was virtually excluded by the retrograde pyelographic studies along with the catheterization of the bladder. Thus, I concluded that the patient must have had an acute, fulminant, intrinsic nephropathy which presented as a rapidly progressive, persistent, acute renal failure which constituted the central feature of his illness. There are so many causes of acute renal failure that it is difficult to know which was at play in this patient, but the three main causes of acute renal failure—acute tubular necrosis, cortical or renal necrosis, and glomerular or vascular nephritides—will be considered.

I don't like the term, "acute tubular necrosis," but it is convenient for the moment. I have reference to the acute nephropathy which frequently is accompanied by acute oliguric or anuric renal failure that follows shock, exposure to certain potent nephrotoxic agents, or catastrophic massive intravascular hemolysis. In this case there was nothing to suggest that this man suffered an episode of acute circulatory insufficiency which would give us a clue to the presence of acute ischemic nephropathy. There was no history of exposure to one of the classical nephrotoxins such as bichloride of mercury, carbon tetrachloride, or the like. The patient was an alcoholic; although nothing suggested such a course of events, he might have accidentally ingested ethylene glycol or methyl alcohol. There was nothing to suggest massive intravenous hemolysis. Therefore, primarily because clinical suggestions of acute tubular necrosis were lacking, I will put this well down on my list and set it aside with one final comment: Most series of cases of acute renal failure include a significant number of patients who have acute oliguric renal failure for which no clear-cut precipitating causes are discovered. In the most classical series,[3] I believe 20 or 25% of the cases had no clear-cut predisposing factor of shock, toxin, or what-have-you. Thus, I can't exclude it completely. My other reason for not favoring it is that no profusion of pigmented renal failure casts was described.

The second category, rare but classical, includes cortical necrosis and renal necrosis resulting from severe shock, and symmetrical cortical necrosis of pregnancy resulting from multiple thromboemboli to the renal arteries or their intrarenal branches. Absolutely nothing suggested such a renal catastrophe in this patient. He was not fibrillating to suggest the presence of potential emboli in the left atrium. He had nothing to suggest recent myocardial infarction. He hadn't had aortic surgery complicated by massive atheromatous emboli. I think that renal necrosis is unlikely.

The third category that came to mind in this case was that of the fulminant glomerular nephritides and vascular nephritides such as acute diffuse glomerular nephritis, the glomerular nephritis of some of the connective tissue disorders as in polyarteritis, for example.

I should add as a fourth category the complications of fulminant infections of the urinary tract, such as acute bacterial nephritis, so-called fulminant interstitial nephritis of bacterial origin, and necrotizing papillitis. This man's course doesn't suggest such a septic disease. He had one positive culture, the significance of which is not clear. The second urinalysis showed little or no pyuria. He had nothing to suggest severe papillary damage on the retrograde pyelogram. I would tend not to favor it.

Thus, I go back to the fulminant glomerular nephritis and nephrovasculitides (third category), which I think constitute something that is suspect in this case. Possibly this man did have acute, severe glomerulonephritis, perhaps of the diffuse proliferative form or so-called post-streptococcal, or possibly the severe fulminant glomerulonephritis that sometimes accompanies polyarteritis. I think his clinical course was consistent with it. He had smoky brown urine with microhematuria and heavy proteinuria on one report. And, he was severely

oliguric. He had an elevated ASO titer at 333 which is above the upper limits of normal (100 to 150 Todd units), which suggests that he had a streptococcal infection sometime in the past year or two, and it might have been in the past month or two, depending on whether the titer is on its way up or down. There is no way to interpret it, but it is a little elevated. I only mention it because it might reflect a streptococcal infection which was, in fact, the etiological factor behind acute diffuse post-streptococcal glomerulonephritis. There are significant numbers of cases of polyarteritis which follow infections, particularly streptococcal infections. The diagnosis of glomerulonephritis of either post-streptococcal or polyarteritis type certainly would be more likely if the sediment contained red blood cells or blood casts, suggesting acute glomerular capillary damage, but such was not reported in the protocol. I would like to have a quick peek at that sediment, but we have to go by the protocol. To be candid, the absence of red blood cell casts constitutes fairly heavy evidence against the diagnosis. I only put it in the differential diagnosis because red cell casts so frequently are missed in routine examination. And while it is a little presumptuous of me, I would keep it in the differential diagnosis. I am really down to two main possibilities: (1) that he had acute tubular necrosis or acute ischemic nephropathy without known predisposing factor or cause such as severe dehydration or any type of acute circulatory failure, or (2) that he had acute fulminant glomerulonephritis, possibly reflecting post-streptococcal glomerulonephritis or possibly polyarteritis. Because one should come to some definite diagnosis, I favor one of the latter. The patient was basically normotensive at the time of admission and apparently remained so throughout his hospital course; in the fulminant glomerulonephritis of polyarteritis nodosa, one of the characteristic features is the absence of hypertension early in the course even when anuria is present. Therefore, although it is rare, I would have to favor a diagnosis of idiopathic polyarteritis, so-called microscopic type, with fulminant glomerulonephritis and acute renal failure with the mode of death not clear.

Dr. Suki: Since I was responsible for some of the diagnostic tests that were performed on this patient, I want to defend my approach at that time and then make a few other comments. When I first saw the patient, he was said to have bone pain; muscle pain was not a prominent feature. The patient was confused at the time and obtaining a history was not possible. I put together bone pain and hyperuricemia and suggested multiple myeloma. Multiple myeloma can lead to renal failure by a variety of mechanisms. But renal vein thrombosis certainly would be a possibility since it may be associated with multiple myeloma. Renal vein thrombosis results in massive proteinuria, which this patient had, and it also results in renal failure and hematuria. When I read this protocol, however, I did not recognize it as resembling anything that I heard when I first saw this patient, and other things come to mind. Basically, the patient was an alcoholic presenting with renal failure. He also presented with a fascinating history of muscle weakness and muscle pain. This should immediately raise the possibility of the pseudo-McArdle syndrome or the alcohol-induced phosphorylase deficiency or the Perkoff syndrome. In 1967, Perkoff reported on a series of alcoholic patients who were admitted for severe alcohol intoxication. Some of them had muscle pain, some had muscle cramps, some had muscle tenderness, some had muscle weakness, and some had muscle wasting, or any combination thereof. Some were completely asymptomatic. The majority of these patients had elevated creatine phosphokinase values, and upon performing an ischemic exercise test their lactic acid levels failed to rise; this is typical of the McArdle syndrome. This defect disappeared after alcohol was withdrawn, thus the entity of alcohol-induced phosphorylase deficiency. There have been patients reported with acute renal failure. These patients developed myoglobulinuria and Perkoff demonstrated, by immunodiffusion, myoglobin in their urine. I think that this case is most compatible with this diagnosis; the patient was oliguric and had an elevated urine sodium level, the features of acute tubular necrosis. Although there was blood in the urine, smoky urine also is compatible with the presence of myoglobin, and myoglobinuric renal failure would be my first choice.

Another diagnosis that one must think of in

an alcoholic presenting with renal failure is papillary necrosis, as Dr. Morgen mentioned. Edmondson and others[2] reviewed some 42,000 autopsies in the Los Angeles County Hospital, and found an incidence of renal papillary necrosis of 0.46%, much the same as that reported all over the world. Of the 195 cases of papillary necrosis, the usual distribution for this country—not for Europe—was found: 50% had diabetes, 25% had obstruction, 10% were alcoholics, and the rest had a variety of other conditions such as analgesic abuse, sepsis, etc. In Europe 50% of such cases would be due to analgesic abuse (phenacetin). These researchers pointed out that whenever one encounters an alcoholic patient who has fever, leukocytosis, pyuria, bacteriuria, and azotemia, one must consider papillary necrosis.

Another possibility for renal failure in a patient with alcoholism is saturnine gout, the so-called lead nephropathy. This is rare, if not unheard of, in this part of the country. It is common in Alabama and other states where moonshine consumption is frequent. These patients distill their own liquor in lead radiators, and lead nephropathy with elevation of the serum uric acid level develops. The normal size of the kidneys in this patient contradicts the diagnosis; oliguria or anuria also argue against it. The other two entities that Dr. Morgen discussed were ingestion of a toxic substance and tubular or cortical necrosis. This patient was acidotic at the time he came in; there was a gap between the sum of serum chloride and carbon dioxide values versus the serum sodium value, suggesting that another acid (such as oxalic acid) may have been present as occurs following ingestion of ethylene glycol. However, no calcium oxalate crystals were seen in the patient's urine, and they are abundant in cases of ethylene glycol ingestion. Finally, tubular or cortical necrosis of the kidney, brought about by events such as bleeding with severe volume depletion, also must be considered in the chronic alcoholic. I must agree with Dr. Morgen that on the basis of elevated urine sodium level and a normal retrograde pyelogram, papillary necrosis was unlikely in this patient. Retrograde examination showed a patent urinary tract and no obstruction could be demonstrated; I think this argues strongly against renal failure due to papillary necrosis. I would make the diagnosis of myoglobinuric renal failure due to alcohol-induced pseudo-McArdle syndrome.

Moderator: Are there any other comments or questions?

Dr. Garabed Eknoyan: Dr. Morgen and Dr. Suki commented about the hyperuricemia. I just finished reviewing 24 cases of acute renal failure that we saw during the past year. The thing that impressed me was the degree of hyperuricemia (uric acid levels of 14 to 17 mg/100 ml) present in all the cases. This is something which we usually don't pay attention to, and somehow in this case it came up. I wonder if this is something that we should consider in treating patients with acute renal failure. Perhaps we should include allopurinol as a part of their therapy. After reviewing these 24 cases, I would not be afraid to use it as a diagnostic measure. Severe hyperuricemia apparently is present in many patients with acute renal failure and rarely is mentioned in the literature.

Dr. Morgen: I mentioned hyperuricemia but I forgot to come back to it. I'd have to agree with Dr. Eknoyan. I have seen disproportionate elevations of serum uric acid in acute renal failure in terms of duration of low glomerular filtration rate and hyperazotemia compared with the average case of chronic renal insufficiency. I don't know what it means. One always has to wonder if it didn't simply reflect a striking hypercatabolic response characteristic of the acute background in which so many cases of acute renal failure occur. Also, I don't know the method by which the serum uric acid value was determined in this case; no matter what the underlying cause, 17.5 mg/100 ml of uric acid is very high for the first few days of acute renal failure, and he couldn't have been in it long. And I believe he presented with a creatinine value of 6.3 mg/100 ml; it was extremely elevated, suggesting (if in fact it was valid) some massive catabolic nuclear protein turnover.

But quite apart from the conditions that Dr. Suki and Dr. Eknoyan mentioned, we all have seen some patients with asymptomatic primary hyperuricemia who present with acute renal failure and are found to have masses of uric acid precipitated in their pelvic-calyceal system. I could tell all sorts of weird and interesting stories about this, and it is fortunate for

the patient if the condition is diagnosed because it can often be relieved. The literature describes cases of acute renal failure caused by massive precipitation of uric acid within the tubules. I'm sure that this occurs but I have not yet recognized it or seen clear-cut histological preparations demonstrating it. Unfortunately, we have to make special histological preparations so as to avoid dissolution of the urates precipitated in the tubules. I doubt that this patient's basic disorder was acute uric acid nephropathy with intrarenal or extrarenal obstruction; but, to be perfectly candid, I could not exclude it with confidence.

Moderator: Dr. Morgen, do you think that a normal retrograde intravenous pyelogram invariably rules out papillary necrosis?

Dr. Morgen: I'm beginning to get the impression that it doesn't. In all honesty I would say no; even without this question it bothers me. Papillary necrosis occasionally occurs as an acute and extensive process as opposed to slowly progressive papillary necrosis that we see first in diabetics without acute obstructive uropathy, and in patients with sickle cell disease in whom a papilla is destroyed now and again, with remarkable preservation of renal function. In the occasional but recurring papillary necrosis of nephropathy of analgesic abuse, and in the aforementioned, I think one almost invariably sees something on retrograde examination that suggests the diagnosis; but fulminant, extensive papillary necrosis can occur without slough, and without slough there may be a perfectly normal retrograde pyelogram.

Moderator: Are there any other comments, disturbing or otherwise? Before we present the histopathologic findings, I would like to ask the respective student spokesmen from the different hospitals to give us a summary of their deliberations in the CPC.

Carrol Cagle, Methodist Hospital: We all agreed that the patient had acute renal failure, but then we fell apart. Four suggested that the patient had polyarteritis nodosa; two suggested hypernephroma with renal vein thrombosis; one acute glomerulonephritis; one acute renal failure due to drug ingestion; one acute renal failure secondary to hepatic failure; and one suggested acute renal failure secondary to myoglobulinuria and alcoholic polymyopathy.

John Moreland, Veterans Administration Hospital: Six of us thought that it was acute glomerulonephritis, and two thought it was rapidly progressive glomerulonephritis.

E. L. Baker, St. Luke's Hospital: We favor the diagnosis of acute post-streptococcal glomerulonephritis.

Fred Hartley, Ben Taub Hospital: We agreed that the patient's problem was intrinsic renal disease, but did not agree as to a more specific diagnosis. Three students favored acute renal failure secondary to myoglobinemia due to alcoholic myopathy; two chose acute imposition of infection or chronic renal disease due to amyloidosis; two chose bilateral hypernephroma; and one selected acute gouty nephropathy.

Moderator: If there are no other comments or questions, we'll hear from Dr. Györkey.

Pathologic Findings: *Dr. Györkey:* This was a fine clinical discussion, and I will comment briefly on the problem of papillary necrosis or necrotizing papillitis or medullary necrosis. In the past, it was thought that the lesion almost always was associated with obstruction of the urinary tract, diabetes mellitus, or acute pyelonephritis. In large series in this country, (32,000 autopsies at Johns Hopkins Hospital) the incidence of papillary necrosis is about 0.25%. Our data at the Veterans Administration Hospital, in carefully reviewed cases, disclosed an incidence of 1.6%. These figures are considerably lower than those in European countries such as Denmark where the incidence is up to 2%, and Switzerland where it is even higher; in Australia, papillary necrosis has been reported in 4% of autopsy cases. This high incidence is especially interesting because carefully done autopsies reveal that pyelonephritis, urinary tract obstruction, and diabetes mellitus have not always been responsible for this frequency, but it has been associated in part with an increase in the consumption of analgesics. Pyelonephritis or urinary tract infection is present in the majority of cases but it need not be. Therefore, the concept that papillary necrosis is simply a form of pyelonephritis is hard to support because even in extremely florid cases of acute pyelonephritis, necrosis of the papillae does not necessarily occur. Acute pyelonephritis may be minimal in many cases of papillary

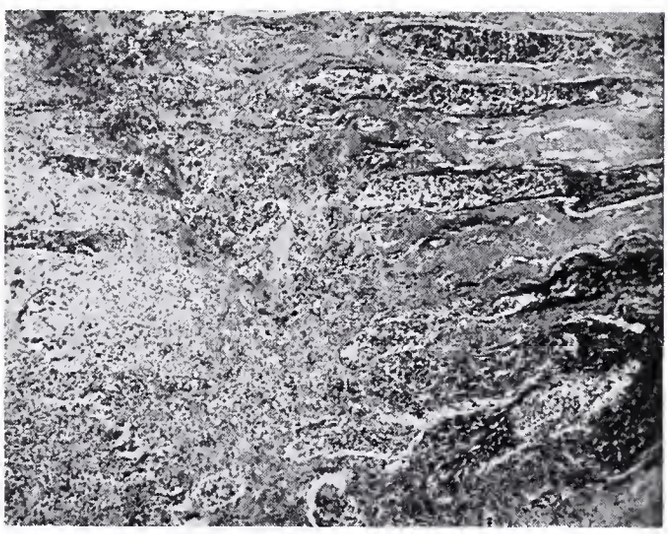
necrosis. It is important to note that if there is urinary tract obstruction at the level of the renal pelvis, necrosis may take place. This was the finding in 15 of the 31 cases that I reviewed at the Veterans Administration Hospital. The same effect can be reproduced experimentally in the rabbit if the ureter is obstructed and the rabbit is injected with *E coli* intravenously. Diabetes mellitus was present in about one-half of the cases that we studied; in fact, careful study of the kidney in diabetics will reveal some degree of papillary necrosis in about 25%. With regard to abuse of analgesics, in Scandinavia, Switzerland, and other European countries there is a great increase in papillary necrosis in patients without diabetes mellitus and urinary tract obstruction. This problem is of great interest to clinicians and pathologists as well.

Now, let us review the findings in our case. At necropsy this man was obese and weighed 188 lb. The heart was moderately hypertrophied, weighing 500 gm. There was no evidence of valvular abnormality. There was, however, abundant epicardial fat. There was tracheitis, bronchitis, and bronchopneumonia in each lung. The spleen weighed 320 gm, with a large abscess, 12 by 3 cm, extending to the capsule with localized acute purulent peritonitis (Fig 1). Another smaller abscess, 3 by 1 cm, also was present in the spleen.

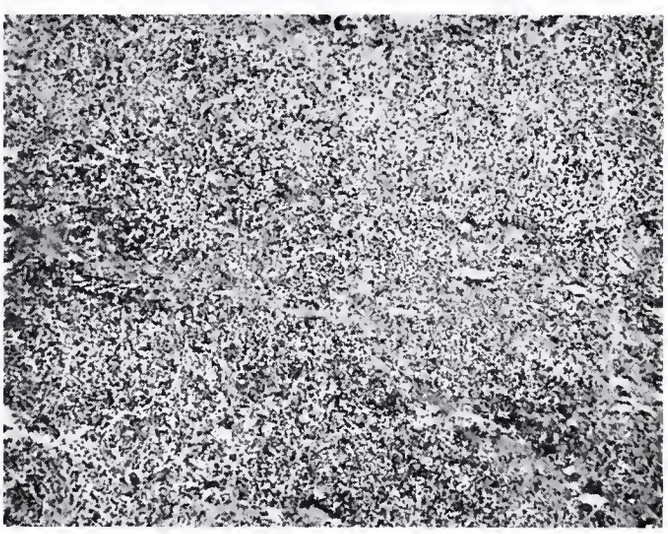
The kidneys were swollen and pale. The ureters and renal pelves were not dilated; the bladder was normal. On cut sections both kidneys showed extensive necrosis of the renal papillae involving the medulla and in foci extending into the adjacent cortex (Fig 1).

Microscopically, the epithelium of the papillae was almost completely absent and the tubular epithelial cells appeared necrotic (Fig 2). In the medulla the normal architecture was replaced by neutrophilic granulocytes (Fig 3). The glomeruli, tubular system, and the vessels in the cortical region disclosed no changes. The prostate gland weighed 27 gm. On cut surfaces there was a 1.7 by 1.5 cm abscess in the left dorsolateral region which in one area extended to the prostatic urethra. Microscopically, the gland was extensively infiltrated by neutrophilic granulocytes forming abscesses (Fig 4) which extended and involved the urethra. In the left

1. Cut surface of the kidney shows severe papillary necrosis. The spleen shows a large abscess with rupture at one point on the surface.

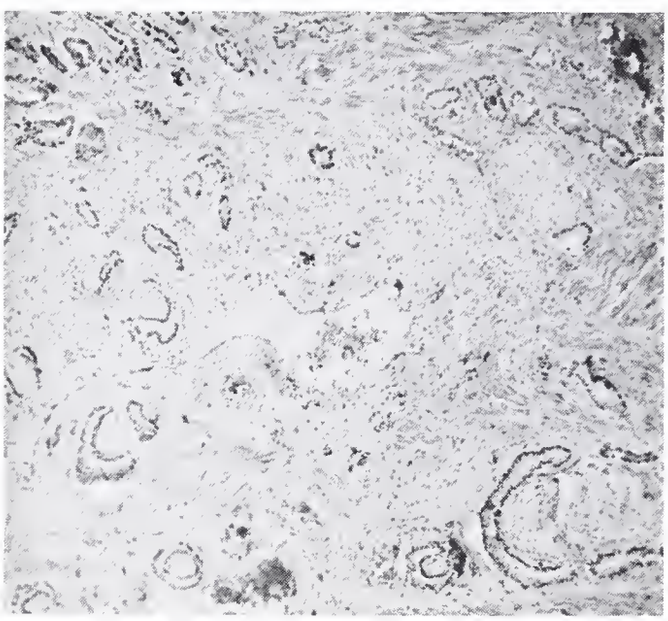


2. Low-power photomicrograph of necrotic papilla with polymorphonuclear leukocytes and ghosts of cells. Hematoxylin and eosin, X 38.



3. Low-power photomicrograph shows the diffuse, acute inflammation in the medulla. Hematoxylin and eosin, X 40.

4. Photomicrograph of the prostate gland shows the large abscess near the urethra. Hematoxylin and eosin, X 40.



5. Photomicrograph of the focal adenocarcinoma of the prostate gland. Hematoxylin and eosin, X 45.

lateral region, contiguous with the abscess, there was a focus of adenocarcinoma which infiltrated the perineural spaces (Fig 5).

At the time of autopsy, random skeletal muscle specimens were taken. Three of seven specimens showed degenerative changes with focal replacement of muscle fibers by connective tissue. The changes were attributed to alcoholic myopathy. Muscular changes in chronic alcoholism have been well described by Ekbom and coworkers.[4] Clinically, their patients had aching, tenderness, and edema of the muscles. Histologic study of the muscles showed varied degrees of necrosis, degeneration, and evidence of regeneration. Muscle damage and liver damage, usually cirrhosis, occurred concurrently in each patient. Nevertheless, in our patient the liver did not show any alteration attributable to alcoholism. The liver, in fact, was quite normal. The final anatomic diagnoses were as follows: (1) acute urethritis, prostatitis with abscesses, and obstruction of prostatic urethra; (2) acute, fulminating, bilateral renal papillary necrosis with multiple renal abscesses; (3) abscesses in spleen with ruptures and localized acute peritonitis; (4) focal and bilateral tracheitis, bronchitis, and pneumonia; and (5) adenocarcinoma (latent) of prostate gland.

Moderator: Dr. Roehm, would you change your initial reading of the retrograde pyelogram, now that we know the diagnosis?

Dr. Roehm: No. I was aware of the anatomic diagnosis and I interpreted the radiographs objectively. In addition, I asked another radiologist for an independent opinion and his interpretation was the same as mine. There was no radiographic evidence of renal papillary necrosis.

REFERENCES

1. Perkoff GT, Dioso MM, Bleisch V, et al: A spectrum of myopathy associated with alcoholism. I. Clinical and laboratory features. Ann Intern Med 67:481-492, 1967.

2. Edmondson HA, Reynolds TB, Jacobson HG: Renal papillary necrosis with special reference to chronic alcoholism. A report of 20 cases. Arch Intern Med 118:255-264, 1966.

3. Swann RC, Merrill JP: Clinical course of acute renal failure. Medicine 32:215-292, 1953.

4. Ekbom K, Hed R. Kirstein L, et al: Muscular affections in chronic alcoholism. Arch Neurol 10:449-458, 1964.

Drs. Dichoso, Morgen, and Suki, Department of Internal Medicine; Drs. Györkey and Spjut, Department of Pathology; Dr. Roehm, Department of Radiology; Dr. Lane, Departments of Pharmacology and Medicine, Baylor College of Medicine, 1200 Moursund Avenue, Houston, Tex 77025.

★

Specialized Service

IN

PROFESSIONAL LIABILITY INSURANCE

is a high mark of distinction

THE

MEDICAL PROTECTIVE COMPANY

FORT WAYNE, INDIANA

Professional Protection Exclusively since 1899

AUSTIN OFFICE: Robert F. Reiman, Representative
3201 Clearview, Austin 78703 Telephone: 512-472-9603
DALLAS OFFICE: Gayle Nelson and Arthur F. Ennis, Jr., Representatives
816 Medical Arts Building, Dallas 75201 Telephone: 214-742-4980
HOUSTON OFFICE: Richard B. Ross and William A. Orsburn, Representatives
1525 Hermann Professional Bldg., Houston 77025 Telephone: 713-523-1127

Turner's Clinical & X-Ray Laboratories

Medical Center

El Paso, Texas

Telephone 532-4689

☆

SURGICAL PATHOLOGY
CLINICAL PATHOLOGY
RADIOLOGY

☆

GEORGE TURNER, M.D.
JEANNE TURNER BOWMAN, M.D.
DAVID LIBMAN, M.D.

The Martin X-Ray and Radium Clinic

3501 Gaston Ave. Dallas, Texas

ADJOINING
GASTON EPISCOPAL HOSPITAL

For X-ray diagnosis and the X-ray and radium treatment of cancer and other conditions suitable for radiation therapy.

Chas L. Martin, M.D. James A. Martin, M.D.

THERE'S NO MYSTERY ABOUT TEXAS MEDICAL ASSOCIATION'S NEW GROUP LIFE PLAN

THE "LEVEL-50"

PHYSICIANS MAY NOW ENROLL FOR $50,000 OF GROUP LIFE INSURANCE, WHICH AMOUNT IS CONSTANT UNTIL AGE 70, WHEN IT REDUCES TO $5,000. LESSER AMOUNTS ARE PROVIDED FOR EMPLOYEES.

ONLY 75% OF THE ELIGIBLE EMPLOYEES IN EACH PHYSICIAN'S OFFICE OR CLINIC ARE REQUIRED TO APPLY. EMPLOYEES MAY SHARE IN THE COST OF THEIR COVERAGE.

MEDICAL EVIDENCE IS REQUIRED FOR PHYSICIANS.

For Details and Enrollment Material, Contact

TEXAS MEDICAL ASSOCIATION
INSURANCE SERVICE OFFICE
1801 NORTH LAMAR BLVD.
AUSTIN, TEXAS 78701

Underwritten By

Prudential

NEWS

Medical Advisory Board Aids State Departments In Examination, Determination of Unfit Drivers

The Texas Medical Advisory Board for Driver Licensing is attracting nationwide attention and is fast becoming a model for similar operations in other states. The board has been operating since April, 1970, and has processed some 1,700 cases. Cooperating with the Texas State Department of Health, the board issues opinions on the medical limitations of licensed drivers in the state.

Using information gathered by the Civil Defense and Traffic Safety Division of the State Health Department, the 18-member board recommends to the Department of Public Safety what action should be taken in licensing individuals who come under consideration. Individuals, only on their own approval, are evaluated by the board with regard to their medical history in an effort to determine the individual's physical capability to perform the functions required of a driver of a motor vehicle.

The subjects remain anonymous to the board, as the board is to the public. When the opinion of the board is received, the Department of Public Safety considers whether or not to allow the individual to continue operation of a motor vehicle.

The driver in question is brought to the attention of the DPS by several means. Many cases come to the attention of the DPS following accidents; a relative of the subject may inform the DPS out of concern for the safety of the subject and safety of others; the subject's physician can also initiate the investigative process in the best interest of the patient and the public. Information received by the DPS is relayed to Charles E. King at the Civil Defense and Traffic Safety Division. King's investigators contact the subjects, request their approval to gather information from their medical files, and present the information to the board for evaluation.

Texas was not the first state to establish a system of increasing highway safety in this manner, but it has become the leader. When the Texas program was first established, the goal was to process 100 cases per month by the end of the first year. After only 5 months of operation, 500 cases per month were being processed. The initial goal was based on what other states were able to accomplish, but with the help of the physicians on the board and the Civil Defense and Traffic Safety Division team, the number of cases processed is now 600% higher than that in other states. The methods used by Texas have eliminated the need for long hours of consideration by board members, thus increasing the efficiency of the system while decreasing the work load of board members.

A plan that will further aid the board is to be in operation next year. Some 700 DPS license specialists will be trained by physicians to "screen" applicants for driver's licenses. This will increase the accuracy of referrals made by DPS personnel not now trained to identify characteristics that might indicate a medically unfit driver. Through screening techniques, the specialists will be able to determine if a driver has a type of illness that would sufficiently hinder his driving capabilities so as to warrant consideration of denial. The medically unsafe driver could be detected without total reliance upon concerned relatives or physicians, although the role of these two groups would still be important.

The Medical Advisory Board was established with funds from the Highway Safety Act, and its sole purpose is highway safety. There are approximately 7 million persons licensed to drive motor vehicles in Texas. Last year, there were more accidents reported in the state than there are licensed drivers. There were 3,551 deaths and 232,000 injuries as a result of motor vehicle accidents. Of those death- and injury-producing accidents, one out of every five was related to illness. This year, with the aid of the Medical Advisory Board and the State Health Department, the DPS is removing at least some of the causes of those accidents, the medically unfit driver.

Local medical associations and individuals may obtain further information by contacting Charles E. King, Civil Defense and Traffic Safety Division, Texas State Department of Health, 1100 West 49th Street, Austin, Texas 78756.

Correction

There were two errors in Dr. S. J. Lerro's article, "Epidemiologic Overview of Meningococcal Infections in Texas, 1964-1968," in the September issue.

The sentence beginning at the bottom of page 46 should read, "*N meningococcus* organisms of groups B and C remain sensitive to penicillin (1,600 units/mg standard solution) in the range of .01 μg/ml to .025 μg/ml."

The sentence beginning on page 49, column 2, line 15, should read, "Erythromycin, 2.0 gm, given intravenously each 24 hours in divided doses, also has been used successfully."

$8 Increase Announced in Medicare Deductible

The inpatient hospital deductible under the federally sponsored Medicare program will be increased from $52 to $60 for benefit periods beginning in 1971, according to the secretary of the Department of Health, Education, and Welfare.

Under present law, the secretary of HEW must review annually hospital insurance costs under Medicare. After the review, the deductible and coinsurance amounts for the following calendar year are adjusted as required.

The $8 increase for 1971 was determined from a somewhat complicated formula written into the law. In the formula, the deductible is set by multiplying $40 times the ratio of per diem hospital costs for an insured person under the program in 1969 and the corresponding average for 1966; then, the answer is rounded to the nearest multiple of $4. The review and use of the formula this year resulted in an answer of $58.72, which has been rounded off to $60.

Coinsurance benefits have also been adjusted. Thomas M. Tierney, director of the Bureau of Health Insurance, explained the operation under the new deductible and coinsurance this way:

". . . Starting in 1971, the deductible amount for the first 60 days of inpatient hospital care will be $60; the hospital coinsurance amount for the 61st through 90th day of each benefit period will be $15 a day (1/4 of the deductible); and the hospital coinsurance amount for each lifetime reserve day used will be $30 a day (1/2 of the deductible). For the 21st through 100th day of services in an extended care facility, the coinsurance amount for benefit periods starting in 1971 will be $7.50 a day (1/8 of the deductible)."

The Department of HEW emphasizes that the increased deductible will apply only to benefit periods which begin in 1971. Any benefit period which begins in 1970, but extends into 1971, will still be subject to the $52 inpatient hospital deductible and its related coinsurance amounts.

Scholarship Winners Announced by Dallas

Sixteen paramedical students in Dallas hospital training schools were named recipients of scholarships from the Millard J. Heath Scholarship Trust Fund of the Dallas County Medical Society.

The awards, presented at the Sept. 1, 1970, joint dinner meeting of the Dallas County and the Tarrant County Medical Societies, are for $300. Recipients are selected by the directors of the hospitals' various training programs on the basis of need of financial assistance and academic achievement.

The fund was established in 1963 with excess monies contributed by the public during the 1962 and 1963 mass county-wide polio immunization programs. The first scholarships were presented Oct. 21, 1963. Since that time, scholarships have been presented at the annual meeting of the Dallas County Medical Society, held each January, and at the joint meeting held with the Tarrant County Medical Society in September. Only the earnings of the trust fund have been used; the principal of $200,000 remains intact.

The name of the fund honors the society's long-time executive secretary, Millard J. Heath.

September winners of the award from the Baylor University Medical Center include Allean Renfro, Postgraduate Nurse Program: Mrs. Deloris R. Fuller, Postgraduate Nurse Program; Mrs. Patricia L. Bolton, Postgraduate Nurse Program; and Mrs. Wyvon Opal Griffin, school of X-ray technology.

Those from Methodist Hospital of Dallas who received scholarships are Janet Stokley, school of nursing; Kathleen Louise Doyle, school of nursing; Rita Kay Turner, school of vocational nursing; and Mrs. Jewell A. Wall, school of vocational nursing.

Dr. Robert B. Crouch, president of the Harris County Medical Society, center, accepts the Good Citizenship Award of the Civitan Club of Houston from club president Julius M. Israel, right, and Reid C. Kirchem, left, chairman of the Sept. 15 award proceedings. Recognition of Dr. Crouch and the county medical society was based on the society's participation in and initiation of various community service activities.

Award winners enrolled in programs at Parkland Memorial Hospital include Yvonne Elizabeth Todar, school of medical technology; Judy Warrington, school of radiologic technology; Frances Jane Jose, school of medical technology; and John E. Stewart, school of radiologic technology.

Completing the list of scholarship recipients are those from St. Paul Hospital, who also receive psychiatric training at Austin State Hospital. They are Kathleen Kelleher, school of nursing; Judith Jay McKean, school of nursing; Jo Ann Morton, school of nursing; and Jeanne Marie Vogel, school of nursing.

21 Granted Diplomas

Twenty-one graduates, comprising the second class of the Health Assistants Program in Laredo, recently received their diplomas and began their careers as paramedical personnel.

Dr. Leonides G. Cigarroa, co-chairman of the Laredo-HOPE Committee, reported that all of the graduates have already obtained employment, as was the case with the first graduating class of 20 health assistants when they were awarded their diplomas on Feb. 27, 1970.

The Health Assistants Program is part of Laredo's Project HOPE, a joint undertaking of the Laredo Independent

School District, the Laredo-Webb Counties Health Department, Mercy Hospital, Laredo Junior College, and the Laredo medical community. The project's goal is to provide more and better health care for the people of Laredo.

The Health Assistants Program operates as an intensive 4-month course emphasizing health training, basic education, and cultural information. Upon completion of the course, graduating students are prepared to work under nursing supervision in any health care environment.

New Medicare Rules Set For Physical Therapists

Two additional avenues of qualification under the Medicare program are now available for physical therapists, the Social Security Administration announced recently.

Currently licensed physical therapists who do not meet the educational requirements set for qualification may qualify by means of two additional, alternative methods. These methods are:

1. Any individual who, prior to Jan. 1, 1970, was licensed or registered to practice physical therapy, is currently licensed or registered, and has achieved a satisfactory grade through an examination conducted by or under the sponsorship of the Public Health Service; or

2. An individual who, prior to Jan. 1, 1966, was licensed or registered to practice physical therapy, is currently licensed or registered, and prior to Jan. 1, 1970, had 15 years of full-time experience in the treatment of illness or injury through the practice of physical therapy in which he rendered services upon the order of and under the direction of attending and referring physicians.

Because the current licensure or registration mentioned in the two new methods refer only to the state in which the physical therapist is practicing, the optional methods will not be applicable in Texas, as there is no licensing law for physical therapists in the state.

However, a physical therapist practicing in Texas who is currently licensed or registered (or both) in another state may qualify to practice under the Medicare program in the licensing state. Further information may be obtained from Mrs. Martha A. McSteen, regional representative of the Bureau of Health Insurance, Social Security Administration, 1114 Commerce St., Dallas 75202, or from E. L. Bailey, director of Certification and Consultation Division, Medical Care Administration Services Section, 5425-A Burnet Road, Austin 78756.

Over $7,000 Awarded To 23 at San Antonio

Scholarships totaling more than $7,000 were recently awarded to 23 students for the 1970-1971 academic year at The University of Texas Medical School at San Antonio.

Richard Becker, a fourth-year student from Abilene, was winner of the largest award, the $1,000 Pfizer Scholarship.

The Southern Medical Association Scholarship of $500 was presented to first-year student Henry Rylander, III, of Austin.

Winner of the $200 Peter Alan Zanca Scholarship was Albert R. Alden, a third-year student from Oxford, Ohio. This is the first year the Zanca scholarship has been awarded. The award was founded in memory of Dr. Peter Zanca's son, who was killed in Vietnam. Dr. Zanca is professor and chairman of the school's radiology department.

Five students in each class were presented $300 Legislative Scholarship Awards.

First-year class winners were Joe R. Cannon of Rule, John H. Gunkel of San Antonio, Tee S. Sardin of Stamford, Shelley P. Roaten, Jr., of Rockport, and James J. Rodriguez of Groves.

Winners from the second-year class were Sharon K. Grosskopf of Austin, John S. Harvey, Jr., of Blanco, David F. Havemann of West Point, Marshall W. Hayes of Vidor, and Dennis M. Toland of Austin.

Those in the third-year class who received the award include James Y. Allen, Jr., of Del Valle, John Melton Graham of Sweeny, David J. Lehmiller of North Industry, Ohio, Timothy L. McLeod of Austin, and Floyd C. Odom of Cisco.

Recipients from the fourth-year class were Sayers R. Brenner of Houston, Murray E. Fox of Dallas, James H. Gray of Dallas, Judith H. Mullins of Nederland, and William J. Zwartjes, Jr., of San Antonio.

New name for AAGP

The nation's second largest medical group has voted to change its 23-year-old name. The American Academy of General Practice, the national association of family physicians, will now be known as the American Academy of Family Physicians.

The action was taken at the final session of the academy's Congress of Delegates during the group's annual meeting in San Francisco.

Mac F. Cahal, executive director of the academy, said that the new name more accurately reflects what the organization represents. He added, however, that the name will not become official until the next meeting of the congress, which will probably be in the fall of 1971, because it requires a change in the organization's constitution and 90-days' notice to delegates.

Cahal explained that the academy's Board of Directors had been empowered by the Congress of Delegates to "utilize the new name in the interim as it sees fit."

In addition to the name change, delegates inaugurated a new president, Dr. William E. Lotterhos of Jackson, Miss., and elected new officers of the academy.

Dr. J. Jerome Wildgen of Kalispell, Mont., is new president-elect. He will become president at the group's next annual meeting scheduled for Miami Beach, Fla. Dr. Norman Coulter of Orlando, Fla., was named vice-president, and Drs. James G. Price of Brush, Colo., and Stanley A. Boyd of Eugene, Ore., remain speaker and vice-speaker, respectively, of the Congress of Delegates. Drs. Robert E. Heerens of Rockford, Ill., Herbert A. Holden of San Leandro, Calif., and Thomas L. Lucas of Alexandria, Va., were elected to serve 3-year terms as directors of the organization.

Seminars Announced By Health Department

A series of 10 regional seminars on drug abuse and its implications for community health are planned by the Texas State Department of Health.

The seminars are part of a major effort of the State Health Department to provide an education on drug abuse problems and to prevent drug abuse in the state. Personnel from the State Health Department have conducted programs on drug abuse to school audiences before, but the emphasis is now being placed on informing the adult community.

The first seminar, held Nov. 17, 1970, in Tyler, attracted health professionals and community officials from the 36-county East Texas Region 7. The seminar focused on the health aspects of drug abuse, current programs under way, and possible future directions for local- and state-level campaigns against drug abuse.

Other phases in the State Department of Health's effort against drug abuse are working with the Governor's Task Force on Drug Abuse in planning and developing a coordinated statewide, interagency attack on the problem and the production of a one-hour film on the scope of drug abuse in Texas. The film is set for release to statewide television this fall.

Cholera Toxin Made By Dallas Scientists

Concentrated amounts of purified cholera toxin, isolated after a 5-year search, are being supplied regularly by researchers at The University of Texas (Southwestern) Medical School to other laboratories around the world engaged in studies of cholera, according to Dr. Richard A. Finkelstein, associate professor of microbiology at Southwestern.

The Dallas-produced material has been utilized in research leading to development of a soon-to-be-tested improved cholera vaccine, Dr. Finkelstein said. He added that a form of the experimental "toxoid" vaccine is being tested at Southwestern and elsewhere and that it looks "extremely promising."

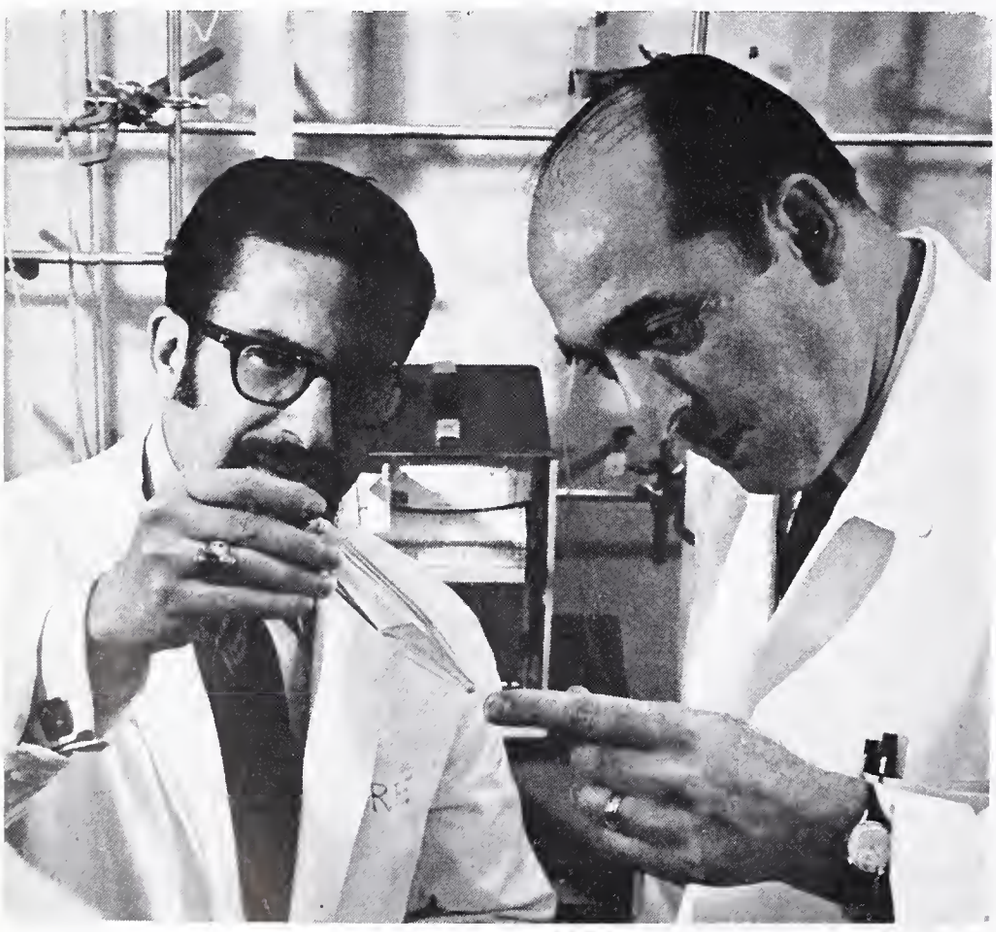
"We've been able to show that immunization with a toxoid prepared from the toxin protects laboratory animals against challenge either with the toxin or the cholera organisms themselves," he said.

Scientists have high hopes the new material will provide longer-lasting immunity, as is now possible with diphtheria and tetanus, and more complete protection against the cholera infection than is afforded by the existing vaccine. The old vaccine, containing killed bacteria, has been essentially unchanged since its development in 1898, Dr. Finkelstein explained. It immunizes less than 50% of its recipients, and the protective effect lasts only 3 or 4 months.

Preliminary tests of the new toxoid vaccine, being produced by Wyeth Laboratory under contract with the National Institutes of Health, are scheduled on human volunteers, tentatively to be followed by a massive trial in Asia. Part of the early testing will be done at The University of Texas Medical Branch in Galveston.

"If the vaccine is found to be safe and to produce a satisfactory immunologic response," Dr. Finkelstein said, "it will be tested in Dacca, East Pakistan, beginning next spring in a controlled field study involving approximately 200,000 people." Dr. Finkelstein recently returned from conferences with cholera researchers in Tokyo, Dacca, and Bangkok, Thailand.

Pakistan, along with India, is annually swept by cholera epidemics. As recently as 1964, an estimated 100,000 cases occurred in Pakistan, resulting in 30,000 deaths.



Dr. Richard A. Finkelstein, left, and Dr. Joseph LoSpalluto, both of The University of Texas (Southwestern) Medical School, examine a vial containing concentrated cholera toxin.

Thus far, some 650 liters (approximately 170 gallons) of toxin have been produced in the Dallas laboratory. Samples have been sent to scientists in Thailand, Japan, Australia, Sweden, England, and other countries, as well as to several US research centers.

In a separate research project, microbiologists Drs. Udom Lexomboon and Finkelstein, working with Dr. Andres Goth, professor and chairman of pharmacology at Southwestern, are testing a series of drugs for their effectiveness in mice against the inflammatory cholera toxin. No known drug exists that will actually reverse the disease process, Dr. Finkelstein said.

The current cholera epidemic began in 1961 and has migrated across Asia to Africa. According to the Center for Disease Control in Atlanta, it is occurring or is suspected widely throughout Southeast and South Asia, the Middle East, and northwest Africa.

Widespread jet travel between Asian countries probably has facilitated the spread of cholera. Indonesia, the Philippines, Vietnam, Burma, India, Nepal, East Pakistan, and Russia have all reported cases of cholera, according to the CDC.

The most obvious and most effective means of control of cholera is improvement of sanitation: "So that people are not obliged to drink contaminated water and eat contaminated food," observed Dr. Finkelstein.

He said a fringe benefit of intensified current research will be an improved understanding of the whole family of diarrheal diseases.

Dr. Finkelstein's work is supported by a grant from the U.S.-Japan Cooperative Medical Science Program administered by the National Institute of Allergy and Infectious Diseases.

Physicians Named To Governor's Council

Eight TMA members have been named to the Citizen's Advisory Council of the Governor's Committee on Aging. The council was established to aid and advise the committee on its efforts to identify the problems faced by the aged and to develop and expand services for the elderly.

Appointed by Gov. Preston Smith are Dr. Clifford E. Painton of Port Arthur, district 4; Drs. William B. Dean and Loyd W. Conyers, both of Dallas, districts 8-16; Dr. Charles H. Spence, Jr., of Raymondville and Drs. William R. Metzger and Clotilde P. Garcia, both of Corpus Christi, district 20; Dr. Otis W. English of Lubbock, district 28; and Dr. Charles B. Dryden, Jr., of Wichita Falls, district 30.

anxiety: the tyrant

Excessive anxiety can often dominate the patient made vulnerable by illness, surgery, prolonged emotional stress. It can induce or aggravate symptoms, disrupt medical management, divert energy the patient needs for recovery.
The antianxiety action of Librium® (chlordiazepoxide HCl)—used adjunctively or alone—has demonstrated clinical usefulness in virtually every field of medical practice where anxiety complicates the patient's condition.

for the patient ruled by anxiety

Librium®
(chlordiazepoxide HCl) 5-mg, 10-mg, 25-mg capsules

Before prescribing, please consult complete product information, a summary of which follows:
Indications: Indicated when anxiety, tension and apprehension are significant components of the clinical profile.
Contraindications: Patients with known hypersensitivity to the drug.
Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. As with all CNS-acting drugs, caution patients against hazardous occupations requiring complete mental alertness (e.g., operating machinery, driving). Though physical and psychological dependence have rarely been reported on recommended doses, use caution in administering to addiction-prone individuals or those who might increase dosage; withdrawal symptoms (including convulsions), following discontinuation of the drug and similar to those seen with barbiturates, have been reported. Use of any drug in pregnancy, lactation, or in women of childbearing age requires that its potential benefits be weighed against its possible hazards.
Precautions: In the elderly and debilitated, and in children over six, limit to smallest effective dosage (initially 10 mg or less per day) to preclude ataxia or oversedation, increasing gradually as needed and tolerated. Not recommended in children under six. Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider individual pharmacologic effects, particularly in use of potentiating drugs such as MAO inhibitors and phenothiazines. Observe usual precautions in presence of impaired renal or hepatic function. Paradoxical reactions (e.g., excitement, stimulation and acute rage) have been reported in psychiatric patients and hyperactive aggressive children. Employ usual precautions in treatment of anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation have been reported very rarely in patients receiving the drug and oral anticoagulants; causal relationship has not been established clinically.
Adverse Reactions: Drowsiness, ataxia and confusion may occur, especially in the elderly and debilitated. These are reversible in most instances by proper dosage adjustment, but are also occasionally observed at the lower dosage ranges. In a few instances syncope has been reported. Also encountered are isolated instances of skin eruptions, edema, minor menstrual irregularities, nausea and constipation, extrapyramidal symptoms, increased and decreased libido—all infrequent and generally controlled with dosage reduction; changes in EEG patterns (low-voltage fast activity) may appear during and after treatment; blood dyscrasias (including agranulocytosis), jaundice and hepatic dysfunction have been reported occasionally, making periodic blood counts and liver function tests advisable during protracted therapy.

Roche LABORATORIES
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

IN ASTHMA
IN EMPHYSEMA

optional therapy

THE mudranes®

All Mudranes are bronchodilator-mucolytic in action, and are indicated for symptomatic relief of bronchial asthma, emphysema, bronchiectasis and chronic bronchitis. **MUDRANE tablets** contain 195 mg. potassium iodide; 130 mg. aminophylline; 21 mg. phenobarbital (Warning: may be habit-forming); 16 mg. ephedrine HCl. **Dosage** is one tablet with full glass of water, 3 or 4 times a day. **Precautions** are those for aminophylline-phenobarbital-ephedrine combinations. **Iodide side-effects:** May cause nausea. Very long use may cause goiter. Discontinue if symptoms of iodism develop. **Iodide contraindications:** Tuberculosis; pregnancy (to protect the fetus against possible depression of thyroid activity). **MUDRANE-2 tablets** contain 195 mg. potassium iodide; 130 mg. aminophylline. **Dosage** is one tablet with full glass of water, 3 or 4 times a day. **Precautions** are those for aminophylline. **Iodide side-effects and contraindications are listed above. MUDRANE GG tablets** contain 100 mg. glyceryl guaiacolate; 130 mg. aminophylline; 21 mg. phenobarbital (Warning: may be habit-forming); 16 mg. ephedrine HCl. **Dosage** is one tablet with full glass of water, 3 or 4 times a day. **Precautions** are those for aminophylline-phenobarbital-ephedrine combinations. **MUDRANE GG-2 tablets** contain 100 mg. glyceryl guaiacolate; 130 mg. aminophylline. **Dosage** is one tablet with full glass of water, 3 or 4 times a day. **Precautions:** Those for aminophylline. **MUDRANE GG Elixir.** Each teaspoonful (5 cc) contains 26 mg. glyceryl guaiacolate; 20 mg. theophylline; 5.4 mg. phenobarbital (Warning: may be habit-forming); 4 mg. ephedrine HCl. **Dosage:** Children, 1 cc for each 10 lbs. of body weight; one teaspoonful (5 cc) for a 50 lb. child. Dose may be repeated 3 or 4 times a day. Adult, one tablespoonful, 4 times daily. All doses should be followed with ½ to full glass of water. **Precautions:** See those listed above for Mudrane GG tablets.

MUDRANE—original formula
First choice

MUDRANE-2
When ephedrine is too exciting or is contraindicated

MUDRANE GG
During pregnancy or when K.I. is contraindicated or not tolerated

MUDRANE GG-2
A counterpart for Mudrane-2

MUDRANE GG ELIXIR
For pediatric use or where liquids are preferred

Clinical specimens available to physicians.

WILLIAM P. POYTHRESS & COMPANY, INC., RICHMOND, VIRGINIA 23217

Manufacturers of Ethical Pharmaceuticals

Doctor in "Training"

By Donald C. Reifel, M.D.

Editor's note: Although he claims that he is not really an "expert" in the field of model railroading, Dr. Donald C. Reifel, a physician involved in occupational medicine in Fort Worth, obviously enjoys his hobby. In this article, one in the series of articles on hobbies that Texas physicians find relaxing and enjoyable, he tells how he got his start as a model railroad "engineer" and provides some general background information on the subject. He also explains the reactions of his family to his unusual pastime.

Let me say that I fall far short of being an expert either in the quality of my model trains or in time spent in my hobby of model railroading. I really became active in this hobby early in 1966, and since that time have worked at it only in "fits and starts," a pattern which incidentally makes the hobby quite attractive to someone who has a less-than-predictable work schedule.

After making repeated unsuccessful requests to my wife, two daughters, and Santa Claus for the gift of a model railroad kit, I finally arrived home one day in January, 1966, with a model train set, assorted pieces of track, wire, and glue. After initially setting up an oval track on the dining room table, I was greeted with glee from my young daughters and a look of tolerant disbelief from my wife. Since that time, model railroading has become somewhat of a family project, with the only discordant note in the family being who is going to sacrifice their room so that the railroad has room to grow. We all think of it now as the "model railroad," rather than the "toy train." This distinction might not seem important to some, but when a physician's wife or children answer the phone in the evening and request the caller to "Wait just a minute; he's playing with his toy trains," the resultant comments can be quite amusing.

The scale of my model is HO, which is approximately 1:87. This is one of the most popular scales in this hobby. About the smallest area in which one can work with this scale is 4 by 8 feet, which is how ours all began on a standard sheet of plywood. Such an arrangement has many drawbacks to the serious model railroader, but is convenient for the beginner and has the advantage that the board can be moved or stored if desired.

Space always seems to be a problem for the model builder and probably is responsible for the increasing popularity of some of the smaller gauges, especially the N-scale, which can be built in approximately half the space of a comparable HO-scale layout.

The smaller scales have their disadvantages also, as detailing is considerably more difficult and operating is generally more difficult, especially for the "small-fry."

Beginning equipment should consist of a train set, some sectional track, and a good rectifier. This enabled us to see something "run" once in a while during the early stages. Since then, almost all equipment and scenery has been built from kits or built from scratch from various parts. Again, this is one of the advantages of this hobby—it allows the modeler to concentrate on the particular aspect of the hobby which interests him most.

As one progresses in this hobby, some of the earlier efforts at building seem quite inadequate, but no less satisfying at the time they were done. As no true model railroad is ever finished, there is always something that can be added, improved, or discarded. There is some aspect of model railroading to satisfy most anyone—from operating the models, to building "rolling stock" or scenery, to figuring out a better electrical wiring system.

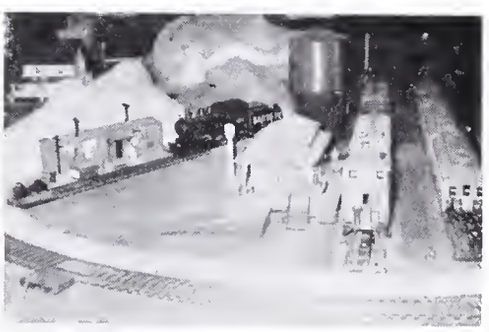
As I mentioned previously, space seems to be a constant problem with most model railroaders. In our house, there is really no extra or spare room, and the railroad was always occupying room needed for something else. This was especially a problem during periods of inactivity on the railroad. Our own problem has been solved by placing the railroad in the garage on a pair of saw-horses when it is in use, and then suspending it from the garage ceiling during inactive periods. This arrangement eliminates a great deal of moving which tends to be hard on the scenery and the electrical system.

For anyone totally new in this hobby, a great deal of help and advice can usually be obtained from a good hobby dealer, especially if the dealer is a model railroad enthusiast. Additionally, there are several excellent national magazines devoted entirely to model railroading, and many easily

"Engineer" Reifel gets set to start his model railroad on a nonstop run of the "country."

Wife Beverly adjusts the town jail in the imaginary city of Rockville, while daughters Karen, right, and Krista, left, give support.

Old-time passenger train chugs down the RR (Reifel Railroad) track.



The "yards" at the imaginary town of Rockville.

The square in Rockville. The passenger station is hidden behind the tree, and passengers "disembark" near the jail in the background. The local saloon is in the right foreground, "conveniently only a short walk from the jail," notes Dr. Reifel.

understood "how-to-do-it" type manuals are available for all aspects of the hobby. These are invaluable to all railroad modelers, but almost a necessity for the novice. As usual, consulting the experts before—rather than after—a problem arises, can save many hours of useless work and, perhaps, considerable disappointment.

Model railroading is certainly not for everyone, but its adherents are generally an enthusiastic bunch. Some get together and form elaborate club layouts. Others, like myself, are in the non-joiner category and prefer to limit their "road" to a family-type project. Granted, I am blessed with a wife and children who are at the very least tolerant of Dad's latest folly and are often enthusiastic helpers in the construction of various types of unclassified trees or unspeakably bizarre "mountains." The result is that we have a model railroad which is certainly neither the largest nor the best, but it is uniquely "ours," and we have had immeasurably fun-filled and relaxing hours working on it. What better recommendation can one give for a hobby?

College of Surgeons Taps 65 Texas Fellows

Sixty-five physicians in Texas received the title of fellow of the American College of Surgeons at the organization's recent Clinical Congress held in Chicago. A total of 1,551 physicians were named to the honor in the world's largest organization of surgeons.

Initiates from Texas included the following:

Abilene—Drs. William Orlan Akin, Marco T. Eugenio, and William P. Gollihar.

Amarillo—Drs. Louis A. Finney and Kenneth H. Johnston.

Arlington—Dr. Ernest E. Rising, Jr.

Austin—Drs. Robert E. Askew and Jerry D. Julian.

Corpus Christi—Dr. Frank S. Martin, Jr.

Dallas—Drs. Maurice Adam; Peter Corte Canizaro; G. Kennedy Hempel, Jr.; Ridlon J. Kiphart; Trevor E. Mabery; Richard L. Mabry; H. Thomas McSwain; William M. Osborne; Felix P. Peppard; Walter Daniel Stevenson; Eugene R. Todd; and Elgin W. Ware, Jr.

Denton—Dr. Frederick D. Kurrus.

El Paso—Drs. Billy M. Dickey and Khosrow Zolfoghary.

Fort Sam Houston—Dr. Sonley R. LeMay, Jr., Lt. Col., US Army Medical Corps.

Fort Worth—Drs. Carl R. Coers, III; Charles A. Crenshaw; Wiltie A. Creswell, Jr.; Allan L. Graham; and John W. O'Rear.

Galveston—Dr. C. Roger Youmans, Jr.

Houston—Drs. Jorge Badillo; Frank L. Barnes, II; Thomas M. Biggs, Jr.; Raymond O. Brauer; Donald Lee Bricker; Beryl L. Harberg; W. Rex Hawkins; Richard Harold Lynch; Malcolm L. Mazow; Marion J. McMurtrey; John H. Meador; Marvin M. Romsdahl; and Charles E. Russo.

Irving—Dr. Herbert R. Kasnetz.

Lubbock—Drs. Edward F. Houser, Jr.; Gordon W. Mayes; Donald K. Wheeler; and Gerald L. Woolam.

McAllen—Dr. Arland K. Faust.

Odessa—Dr. Radames R. Martinez.

San Angelo—Dr. Robert B. Stell.

San Antonio—Drs. Robert L. Brusenhan, Jr.; Charles R. Leone, Jr.; Leonardo Lince; Joe R. McFarland, Jr.; Graham B. Milburn; Perry T. Roberts, Lt. Col., US Air Force Medical Corps; Waid Rogers; Daniel A. Russell, Jr.; Bland H. Schwarting; L. Dow Strader, Jr., Lt. Col. US Army Medical Corps; and David C. Wolfe.

Texarkana—Dr. Barry M. Green.

Tyler—Dr. Charles A. Primer.

Essayists Review Needs Of Organized Medicine

From a motivating letter came some interesting and unusual answers to the theoretical question, "What can an individual physician do for organized medicine and what should the county medical society do for the physician?"

The letter, from El Paso County Medical Society president Dr. John D. Martin, was sent in early April to members of the society. In the last three paragraphs, Dr. Martin proclaimed the opening of a unique "opinion survey" that he was personally sponsoring. The survey was to be in the form of an essay, and since the stated aim of the new president was to "bring you to the society and the society to you," the essays were to cover the topic, "What I Can Do for Organized Medicine and What Should the El Paso County Medical Society Do For Me?"

Frankly admitting that he did not know whether such a contest had been conducted by a county medical society before and that he had no criteria to guide him, Dr. Martin stated that he would even consider "such radical ideas as an affiliation with the AFL-CIO, provided the writer explores the legality, feasibility, and implications of such an affiliation."

"If an essayist can convince the society that we should march on Washington, I have good camping equipment," he wrote, somewhat facetiously.

Essays were submitted anonymously by the July 1 deadline, with some identifying number (such as the contestant's social security number or license plate number) on the paper. The entries were read and judged; then, the winners were determined from slips of paper on which the contestant had given his secret "name-number."

Although the response was light, the four winners presented quite different ideas to the society for their consideration. The winning essays were read at the society's September meeting, and the contest winners were presented their awards.

Dr. Martin suggests that other county medical societies might find a similar undertaking beneficial to both the society and individual physicians.

Following are some excerpts and a synopsis of the winning thoughts.

First prize, $250, to Dr. Paul J. Huchton, Jr., El Paso pediatrician: Noting the closeness of El Paso to Mexico, Dr. Huchton's essay pointed out the importance of bilingual education in the county.

He suggested that newspaper articles written by a local physician be carried in both the local English and Spanish dailies.

Dr. Huchton also suggested that a supervisor, "whether he be the Public Health officer in charge or somebody appointed by the El Paso County Medical Society," be in charge of making sure that each Health Department clinic has the proper facilities and aids to educate its patients as to the necessity of immunization—not just to provide the shots without any explanation of their great importance.

Also suggested was a telephone "hot line" to the medical director at a local hospital. "All questions pertaining to medical problems could be called in to this physician. If he did not have the answer at his fingertips, he could direct any incoming question to his medical staff."

To implement these proposed educational programs, Dr. Huchton called for a request to local radio stations to provide free time for advertisement of the services.

Regarding the community, he also pointed out that many of the low-income groups face many transportation problems in obtaining medical services. He proposed that some sort of transportation program be implemented, by using existing bus facilities and additional government funds, to allow these people easy access to the county hospital or to local baby clinics.

For the county medical society, Dr. Huchton had these suggestions:

1. Inviting out-of-town speakers to address the group's meeting.
2. Use of audiovisual aids, such as movies and closed circuit television at meetings.
3. Recognition programs for local physicians who have made a significant contribution to the field of medicine or to the community.
4. A weekly bulletin to keep members abreast of society happenings.
5. Better utilization of manpower by sending out a questionnaire to all new members, "therefore deciding how he [a new member] can best be dynamically utilized by the society."
6. Use of modern business methods in keeping society records, for example, using computers for billing dues.

Second prize, $125, to Dr. Stefan Georg Sarre, El Paso cardiologist: A broad overview of the function of the county medical society was included in the second-prize essay by Dr. Sarre. He pointed out the importance of the medical society representing local physicians and providing positive representation.

"The medical society should then represent the physician in society as a whole. It should do this in a positive way as do other successful groups. It should not merely jump into action when the medical profession is harassed, maligned or threatened, but it should take a positive, constant and active role in society."

Dr. Sarre also outlined the medical society's obligation to the community: "The medical society, to be successful, should have a role as part of the community as well as being a representative of the medical profession. It will have to investigate the health needs of a community both as they exist and as they appear to the public. It should cooperate with legitimate health needs and wishes of the population and furnish expert interpretation and aid in these matters so that they are not left up merely to professional politicians at times of elections. This requires a constant, year round, positive, aggressive, and systematic approach."

Author Sarre also stated that for such a medical society to exist, the individual physician must participate and cooperate with the society. "The individual physician . . . has to take the medical society seriously as much more than a social or scientific group, but as his legitimate representative and extension."

In concluding, he wrote, "The medical society, then, will have to establish itself as the respected and interested expert group evaluating and in a way overseeing the community's health needs."

Third prize, $75, to Dr. Maurice P. Spearman, El Paso otolaryngologist: In his third-prize winning essay, Dr. Spearman discussed the problem of crowding and overpopulation as it relates to the spread of disease. He also pointed out the problems of health care delivery for the victim of illness who is not financially able. He, like other contestants, noted that physicians must learn to accept criticism and to be aware of the changes occurring in our society. "Learned as they are in the ills of mankind, men of medicine, alas, display extreme myopia when they attempt wide social awareness and solutions. This is not to medicine's credit, not to society's benefit."

Too, physicians must take the initiative and guide the changes in the medical circles, he said. "Medicine has the chance to advise and direct, in a large degree, this birth of the new changes. To accept or decline this challenge; that is a choice that organized medicine is compelled to make."

"If we decline," he warns, "the nostrum prescribed for us may be bitter indeed, for medicine and mankind alike."

To provide first-class medical service to all citizens, Dr. Spearman proposed, "Congress should create a semiautonomous medical care corporation. The governing body should contain representatives of government; the general consumer; medical, dental, nursing, and pharmaceutical professions; and the hospital industry. The governors would take possession of hospital and clinic facilities, promulgate rules and regulations regarding all facets of the delivery of medical care to every person in the country, abolish the nonsensical state licensure procedures, and assign personnel to duty stations."

He concluded, "The proposal . . . may be revolutionary, or evolutionary, depending upon one's convictions of the moment. At any rate, the hour is at hand for purposeful debate. Shrill name-calling solves no domestic differences and will not help here either. On the anvil of debate, then, will be hammered out the compromise of a solution. Let it begin."

Fourth prize, $50, to Dr. Harold M. Jesurun, El Paso obstetrician-gynecologist: Dr. Jesurun, winner of fourth place in the competition, proposed a massive public relations campaign in his essay. A series entitled "Know Your Hospital," "Know Your Doctor," and "Know Your Medical Personnel, Your Real Servants" was suggested in the entry. News releases are also called for in Dr. Jesurun's public relations campaign. "Reveal how many free hours physicians give at local hospitals, with the American Cancer Society, in charitable work, in committee work, and with the city and county government in planning and working out problems."

"On the other side of the coin," he writes, "it could be nicely shown that doctors and their families are 'human,' too!"

"We are all interested in better medical care for everyone, whether they can pay or not. It is and has been our goal always. Let's keep pushing it not only by deed, but by information and education of the public," he stated.

Honorable mention, to Dr. Hervey W. Dietrich, El Paso internist: Given a fourth-place rating by one judge and honorable mention by two other judges, Dr. Dietrich's essay concentrated on the inequities existing under the current Medicare program.

He urged the society to become actively involved in publishing, through all forms of news media, the problems that both the physician and the patient face under Medicare.

One of his major points was that organized medicine should "organize." He wrote, "I also believe that organized medicine should *organize* if we are going to accomplish anything and to rectify the absolutely fraudulent actions of the government in its relation with the people and the promises that it puts out as gospel."

DISTAL EARLY WARNING:

SLOW OR UNUSUAL NAIL GROWTH

Discolored, thickened and deformed toenails or ridged fingernails which are not firmly attached to the nailbed may be an early sign of peripheral vascular disease.

So, too, other distal early warning signs such as mild calf pain, postural color changes, shiny skin, cold sensitivity and loss of hair on the toes may suggest an impaired peripheral circulation.

Early diagnosis can mean more viable smooth musculature more capable of responding to vasospasmolytic therapy with Cyclospasmol.

☐ Cyclospasmol lowers peripheral resistance in limb vessels... improves distal run-off, facilitates development of collateral circulation.

☐ is a musculotropic without significant adrenergic or cardiostimulant effects.

☐ is unrelated to epinephrine, papaverine or nicotinic acid.

A program of progressive walking exercise, cessation of smoking, foot care, proper diet and Cyclospasmol can be of long-term value to many patients with early occlusive disease.

Before arteriosclerosis obliterans becomes painfully evident

Cyclospasmol® (cyclandelate)

For long-term enhancement of peripheral circulation

See facing page for Brief Summary

Cyclospasmol
(cyclandelate)

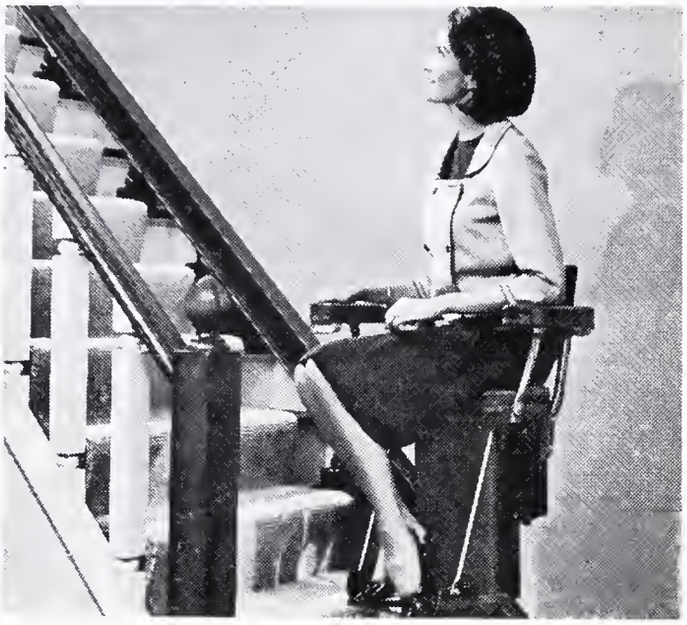
ACTIONS: Cyclospasmol (cyclandelate) is an orally effective peripheral spasmolytic and vasodilator that acts directly on the vascular smooth musculature to produce a gradual and progressive relaxation that enhances the peripheral and cerebral blood flow. **INDICATIONS:** For adjunctive therapy in occlusive and vasospastic diseases of the vascular system associated with an impaired circulation, such as: intermittent claudication; arteriosclerosis obliterans; thrombophlebitis (to control associated vasospasm and muscular ischemia); nocturnal leg cramps; local frostbite; Raynaud's phenomenon; as an aid to encourage healing of diabetic and trophic ulcers of the legs; and for selected cases of ischemic cerebral vascular disease. A faster response may be expected in conditions in which vasospasm is predominant in the pathological process. The drug is not intended to substitute for an adequate medical or surgical program in the treatment of peripheral or cerebral vascular disease. It is imperative that the patient continue to follow established therapy, e.g., foot care, discontinuance of smoking, etc., while taking Cyclospasmol. Since cerebrovascular disease is diagnosed most frequently only after destruction of nerve tissue, it cannot be expected that signs and symptoms arising from an interruption of neuronal function can be completely reversed by correcting the exciting cause. Nevertheless, restoration of blood flow towards more normal levels with cyclandelate may often produce marked relief from such signs and symptoms as head noises, ringing in the ears, a feeling of weakness, unsteady gait, mental confusion, temporary fluctuations in hearing acuity, poor memory and slurred speech. More important, the drug may provide prophylaxis against further circulatory embarrassment, particularly if the diminished circulation is associated with spasm of the vascular wall. **CONTRAINDICATIONS:** Cyclospasmol is contraindicated in cases of known hypersensitivity to the drug. **WARNINGS: 1.** Cyclandelate should be used with extreme caution in patients with severe obliterative coronary artery or cerebral vascular disease, since there is a possibility that these diseased areas may be compromised by vasodilatory effects of the drug elsewhere. **2. USE IN PREGNANCY:** The safety of cyclandelate for use during pregnancy or lactation has not been established; therefore, it should not be used in pregnant women or in women of childbearing age unless, in the judgment of the physician, its use is deemed absolutely essential to the welfare of the patient. **3.** Although no prolongation of bleeding time has been demonstrated in humans in therapeutic dosages, it has been demonstrated in animals at very large doses. Therefore, the hazard of a prolonged bleeding time should be carefully considered when administering cyclandelate to a patient with active bleeding or a bleeding tendency. **PRECAUTIONS:** Since Cyclospasmol is a vasodilator, it should be used with caution in patients having glaucoma. Consult direction circular before prescribing. **ADVERSE REACTIONS:** Gastrointestinal distress (pyrosis, pain and eructation) may occur with Cyclospasmol. These symptoms occur infrequently and are usually mild. Relief can often be obtained by taking the medication with meals or by the concomitant use of antacids. Mild flush, headache, feeling of weakness or tachycardia may occur, especially during the first weeks of administration. **SUPPLIED:** 200 mg. blue capsules in bottles of 100 and 500; 100 mg. orange tablets in bottles of 100 and 500.

May we send you reprints, detailed literature or professional samples?

IVES LABORATORIES INC.
685 Third Avenue, New York, N.Y. 10017

Ives®

WELCOLATOR
STAIRWAY ELEVATOR



Sit down and ride up! (or down) at the touch of a button. Ideal way to climb stairs. Like living in a one-story home. Comfortable, attractive styling. The Wecolator is superbly engineered, cog drive—no cables, completely safe and virtually maintenance free. Installed on any straight or curved stairway . . . in just a few hours.

Write or Call:

CUSTOM HOME ELEVATOR CO.

P. O. Box 13627 Dept. M
Ft. Worth, Texas 76118 • A/C 817/281-8188

WICHITA FALLS CLINIC-HOSPITAL

GENERAL SURGERY
W. E. Crump, M.D., F.A.C.S.
James T. Lee, M.D.
Charles H. Wilson, M.D., F.A.C.S.

ORTHOPEDIC SURGERY
Jack E. Maxfield, M.D., F.A.C.S.
Clyde W. Parsons, M.D.
Mark E. Huff, Jr., M.D.
David G. Borman, M.D.

ORAL SURGERY
R. A. Mitchell, D.D.S.
Larry J. Cason, D.D.S.

RADIOACTIVE ISOTOPES
Claude D. Wilson, M.D., F.A.C.R.
Joe D. Steed, M.D., D.A.B.R.
Julian H. Acker, M.D.
David D. Salmon, M.D., D.A.B.R.

PEDIATRICS
George W. Slaughter, III, M.D., F.A.A.P.
Joseph Bilder, Jr., M.D.

LABORATORIES
Claude D. Wilson, F.A.C.R., Radiology
Joe D. Steed, M.D., D.A.B.R., Radiology
David D. Salmon, M.D., D.A.B.R., Radiology

MEDICINE
W. B. Whiting, M.D., Cardiology
R. F. Knox, M.D., Endocrinology
P. K. Smith, M.D., F.A.C.P., Diagnosis & Internal Medicine
I. L. Humphrey, Jr., M.D., Diagnosis & Internal Medicine
Julian H. Acker, M.D., Diagnosis & Internal Medicine
Preston McCall, M.D., Diagnosis & Internal Medicine
Julian C. Sleeper, M.D., Cardiology
Eugene Jackson, M.D., Diagnosis & Internal Medicine

GENERAL PRACTICE
J. B. Hathorn, Jr., M.D.
Melvin Horany, M.D.
John E. Worthen, Jr., M.D.

UROLOGY
Owen C. Berg, M.D., F.A.C.S.

OBSTETRICS AND GYNECOLOGY
W. L. Parker, M.D., F.A.C.S.
Warren T. Kable, M.D.
Frank J. Lee, M.D.

ADMINISTRATIVE OFFICER
Bertha McNeill, Administrator
Jesse E. Dobbs, Jr., Asst. Administrator

THE CHANGING FACE OF TEXAS MEDICINE

Fifty years ago, *Texas Medicine* (then the *Texas State Journal of Medicine*) kept TMA members informed of current happenings, as it now does. The November, 1920, issue carried the following items of note.

**Problems with chiropractors were discussed extensively in the November, 1920, issue. One irate reader wrote "in regard to the policy of the State Medical Association as it relates to the daily violation of the medical practice act by the chiropractors, so-called." He said, "I think the time is on us when we should do something . . . There is no reason that I can see why we should not call a halt on the chiropractors, at least. There is a bunch of these people in — who advertise to cure everything, cancer included. All of this rot goes through the United States mail, and the postal authorities stand for it . . ."

**In an original article, "Prohibition and the Practice of Medicine," several beneficial uses of alcohol were described, including one for treatment of scarlet fever when dropsy had set in: "At this point, one successful method of treatment consists in saturating the patient with champagne, in order to neutralize the toxins, which the kidneys are unable to eliminate."

**The author of "Non-Operative Management of Cataract Cases" offered a bit of advice that could be applied to many situations: "Looking back calmly over the past, and looking forward hopefully into the future, I find one dominant idea that I think should always be kept vividly before us in the management of these important and exacting cases. The thought is this: In the interest of the patient, the surgeon and all concerned, we should aim not simply to perform an operation which is technically correct, but to leave the patient happier than we found him."

**Dr. John M. Wheeler of New York confessed in his article, "Extirpation of the Lacrimal Sac in Traumatic Dacryocystitis": "In speaking of removal of the lacrimal sac, I always feel that my enthusiasm must be curbed, as I must confess a distinct fondness for performing this operation, and a distinct feeling of satisfaction over the results which it yields . . ."

**An original article on "Operative and Non-Operative Treatment of Squint" discussed the cases of two sisters with squinting problems.

**In the News section—

*A decision handed down by the Fourth Court of Civil Appeals held the San Antonio ordinance providing for compulsory vaccination in the public schools to be valid. From the *Dallas News*.

*Physicians in Vienna, Austria, who were connected with the Kranken Kasse (State Sick Relief Fund) struck for "livable fees." Under the system then in practice, the doctors received 24 to 55 kronen (approximately 35 to 75 cents) a day. They demanded 48 to 110 kronen a day.

*Dr. Oscar Davis, state health officer, issued an alarm against using horse-hair shaving brushes which the surgeon general warned might cause "shaving brush anthrax."

**In the Miscellaneous section, the journal reprinted a piece from the Fresno (Calif.) Republican on "plumbopathy." The article reads in part: "We rise again to protest! Examinations were held in Fresno last night for plumbers' licenses. No one is permitted to practice plumbing in California without such a license. And all the examinations are in complete control of the regular plumbopathic school. This is a rank discrimination against the disciples of other plumbing faiths . . . An educational qualification is undemocratic in a community in which there are more people who do not know plumbing than there are who do know it. Let the majority rule!"

**The Grayson County Medical Society had its problems, too: "The Grayson County Medical Society was due to meet October 5th, at Sherman, in the Y.M.C.A. parlors. The meeting did not eventuate. Fact is, there is so tarnation much going on just now of one character or another, that doctors haven't time to meet, and no place to meet if they had time."

**The journal carried a review of *The Oxford Medicine*, "the first Loose-Leaf Reference made in the field of Medical Literature and was undertaken at the request of the profession at large." The reviewer says that in his opinion, "This system of medical reference is destined to become more excellent than any cabinet filing system that can be kept, since its service will be that of the ablest physicians of America and the British Empire, and will come near to keeping the subscriber in touch with the world's progressive medicine and allied sciences."

Annual Contest Opened

Competition is under way for the 1970 Anson Jones Award, sponsored by the Texas Medical Association.

The annual award, presented since 1956, recognizes Texas newspapers, magazines, radio stations, and television stations for excellence in communicating health information to the public. The award—named in honor of Dr. Anson Jones, a pioneer Texas physician, distinguished writer, and last president of the Republic of Texas—consists of a $100 cash prize and an engraved plaque.

A total of eight winners may be named this year, with four categories of competition for newspapers, one each for magazines and radio stations, and two for television. However, no award will be given in a category if the judges determine that there are no entries representing excellence.

Entries will be evaluated on the basis of accuracy, significance, quality, public interest, and impact. Judging will be done by respected members of the publishing and broadcast industries, with final winners being selected by a panel of Texas physicians.

Contest deadline is Dec. 10, 1970, and entries submitted must have been published or broadcast between Dec. 1, 1960, and Nov. 30, 1970.

Winners are scheduled to be announced in early February, and awards will be presented at the 1971 TMA Annual Session, May 6-9, in Houston.

Pediatricians Assist In 4 Foreign Nations

The department of pediatrics at The University of Texas (Southwestern) Medical School in Dallas is involved in projects in four foreign countries—all because concern for children is multilateral.

Department chairman Heinz Eichenwald has only recently returned from Saigon. He was requested by the State Department to plan and assist in setting up a functioning department of pediatrics in the Faculty of Medicine, University of Saigon.

The need for improvement of medical education in Vietnam is imperative, says Dr. Eichenwald. This was his second trip in the effort to develop the pediatrics department, as well as to assist in the solution of severe public health problems there.

"Infant mortality is from 300 to 350 per 1,000 in the first year. That's a third," explains the child specialist. In this country, the rate is approximately 23 per 1,000.

"In Vietnam, when you come into a hospital, your chances of dying are pretty good. On a given children's disease, the doctors might have available only a French book on how children in Paris were treated. It's not the same.

There are nutritional and environmental differences," he notes.

During his first visit from November, 1968, to January, 1969, Dr. Eichenwald tried out various educational methods he thought would be more effective for aiding the patients in Children's Hospital in Saigon.

On his second trip this year, he learned the results. "From what I was told there was a steep decline in mortality," he said. Specifically measured were deaths from meningitis, pneumonia, and diarrhea.

The program to establish the Saigon department is under the sponsorship of the American Medical Association and the Department of State. Southwestern's department of pediatrics was given full responsibility for development and management of the effort.

About a dozen postgraduate students will be trained in the preliminary phase of the program. Chairman of the Saigon pediatrics department, Dr. Phan Din Tuan, spent 2 months with the department in Dallas, and a 6-month visit by another Vietnamese professor is expected this fall.

In addition to the program being conducted in Saigon, there continues to be collaboration between Southwestern and the department of pediatrics at the Children's Hospital of the University of Chile at Santiago.

"We've set up some collaborative research in infectious diseases and nutrition," said Dr. Eichenwald. "Some of the studies would be difficult to carry out here: we don't have the numbers of patients with nutritional disturbances, and some of the diseases we're interested in are more common there," he added. Those diseases include sepsis and meningitis, he said, as well as pneumonias in young children and various diarrheal diseases.

Another cooperative arrangement exists with the pediatrics department of the University of Antioquena in Medellin, Colombia.

Currently, there are two efforts under way with the University of Antioquena group, Dr. Eichenwald said. One is an effort to train some of their people in infectious disease and in clinical research. Projects include a study of bacterial meningitis in children—particularly the effect of nutrition on response to that disease.

Still another member of the Southwestern pediatrics department has a cooperative international research venture under way. Dr. George McCracken regularly journeys to the most modern hospital in Haiti, the Albert Schweitzer Hospital, where he and members of the hospital staff cooperate in studies of tetanus treatment in newborns.

Program Planned to Aid Nurses Without Licenses

A new program to assist nurses who are currently not licensed to practice nursing in the state is being offered by the Texas Nurses Association.

The program, headed by Marie-Louise Ranzau, Ph.D., of San Antonio, is designed to aid nurses to qualify for licensure to practice professional nursing in Texas. Both nurses educated within and outside the United States may participate.

The first step of the project involves working with the Board of Nurse Examiners and employing agencies to determine the individual needs of such nurses; then, the type of instruction or clinical practice required to prepare the nurses for licensure is to be made available.

The Texas Nurses Association estimates that approximately 2,000 nurses could benefit from the new program.

The program will be financed by a $35,698 grant awarded to the Texas Nurses Association by the US Public Health Service.

PERSONALS

Dr. Charles R. Queen of Edinburg was chairman of the medical section meeting of the United States Civil Defense Council held Oct. 7 in Fort Worth. AMA President Dr. Walter C. Bornemeier, Chicago, was one of the participants and was introduced by **Dr. Walter Wallthall**, San Antonio, President of TMA. Dr. Queen is chairman of the TMA Committee on Disaster Medical Care.

Dr. Daniel M. Martinez, clinical assistant professor of otolaryngology and director of the Otoneurology Laboratory at The University of Texas (Southwestern) Medical School in Dallas, will give a presentation to the Amsterdam Symposium on Meniere's Disease on his almost 20 years of research on the ailment.

The only specialist from the US invited to participate in the symposium, Dr. Martinez will show films produced at Dallas' Methodist Hospital.

Dr. Richard D. Burk, dean of the School of Allied Health Professions and chairman of the department of physical medicine and rehabilitation at The University of Texas (Southwestern) Medical School, was named president of the National Rehabilitation Association at the group's annual meeting held recently in San Diego.

Dr. Burk is the first from Texas to be elected president of the organization.

DR. SKINNER

Dr. Robert B. Skinner was named deputy commissioner for tuberculosis control by the Texas State Board of Health at its quarterly meeting on Sept. 13, 1970.

Before his appointment, Dr. Skinner had been serving as acting deputy commissioner for tuberculosis control, as well as director of state tuberculosis hospitals. He has been with the Texas State Department of Health since 1965.

Dallas pediatrician **Dr. Anthony L. Alfiere**, also a clinical professor of pediatrics at The University of Texas (Southwestern) Medical School, was elected president of the Texas Pediatric Society at the group's recent annual meeting.

Serving with Dr. Alfiere during 1970 will be **Dr. Jack F. McKemie** of Corpus Christi, president-elect; **Dr. George R. Branch** of Dallas, vice-president; **Dr. Pat A. Cato** of Austin, secretary; and **Dr. George M. Waddill, Jr.**, of Amarillo, treasurer.

District chairmen for the society include **Drs. Robert R. Gardner** of Houston, district 1; **Melvin G. Russell** of Dallas, district 2; **P. Clift Price** of Austin, district 3; and **John M. Pickett** of Amarillo, district 4.

PAMPHLETS

The cover of a new leaflet published by the Texas Safety Association cries, "Your family is in danger. You can help save their lives. Do you want to?"

Inside the leaflet is an outline of the facts and legislative actions needed to combat the serious traffic hazards currently found in Texas. This proposed traffic legislation program has been recommended by the Governor's Traffic Safety Committee and endorsed by several state organizations, including the Texas Medical Association.

To obtain free copies of the leaflet, contact the Texas Safety Association, 1623 South Lamar Boulevard, Austin 78704.

Menrium® treats the menopausal symptoms that bother him most.

Roche
LABORATORIES
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

His wife has a lot of different menopausal symptoms, but only a few really irritate *him*. Her hot flashes, her vertigo, her palpitations—that's *her* problem. What really bothers him is her nervousness, her irritability and her excessive anxiety, often expressed by endless "book-shuffling, chain-smoking, reading-lamp" insomnia!

Menrium takes care of hot flashes, vertigo, palpitations in most menopausal women. Menrium provides the well-known antianxiety action of chlordiazepoxide (Librium®) and water-soluble esterified estrogens. It therefore relieves more symptoms than either component separately. It takes care of the vasomotor symptoms as well as the emotional symptoms. This means the symptoms that bother his wife most. And the symptoms that irritate him most.

So, to help them both get through *her* menopause, remember Menrium.

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Management of manifestations generally associated with the menopausal syndrome—anxiety and tension, vasomotor complaints and hormonal deficiency states.

Contraindications: Women with cancer of breast or genitalia, except inoperable cases, and those with known hypersensitivity to chlordiazepoxide and/or esterified estrogens.

Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. As with all CNS-acting drugs, caution patients against hazardous occupations requiring complete mental alertness (e.g., operating machinery, driving). Exclude other possible causes of menopausal syndrome manifestations, such as pregnancy. Though physical and psychological dependence have rarely been reported on recommended doses, use caution in administering to addiction-prone individuals or those who might increase dosage; withdrawal symptoms (including convulsions) similar to those seen with barbiturates have been reported following discontinuance of chlordiazepoxide HCl. Potential benefits of use in pregnancy, lactation or women of childbearing age should be weighed against possible hazards to mother and child. Clinical data inadequate on safety in pregnancy.

Precautions: In elderly and debilitated patients, limit dosage to smallest effective amount of chlordiazepoxide (initially 10 mg or less per day) to preclude ataxia or oversedation; increase gradually as needed and tolerated. Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider individual pharmacologic effects—particularly in use of potentiating drugs such as MAO inhibitors and phenothiazines. Observe usual precautions in patients with impaired renal or hepatic function. Paradoxical reactions to chlordiazepoxide (e.g., excitement, stimulation and acute rage) have been reported in psychiatric patients. Employ usual precautions in the treatment of anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation very rarely reported in patients receiving Librium® (chlordiazepoxide) and oral anticoagulants.

Adverse Reactions: Untoward effects seen with either compound alone may occur with Menrium. With chlordiazepoxide, drowsiness, ataxia and confusion reported in some patients, particularly in the elderly and debilitated; while usually avoided by proper dosage adjustment, these are occasionally observed at lower dosage ranges. Also reported have been a few instances of syncope; isolated occurrences of skin eruptions, edema, minor menstrual irregularities, nausea and constipation, extrapyramidal symptoms, increased and decreased libido, and occasional reports of blood dyscrasias, including agranulocytosis, jaundice and hepatic dysfunction. Periodic blood counts and liver function tests advisable during protracted treatment. Changes in EEG patterns (low-voltage fast activity) observed during and after chlordiazepoxide treatment.

With estrogens, headache, nausea and vomiting, anorexia, gastrointestinal discomfort, dysuria and urinary frequency, jitteriness, breast engorgement, formation of breast cysts, skin rashes and pruritus occasionally seen. Administration may also be associated with uterine bleeding and/or followed by withdrawal bleeding.

Usual Dosage: One tablet t.i.d. for 21 days, followed by one-week rest periods.

Menrium® T.I.D.

5 mg chlordiazepoxide	5-2	0.2 mg water-soluble esterified estrogens
5 mg chlordiazepoxide	5-4	0.4 mg water-soluble esterified estrogens
10 mg chlordiazepoxide	10-4	0.4 mg water-soluble esterified estrogens

STATEMENT OF OWNERSHIP, MANAGEMENT AND CIRCULATION

(Act of October 23, 1962; Section 4369, Title 39, United States Code)

1. Date of Filing: *September 22, 1970*

2. Title of Publication: *Texas Medicine*

3. Frequency of Issue: *Monthly*

4. Location of Known Office of Publication:
1801 North Lamar Blvd., Austin, Texas 78701

5. Location of the Headquarters or General Business Offices of the Publishers:
1801 North Lamar Blvd., Austin, Texas 78701

6. Names and Addresses of Publisher, Editor, and Managing Editor:

Publisher: *Texas Medical Association, 1801 North Lamar Blvd., Austin, Texas 78701*

Editor: *None*

Managing Editor: *Mrs. Marilyn Baker, 1801 North Lamar Blvd., Austin, Texas 78701*

7. Owner: *Texas Medical Association, 1801 North Lamar Blvd., Austin, Texas 78701*

8. Known Bondholders, Mortgagees, and Other Security Holders Owning or Holding 1 Percent or More of Total Amount of Bonds, Mortgages or other Securities: *None*

9. Not applicable.

10. Circulation Information:

	Average No. Copies Each Issue During Preceding 12 Months	Single Issue Nearest to Filing Date
A. Total No. Copies Printed	*11,350*	*11,357*
B. Paid Circulation:		
1. Sales Through Dealers and Carriers, Street Vendors and Counter Sales	*None*	*None*
2. Mail Subscriptions	*10,969*	*10,979*
C. Total Paid Circulation	*10,969*	*10,979*
D. Free Distribution (including samples) by Mail, Carrier or Other Means	*251*	*248*
E. Total Distribution	*11,220*	*11,227*
F. Office Use, Left-Over, Unaccounted, Spoiled After Printing	*130*	*130*
G. Total	*11,350*	*11,357*

I certify that the statements made by me above are correct and complete.

E. Maxwell Jones, Business Manager

Use Christmas Seals.

It's a matter of life and breath.

IT REALLY ISN'T CHRISTMAS WITHOUT THEM.

Fight emphysema, tuberculosis, air pollution.

Space contributed by the publisher as a public service.

Reviewers Comment on Wine, Pediatrics, and Drugs

Wine and the Digestive System, The Effects of Wine and Its Constituents on the Organs and Functions of the Gastrointestinal Tract, Salavatore Pablo Lucia, 157 pp., San Francisco, Fortune House, 1970, $3.50.

AN ANNOTATED BIBLIOGRAPHY on the effects of wine on the gastrointestinal tract, this book includes over 450 references. These references span 24 centuries, beginning with the Fourth Century B. C., when Hippocrates noted that wine was an aid to digestion, and ending with quotations from medical papers published in 1969.

Dr. Lucia has divided his book into seven sections, each dealing with a segment of the gastrointestinal tract. Each section is further divided into three parts: the effects of wine on normal function, the effects of wine in pathological conditions, and specific situations in which the use of wine is contraindicated. This arrangement, with the annotations listed chronologically, makes the book a handy reference tool.

MEMORIAL LIBRARY STAFF.

Current Pediatric Therapy, vol. 4, Sydney S. Gellis and Benjamin M. Kagan, 1077 pp., Philadelphia, W. B. Saunders, 1970, $27.

THIS VOLUME is a great contribution to the practice of pediatrics and is especially valuable to the practicing pediatrician as a ready and reliable reference for therapy.

The list of contributors reads like "Who's Who" in the field of pediatrics, and the two authors are most certainly authorities in both diagnosis and therapy in pediatrics.

Current Pediatric Therapy will serve as a very reliable reference for treatment, and I am unable to find any omissions in the field of therapy.

It is a voluminous text, and I certainly could not begin to read the entire volume. However, I did study the contents and feel that every topic was well covered. With the excellent index and arrangement, any subject can be readily found. The recommended treatment is concise and most reliable. Also, a brief summary of the most pertinent clinical signs and symptoms is given in most cases, which is a great help in assuring all that the proper diagnosis has been made.

I am sure that some of the current therapy recommended will soon become obsolete in the present progress of medical practice, but this is true in all fields of medicine and must be considered a part of the progress we are making in medical science.

I can most heartily recommend this volume for the practicing pediatrician and feel quite honored to have had the opportunity to express my opinion of the book.

L. B. OUTLAR, SR., M.D.,
Wharton.

Drug Dependence, Robert T. Harris, William M. McIsaac, and Charles R. Schuster, Jr., eds., 313 pp., illus., charts, Austin, Tex. University of Texas Press, 1970, $10.

WHY DO PEOPLE harm themselves by abusing drugs? What can we learn about treatment of addicts? These papers from a 1969 symposium on drug dependence report on theory, research, and practice.

Jerome H. Jaffe describes the multimodality program which he developed at Chicago. This important conception provides a flexible approach to the treatment of addicts through four plans: hospital withdrawal, outpatient methadone maintenance, narcotic antagonists, and residence treatment. The need to assess the results of each plan and to modify or discontinue unsuccessful efforts is explained. This section will be interesting to anyone planning a treatment program.

Just when successful treatments for narcotic addiction are being applied, abuse of alcohol, marihuana, amphetamines, and barbiturates is becoming more widespread. Carl Essig points to the 87-year delay following the discovery of barbituric acid and the recognition of the risk of its derivatives causing dependence, suggesting the need for the same precautions in the use of new sedatives as was used for barbiturates. How many careless prescriptions are written for sedatives and tranquilizers?

William M. McIsaac, Robert T. Harris, and Beng T. Ho describe the hallucinogens and their relationships to serotonin and monoamine oxidase. Such studies may yield new antipsychotic and antidepressant drugs.

Animal studies reported in the book investigate the pharmacology of abused drugs, demonstrate techniques used, and suggest behavioral effects that may be useful in treatment.

David C. Fenimore and Chester M. Davis, Jr., describe a rapid urine screening test for opioids, further testing positives with the highly specific gas chromatograph for optimum results.

Learning theory as applied to dependence is discussed in papers by Steven R. Goldberg and by Robert T. Harris and Robert L. Balster.

Helen N. Nowlis, Frederick M. Garfield, and Michael P. Rosenthal each consider the social and philosophical aspects of drug use. Changes in social attitudes, including education and legal regulation, deserve study. The role of the federal government in controlling research and treatment concerns everyone.

I wish that the editors had emphasized the need for treatment facilities. The time seems ripe for wider application of proved treatments. The cost of balanced programs, including methadone maintenance and alternative plans, is small compared to the potential savings.

The authors have reported worthy contributions in a well-edited book. Now, let physicians and other community leaders use this as a guide to action.

JAMES D. FOGLEMAN, M.D.,
Dallas.

New Books In TMA Library

Clark, V. V., comp. and ed.: *Outpatient Services Journal Articles, A Collection of Current Articles Related to Outpatient Services,* Flushing, N. Y., Medical Examination Publishing Co., Inc., 1970.

Gelperin, A. and Gelperin, E. A., eds.: *Emergency Room Journal Articles, A Collection of Current Articles Related to Hospital Emergency Rooms,* Flushing, N. Y., Medical Examination Publishing Co., Inc., 1970.

Grigg, E. R. N.: *The Trail of the Invisible Light,* Springfield, Ill., Charles C Thomas, 1965.

Gross, R. E.: *An Atlas of Children's Surgery,* Philadelphia, W. B. Saunders Co., 1970.

Harris, R.: *The Management of Geriatric Cardiovascular Disease,* Philadelphia, J. B. Lippincott Co., 1970.

Kosakai, N.: *Illustrated Laboratory Techniques,* Flushing, N.Y., Medical Examination Publishing Co., Inc., 1969.

Maddin, S., ed., and Brown, T. H., consultant: *Current Dermatologic Management,* St. Louis, The C. V. Mosby Co., 1970.

Shute, W. E., and Taub, H. J.: *Vitamin E for Ailing and Healthy Hearts,* New York, Pyramid Publications, Inc., 1969.

Smith, C. U. M.: *The Brain: Towards an Understanding,* New York, G. P. Putnam's Sons, 1970.

Symonds, Sir C.: *Studies in Neurology,* London, Oxford University Press, Inc., 1970.

University of Texas, M. D. Anderson Hospital and Tumor Institute at Houston: *Genetic Concepts and Neoplasia, A Collection of Papers Presented At the Twenty-Third Annual Symposium on Fundamental Cancer Research, 1969,* Baltimore, Williams & Wilkins Co., 1970.

Many of the books listed are available for review. If you would like to prepare a review on one of the new books listed, or if you would like to review other new books on a specific topic, write to the TMA Library, 1801 North Lamar Boulevard, Austin 78701. Guidelines for book reviewers are available from the Library.

Recent Deaths

Dr. J. C. Young

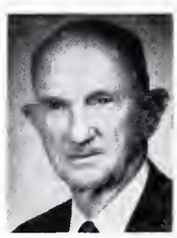
Dr. Josephus Cavitt Young, longtime general practitioner in Coleman, died Oct. 4, 1970, in Overall-Morris Memorial Hospital in Coleman after an extended illness.

Dr. Young, 79, was the son of William Ewing and Sarah Elizabeth Ferguson Young. He was born on Aug. 24, 1891, on his parents' farm near Turnersville, Tex. After obtaining a BA degree in 1914 from Daniel Baker College (since merged with Howard Payne College) in Brownwood, Dr. Young attended Northwestern University Medical School in Chicago. He received his MD degree in 1920 from Northwestern. While at Northwestern, he did special work in obstetrics with Dr. Joseph B. DeLee. He served a student internship at Cincinnati General Hospital, Cincinnati, Ohio, from 1919 to 1920 and remained at that hospital as a resident from 1920 to 1921. He also took postgraduate work in 1937 at The University of Texas Medical Branch in Galveston.

A World War I navy veteran, Dr. Young began his practice in Dallas and was on the staff of the Presbyterian Clinic, now a part of The Children's Medical Center of Dallas. He had practiced in Cross Plains and Brownwood before moving to Coleman in 1937. He served on the staff of the Overall-Morris Hospital from 1937 to 1970.

Dr. Young had served as secretary of the Brown County Medical Society in 1933 and as president of the Brown-Mills Counties Medical Society in 1934. While practicing in Coleman, he served as secretary of the Coleman County Medical Society for several years and was president of the society in 1950 and 1951. He was also a member of Texas Medical Association and American Medical Association. An active Presbyterian, Dr. Young had served as an elder for more than 40 years in the Presbyterian churches in Cross Plains, Brownwood, and Coleman. He was also a member of the Masonic lodge.

He is survived by his wife, Williprice Mizell Young; a daughter, Caroline Elizabeth Young of Weatherford, Okla.; two sisters, Mrs. Fannie Matthews and Mrs. Charlotte Pumphrey, both of Brownwood; a brother, George Thomas Young of Austin; three granddaughters; and one great-grandson. He was preceded in death by his daughter, Marguerite Young Currie.



DR. YOUNG

Dr. J. R. Story

Dr. Joseph Reynolds Story, 71, died on Sept. 12, 1970, at his home in Victoria. He was a retired physician and surgeon and was former chief of staff at Citizens Memorial Hospital in Victoria.

Dr. Story, the son of the Rev. James Cameron and Hida Reynolds Story, was born in Goldston, N.C., on Jan. 3, 1899. He entered Davidson College at Davidson, N.C., in 1917 and was graduated in 1921 with an AB degree. He also attended pre-medical school at the University of North Carolina, and then entered the Tulane University School of Medicine at New Orleans and was awarded his MD degree in 1926.

He served an internship at the Schumpert Memorial Hospital in Shreveport, La., from 1926 to 1928. Dr. Story also practiced in Sinton, Tex., for a brief period of time before relocating in Victoria.

Dr. Story was secretary from 1940 to 1944 and president in 1934 and 1938 of the Victoria-Calhoun-Goliad Counties Medical Society. He was also a member of Texas Medical Association and American Medical Association.

He is survived by two brothers, Paul J. Story, of Marion, N.C., and W. R. Story of Anderson, S.C.; and a sister, Mrs. Miriam Bolick of Raleigh, N.C.

Dr. C. A. Poindexter

Dr. Cary Allen Poindexter, Crystal City physician and surgeon, died Sept. 14, 1970, in the Winter Garden Hospital, Inc., in Crystal City following a lengthy illness. He was 73.

Dr. Poindexter was the son of John Reams and Larissa Powell Poindexter. He was born on June 7, 1897, in Colmesneil, Tex. He attended The University of Texas at Austin, receiving a BA degree in 1921. In 1925, he was awarded an MD degree from The University of Texas Medical Branch, Galveston. He served an internship at John Sealy Hospital in Galveston from

DR. POINDEXTER

1925 to 1926 and was a resident at King's Daughters Hospital in Temple from 1926 to 1929. At King's Daughters Hospital, he devoted his attention to surgery and obstetrics.

In 1930, Dr. Poindexter established the Crystal City Clinic and Hospital, which for more than 30 years was the city's only hospital. It was closed in 1966 when Dr. Poindexter retired from practice.

Dr. Poindexter was a member of Texas Medical Association, American Medical Association, American Academy of General Practice, and the Southwestern Surgical Congress. He was also a member of the Alpha Kappa Kappa medical fraternity. Dr. Poindexter was a former president of the Nine Counties Medical Society (Medina-Uvalde-Maverick-Val Verde-Edwards-Real-Kinney-Terrell-Zavala) and the Private Hospital and Clinic Association of Texas. He had also served as a TMA councilor from the Fifth District Medical Society.

A World War I navy veteran, he was also a member of the First Baptist Church and had served as Crystal City and Zavala County health officer.

Survivors include his wife, the former Golda Genevieve Burdwell; three sons, Allan Moore Poindexter of Pittsburgh, Pa., Craig Poindexter, MD, of Arlington, and Powell Emerson Poindexter of Crystal City; one daughter, Larissa Anna Poindexter of Crystal City; two sisters, Mrs. Ruby Lackey of Crystal City and Mrs. Myrtie Landers of Temple; and five grandchildren.

Dr. T. B. Reed

Dr. Theodore B. Reed, 82, died Sept. 28, 1970, in Wood Memorial Hospital in Mineola, Tex., the victim of an apparent heart attack.

Dr. Reed, the son of Oscar and Della DuBose Reed, was born in Fort Worth on Sept. 6, 1888. He attended the old Fort Worth University and took postgraduate work at Tulane University and at Texas Agricultural and Mechanical University. In 1912, he was graduated from the Fort Worth School of Medicine with an MD degree.

Dr. Reed had lived in Mineola for the past 57 years and had continued his private practice until 1968, when he retired. He served as assistant city physician of Fort Worth from June, 1912, until August, 1913.

He had served as secretary (1933-1935 and 1946) and president (1940) of the Wood County Medical Society. In 1962, he was elected to honorary membership in American Medical Association and Texas Medical Association. He was also a member of First United Methodist Church of Mineola.

Surviving Dr. Reed are his wife, Harriet W. Standley Reed; a daughter, Mrs. Harriet Pegues of Shreveport, La.; two grandchildren; and one great-grandchild.

Dr. H. G. Cull

Houston and Humble general practitioner Dr. Herbert Graham Cull died on Aug. 17, 1970, at home following a 10-month illness. He was 63.

Dr. Cull, the son of Benjamin and Mabel Graham Cull, was born on April 24, 1907, in Newport, R.I. He was graduated from Rice University (formerly Rice Institute) in Houston with a BA degree in 1929. In 1933, he received his MD degree from The University of Texas Medical Branch at Galveston. He served an internship at Santa Rosa Hospital in San Antonio and was a resident surgeon of Nix Memorial Hospital in San Antonio from 1934 to 1935. He also served as contract physician to the Civilian Conservation Corps camp at the Longhorn Cavern near Burnet, Tex., from 1934 to 1935. Postgraduate schooling was taken at Vanderbilt University in Nashville, Tenn.

Dr. Cull actively served in the Army Medical Corps from Oct. 20, 1940, to Jan. 19, 1946, and spent approximately two years of this period in the Asiatic Pacific Theatre (Aleutian Islands). Upon his discharge, he joined the National Guard and attained the rank of lieutenant colonel.

For several years before and after his military service, Dr. Cull was venereal disease control officer for Houston. He entered private practice in January, 1948.

He was a member of Texas Medical Association and Harris County Medical Society. He was also a member of the Episcopal Church of the Good Shepherd and Theta Kappa Psi medical fraternity.

Survivors include his wife, Elizabeth; three sons, Frederick Benjamin Cull and Graham William David Cull, both of Humble and Herbert Graham Cull of Houston; a daughter, Judith Marilyn Cull of Humble; and a sister, Mabel Cull of Houston.

Dr. R. E. Winn

Dr. Robert Erle Winn, Dallas psychiatrist, died Oct. 7, 1970, in Dallas of a heart attack.

The son of William McKendree and Gertrude Scott Winn, he was born in Dallas on June 16, 1906. He received a BA degree from Southern Methodist University in Dallas in 1927 and was graduated with an MD degree in 1932 from Baylor College of Medicine, then located in Dallas. Dr. Winn served as an intern at Parkland Memorial Hospital in Dallas from 1932 to 1933 and at Bellevue Hospital Center in New York City in 1934. He was a resident at Beverly Hills Hospital in Dallas for 3 years, from 1936 to 1939. Postgraduate work was taken at the Columbia University College of Physicians and Surgeons in New York City in 1946.

Dr. Winn engaged in general practice in the US Army Medical Corps Reserve from 1935 to 1936. From 1944 to 1946, he served in the US Navy Medi-

cal Corps, and in 1956, he was promoted to captain in the US Navy Reserves.

He was a member of Dallas County Medical Society, Texas Medical Association, and American Medical Association. He was also active in Dallas Neuropsychiatric Society, Texas Neurophychiatric Association, American Psychiatric Association, and the Dallas Southern Clinical Society. In addition to his medical activities, he was a member of Oak Lawn Methodist Church, Alpha Tau Omega social fraternity, and Phi Rho Sigma medical fraternity.

Survivors include his wife, Elizabeth Smith Winn; a son, David McKendree Winn, now in South Vietnam with the Foreign Service; a daughter, Mrs. Elizabeth Brandt of Palo Alto, Calif.; and two brothers, Watt W. Winn, MD, of Dallas and W. E. Winn of Houston.

DR. ANDERSON

Dr. J. C. Anderson

Fort Worth obstetrician and gynecologist Dr. James Covert Anderson died Sept. 4, 1970. He was 37.

Dr. Anderson was born on Feb. 21, 1933, in Fort Worth. He was the son of John L. and Sarah Covert Anderson. After receiving a BS degree from Texas Christian University at Fort Worth in 1954, Dr. Anderson was graduated from Tulane University School of Medicine in New Orleans with an MD degree in 1957. In 1958, he served an internship at Parkland Memorial Hospital at Dallas, and from 1958 to 1961 was a resident in obstetrics and gynecology at Parkland. He began his practice in Fort Worth in 1961.

He was a member of Tarrant County Medical Society, Texas Medical Association, American Medical Association, and American College of Obstetricians and Gynecologists. For the past five years, he served as medical director of the Fort Worth Planned Parenthood Center and was a past president of the Fort Worth chapter of the American Cancer Society. He was also a member of Phi Chi medical fraternity and had served as a member of the vestry of the Trinity Episcopal Church.

Surviving Dr. Anderson are his wife, Eddye-Ruth; a son, James Covert Anderson, Jr.; a daughter, Sarah Katherine Anderson; and his parents, all of Fort Worth.

Dr. R. D. English

Glen Rose general practitioner Dr. Robert Dillion English, 43, died Sept. 21, 1970, of a gunshot wound inflicted by an assailant.

Dr. English was born July 31, 1927, in Salt Lake City, Utah, to Howard William and Mildred Robinson English. He moved to Cleburne, Tex., shortly thereafter. He was graduated from Baylor University in 1948 with a BS degree, and he received his MD degree from Baylor College of Medicine in 1952. Dr. English interned at Parkland Hospital in Dallas from 1952 to 1953, when he came to Glen Rose to enter private practice. He had previously served in the US Navy from 1946 to 1947, attaining the rank of Quartermaster 3rd Class.

At the time of his death, Dr. English was involved in the establishment of a new hospital in Glen Rose. The groundbreaking ceremony for the new facility, to be called Marks-English Hospital, had been held in August.

Dr. English was a member of Texas Medical Association, American Medical Association, Erath-Hood-Somervell Counties Medical Society, and the American Academy of General Practice. He was also a member of Alpha Kappa medical fraternity. Dr. English had been a former officer and director of Glen Rose Chamber of Commerce and was a member and deacon of the Glen Rose First Baptist Church.

He is survived by his wife, the former Carlie Daldridge Brannon; four daughters, Mrs. Lalla Schackleford of Brownwood and Mrs. Jane Whitworth, Jean English, and Tamara English, all of Glen Rose; four sons, Robert Howard English, Roger Brannon English, Graham Howie English, and Paul Dillion English, all of Glen Rose; and his father of Cleburne.

Dr. J. J. Whitsitt

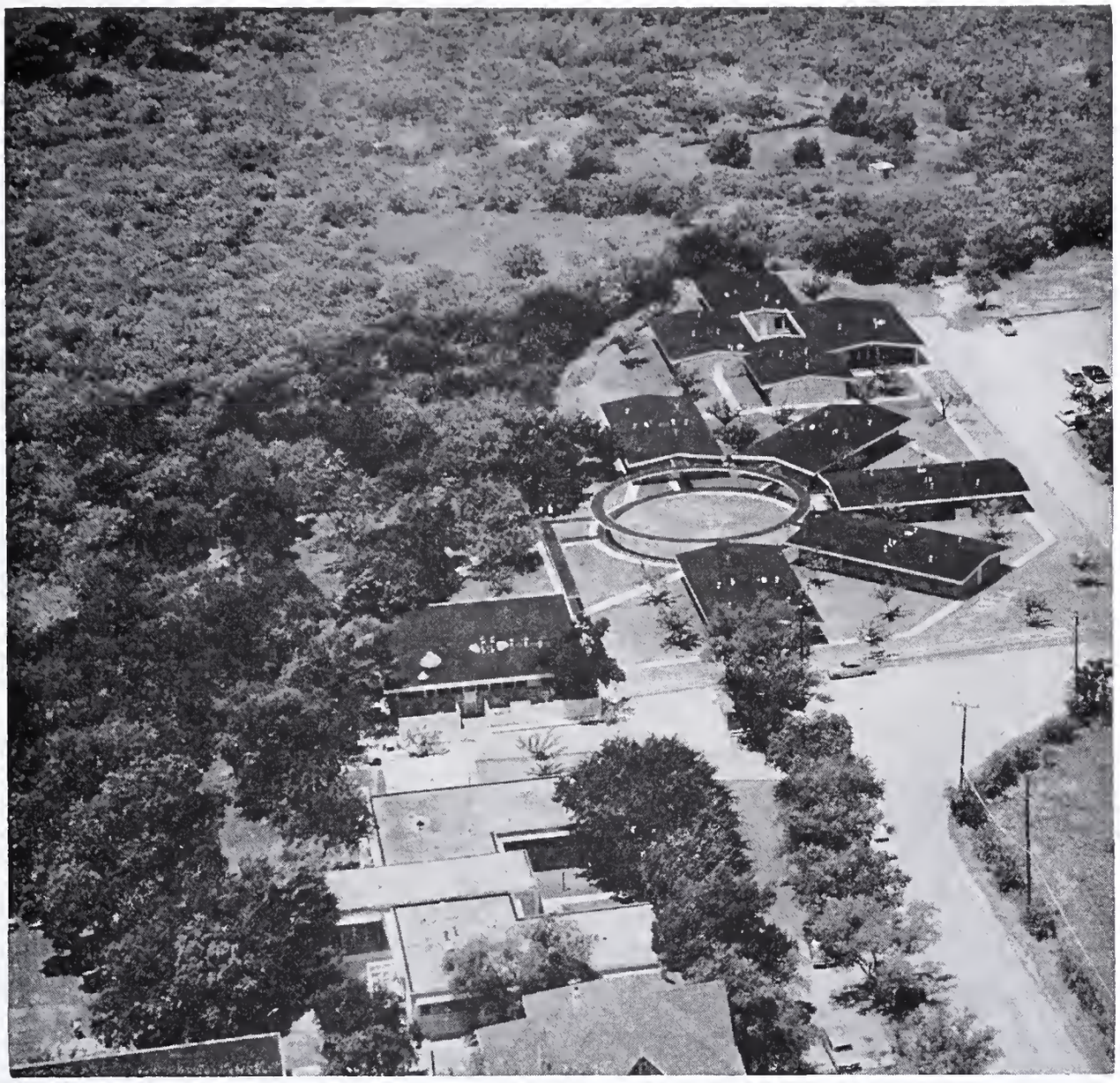
Houston general practitioner Dr. James Joseph Whitsitt, 63, died Aug. 29, 1970, in his home. Cause of death was myocardial infarction.

Dr. Whitsitt was born Jan. 23, 1907, in McKenzie, Tenn., and was the son of James Samuel and Sarah Dillinger Whitsitt. He attended Bethel College in McKenzie and the University of Tennessee at Knoxville before receiving his MD degree from the University of Tennessee College of Medicine at Memphis in 1932. He was an intern at the University Hospital in Oklahoma City in 1933, and before moving to Houston in 1938, he practiced in Leedey and Elk City, Okla. After serving as a major in the paramedic 102nd Airborne Division from 1943 to 1946, Dr. Whitsitt returned to Houston where he practiced until his retirement early this year. For his service in the armed forces, he was awarded the Distinguished Service Commendation, Silver Star, Purple Heart, and the French Crosse d'Garde medals.

A member of Harris County Medical Society and Harris County Academy of General Practice, he also belonged to Texas Medical Association, American Medical Association, and Association of American Physicians and Surgeons, Inc. He was a member of the First Presbyterian Church of Houston, the Houston Club, and Kappa Sigma social fraternity.

Dr. Whitsitt is survived by his wife, Evelyn; a daughter, Mrs. Marte Doyle of Houston; a sister, Mrs. Mamie Carnahan of Hobbs, N.M.; and four grandchildren.

DR. WHITSITT



BEVERLY HILLS HOSPITAL
BEVERLY HILLS CLINIC

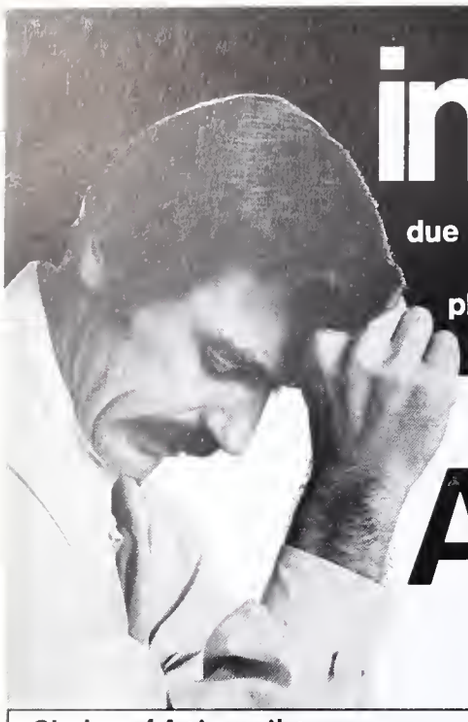
PSYCHIATRY
INPATIENT — OUTPATIENT

Multiple-approach treatment of thinking disorders. Established diagnostic procedures available. Secluded in-town location convenient to the medical community.

Psychiatry

Joseph L. Knapp, M.D. — Fred H. Jordan, M.D.
Jackson H. Speegle, M.D. — Joseph H. Lindsay, M.D.
Jack R. Tomlinson, M.D.

1353 North Westmoreland Avenue — Dallas, Texas 75211 — 214 331-8331



The treatment of

impotence

due to androgenic deficiency in the American male. The concept of chemotherapy plus the physician's psychological support is confirmed as effective therapy.

NEW CLINICAL STUDY

The Treatment of Impotence with Methyltestosterone Thyroid (100 patients — Double Blind Study) T. Jakobovits Fertility and Sterility, January 1970 Official Journal of the American Fertility Society

Android®

(thyroid-androgen) tablets

Double-Blind Study and Type of Patient: 100 patients suffering from impotence. Of the patients receiving the active medication (Android) a favourable response was seen in 78%. This compares with 40% on placebo. Although psychotherapy is indicated in patients suffering from functional impotence the concomitant role of chemotherapy (Android) cannot be disputed.

Choice of 4 strengths:

Android

Each yellow tablet contains:
Methyl Testosterone ..2.5 mg.
Thyroid Ext. (1/6 gr.) ..10 mg.
Glutamic Acid .....50 mg.
Thiamine HCL .....10 mg.
Dose: 1 tablet 3 times daily.
Available:
Bottles of 100, 500, 1000.

REFER TO PDR

Android-HP

HIGH POTENCY

Each red tablet contains:
Methyl Testosterone ..5.0 mg.
Thyroid Ext. (½ gr.) ...30 mg.
Glutamic Acid .....50 mg.
Thiamine HCL .....10 mg.
Dose: 1 tablet 3 times daily.
Available:
Bottles of 100, 500, 1000.

Android-X

EXTRA HIGH POTENCY

Each orange tablet contains:
Methyl Testosterone .12.5 mg.
Thyroid Ext. (1 gr.) ....64 mg.
Glutamic Acid .....50 mg.
Thiamine HCL .....10 mg.
Dose: 1 or 2 tablets daily.
Available:
Bottles of 60, 500.

Android-Plus

WITH HIGH POTENCY B-COMPLEX AND VITAMIN C

Each white tablet contains:
Methyl Testosterone ..2.5 mg.
Thyroid Ext. (¼ gr.) ...15 mg.
Ascorbic Acid (Vit. C) .250 mg.
Thiamine HCL .....25 mg.
Glutamic Acid .....100 mg.
Pyridoxine HCL ..... 5 mg.
Niacinamide .....75 mg.
Calcium Pantothenate .10 mg.
Vitamin B-12 .....2.5 mcg.
Riboflavin .....5 mg.
Dose: 2 tablets daily.
Available: Bottles of 60, 500.

Contraindications: Android is contraindicated in patients with prostatic carcinoma, severe cardiorenal disease and severe persistent hypercalcemia, coronary heart disease and hyperthyroidism. Occasional cases of jaundice with plugging biliary canaliculi have occurred with average doses of Methyl Testosterone. Thyroid is not to be used in heart disease and hypertension.

Warnings: Large dosages may cause anorexia, nausea, vomiting abdominal pain, diarrhea, headache, dizziness, lethargy, paresthesia, skin eruptions, loss of libido in males, dysuria, edema, congestive heart failure and mammary carcinoma in males.

Precautions: If hypothyroidism is accompanied by adrenal insufficiency the latter must be corrected prior to and during thyroid administration.

Adverse Reactions: Since Androgens, in general, tend to promote retention of sodium and water, patients receiving Methyl Testosterone, in particular elderly patients, should be observed for edema.

Hypercalcemia may occur, particularly in immobilized patients; use of Testosterone should be discontinued as soon as hypercalcemia is detected.

References: 1. Montesano, P., and Evangelista, t. Methyltestosterone-thyroid treatment of sexual impotence. Clin Med 12:69, 1966. **2. Dublin, M. F.** Treatment of impotence with methyltestosterone-thyroid compound. West Med 5:67, 1964. **3. Titeff, A. S.** Methyltestosterone-thyroid in treating impotence. Gen Prac 25:6, 1962. **4. Hellman, L., Bradlow, H. L., Zumoff, B., Fukushima, D. K., and Gallagher, T. F.** Thyroid-androgen interrelations and the hypocholesteremic effect of androsterone. J Clin Endocr 19:936, 1959. **5. Farris, E. J., and Colton, S. W.** Effects of L-thyroxine and liothyronine on spermatogenesis. J Urol 79:863, 1958. **6. Osol, A., and Farrar, G. E.** United States Dispensatory (ed. 25). Lippincott, Philadelphia, 1955, p. 1432. **7. Wershub, L. P.** Sexual Impotence in the Male. Thomas, Springfield, Ill., 1959, pp. 79-99.

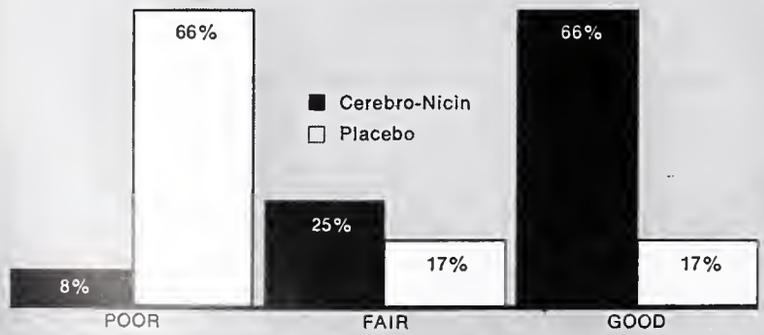
Write for literature and samples: BROWN **THE BROWN PHARMACEUTICAL CO., INC.** 2500 West 6th Street, Los Angeles, California 90057

For the treatment of the aging patient

Cerebro-Nicin®

capsules/elixir

A Gentle Cerebral Stimulant and Vasodilator



CEREBRO-NICIN® New double-blind study* shows how effectively senility can be forestalled. Four times as many aging patients showed striking improvement.

*A Double-Blind Study of Cerebro-Nicin, Therapy for the Geriatric Patient, R. Goldberg Jrnl,. of the Amer. Ger. Soc. June, 1964

Available in a tasty wine base elixir and capsules

Each Cerebro-Nicin capsule contains:

Pentylenetetrazole	100 mg.
Nicotinic Acid	100 mg.
Ascorbic Acid	100 mg.
Thiamine HCl	25 mg.
l-Glutamic Acid	50 mg.
Niacinamide	5 mg.
Riboflavin	2 mg.
Pyridoxine	3 mg.

DOSAGE: One capsule t.i.d. or as prescribed by physician.

AVAILABLE: Bottles of 100, 500, 1000 capsules.

Also elixir 8 oz. bottles.

CONTRAINDICATIONS: There are no known contraindications to Pentylenetetrazole although caution should be exercised when treating patients with a low convulsive threshold.

Most persons experience a flushing or tingling sensation after taking a higher potency niacin-containing compound. As a secondary reaction some will complain of nausea and other sensations of discomfort. This reaction is transient and is rarely a cause of discontinuance of the drug if the patient is forewarned to expect the reaction.

REFER TO PDR

Write for literature and samples...

BROWN **THE BROWN PHARMACEUTICAL CO.**
2500 W. 6th St., Los Angeles, Calif. 90057
Write for Product Catalog

A once-popular treatment for back pains was to have the seventh son of a seventh son stand or walk on the patient's back.

The pain of earache was allegedly relieved by holding a hot roasted onion to the ear.

For headache, a sovereign remedy was to wear a snakeskin round one's head.

A realistic approach to pain relief

Empirin'®

Compound with Codeine Phosphate gr. 1/2 No. 3

Each tablet contains:
Codeine Phosphate gr. 1/2 (Warning—May be habit forming), Phenacetin gr. 2 1/2, Aspirin gr. 3 1/2, Caffeine gr. 1/2.

keeps the promise of pain relief

'B.W. & Co.' narcotic products are Class "B", and as such are available on oral prescription, where State law permits.

BURROUGHS WELLCOME & CO. (U.S.A.) INC.
Tuckahoe, N.Y.

The actions of the official Tincture and Extract of Belladonna result chiefly from their Atropine content . . . conclude Goodman and Gilman

THE PHARMACOLOGICAL BASIS OF THERAPEUTICS
3rd Edition, page 522

ANTROCOL®

Antrocol provides the prompt, predictable antisecretory action of the belladonna alkaloid, atropine, fortified with sedation and blended with Bensulfoid, contributing to even absorption.

Each tablet or capsule contains: Atropine sulfate, 0.324 mg.; Phenobarbital, 16 mg. (may be habit forming); Bensulfoid, 65 mg. (see white section PDR). The atropine content of Antrocol is the maximum amount the average patient can take at six hour intervals over long periods with comfort.

SUPPLIED
Tablet in bottles of 100, 500 and 5000
Capsule in bottles of 100, 500 and 1000

Caution: Federal law prohibits dispensing without prescription.

PRESCRIBING INFORMATION

Contraindicated in glaucoma. Use cautiously in prostatic hypertrophy. Side-effects of toxic dose of atropine: flushing, dryness of mouth, cycloplegia, tachycardia and urinary retention.

DOSAGE: One tablet or capsule after each meal to correct emotional stress and normalize gastric secretions. In treating peptic ulcer, doses at regular intervals up to eight (8) tablets or capsules per day to provide the proper gastric titer for healing. After ulcer has healed, one tablet or capsule after each meal to maintain a titer unfavorable to recurrence.

Clinical supply available to physicians.

WILLIAM P. POYTHRESS & CO., INC.
RICHMOND, VIRGINIA 23217
Manufacturers of Ethical Pharmaceuticals

Drip stopped, Congestion cleared

For upper respiratory allergies and infections, up to 12 hours clear breathing on one tablet. Dimetapp Extentabs® do an outstanding job of helping clear up the stuffiness, drip and congestion of colds and upper respiratory allergies and infections. Each Extentab keeps working up to 12 hours. And for most patients drowsiness or overstimulation is unlikely.

INDICATIONS: Dimetapp is indicated for symptomatic relief of the allergic manifestations of respiratory illnesses, such as the common cold and bronchial asthma, seasonal allergies, rhinitis, conjunctivitis, and otitis. CONTRAINDICATIONS: Hypersensitivity to antihistamines. Not recommended for use during pregnancy. PRECAUTIONS: Until patient's response has been determined, he should be cautioned against engaging in operations requiring alertness. Administer with care to patients with cardiac or peripheral vascular diseases or hypertension. SIDE EFFECTS: Hypersensitivity reactions including skin rashes, urticaria, hypotension and thrombocytopenia, have been reported on rare occasions. Drowsiness, lassitude, nausea, giddiness, dryness of the mouth, mydriasis, increased irritability or excitement may be encountered. DOSAGE: 1 Extentab morning and evening. SUPPLIED: Bottles of 100 and 500.

A·H·ROBINS

A. H. Robins Company
Richmond, Va. 23220

Dimetapp® Extentabs

Dimetane® (brompheniramine maleate), 12 mg.; phenylephrine HCl, 15 mg.; phenylpropanolamine HCl, 15 mg.

when an unnerving experience compounds the pain

the compound analgesic that calms instead of caffeinates

In addition to pain, this patient has experienced anxiety, fear, embarrassment, and frustration. No doubt these psychic factors actually increased her perception of pain. Surely the last thing she needs is an analgesic containing caffeine. The logical choice is Phenaphen with Codeine. It provides a quarter grain of phenobarbital to take the nervous "edge" off, so the rest of the formula can control the pain more effectively. It's no accident that the Phenaphen formulations contain a sedative rather than a stimulant. Don't you agree, Doctor, that psychic overlay is an important factor in most of the accident cases you see?

Phenaphen®
with Codeine

Phenaphen with Codeine Nos. 2, 3, or 4 contains: Phenobarbital (¼ gr.), 16.2 mg. (warning: may be habit forming); Aspirin (2½ gr.), 162.0 mg.; Phenacetin (3 gr.), 194.0 mg.; Hyoscyamine sulfate, 0.031 mg.; Codeine phosphate, ¼ gr. (No. 2), ½ gr. (No. 3), or 1 gr. (No. 4) (warning: may be habit forming). **Indications:** Provides relief in severer grades of pain, on low codeine dosage, with minimal possibility of side effects. Its use frequently makes unnecessary the use of addicting narcotics. **Contraindications:** Hypersensitivity to any of the components. **Precautions:** As with all phenacetin-containing products, excessive or prolonged use should be avoided. **Side effects:** Side effects are uncommon, although nausea, constipation and drowsiness may occur. **Dosage:** Phenaphen No. 2 and No. 3—1 or 2 capsules every 3 to 4 hours as needed; Phenaphen No. 4—1 capsule every 3 to 4 hours as needed. For further details see product literature.
A. H. Robins Company, Richmond, Va.

A·H·ROBINS

LACTINEX®

LACTINEX®

LACTINEX®

TABLETS & GRANULES

■ to help restore and stabilize the intestinal flora

■ for fever blisters and canker sores of herpetic origin

Introduced to help reestablish the normal physiology of the intestinal tract in gastrointestinal disturbances[1], particularly diarrheas (including those resulting from antibiotic therapy), Lactinex is also useful for reestablishing the flora following bowel surgery, infant colic, mucous colitis, foul-smelling stools, pruritus ani, flatulence and hives.[2,3,4,5,6]

Lactinex contains a viable mixed culture of both *Lactobacillus acidophilus* and *L. bulgaricus* with the naturally occurring metabolic products produced by these organisms.

No untoward side effects have been reported to date.

Literature on indications and dosage available on request.

HYNSON, WESTCOTT & DUNNING, INC.

HWD

(#LX06)

Baltimore, Maryland 21201

LX

References:

(1) Siver, R. H.: CMD, 21:109, September 1954. (2) Frykman, H. H.: Minn. Med., 38:19-27, January 1955. (3) McGivney, J.: Tex. State Jour. Med., 51:16-18, January 1955. (4) Quehl, T. M.: Jour. of Florida Acad. Gen. Prac., 15:15-16, October 1965. (5) Weekes, D. J.: NY State Jour. Med., 58:2672-2673, August 1958. (6) Ellis, S. and Spratt, J. S.: JOUR. AMER. GER. SOC., 18:410-415, May 1970.

Starlite Village Clinic

Center Point, Texas

Ph.: ME 4-2426

- - - A specialized clinic dedicated to the physical, mental, and spiritual treatment of men and women suffering from alcoholic and similar disturbances.

F. E. Seale, M.D.
Medical Director

Bland Seale
Administrator

RADIOLOGY ASSOCIATES OF FORT WORTH

John S. Alexander, M.D., M.A.C.R.
Robert J. Atcheson, M.D., M.A.C.R.
Douglas E. Bibby, M.D., F.A.C.R.
James W. Buice, M.D., F.A.C.R.
Richard C. Gasser, M.D., M.A.C.R.
James A. Holland, M.D., M.A.C.R.
Paul W. Mathews, Jr., M.D., M.A.C.R.
Preston W. Nash, M.D., M.A.C.R.
Rolland F. Oakes, M.D., M.A.C.R.
Norman L. Presley, M.D., M.A.C.R.
Sanford Reitman, M.D., M.A.C.R.
Gomer W. Roberts, M.D., M.A.C.R.
Herman C. Sehested, M.D., F.A.C.R.
Glenn A. Stokdyk, M.D., M.A.C.R.
J. Thomas Telle, M.D., D.A.B.R.
C. H. Tseng, M.D., M.A.C.R.
Claude Williams, M.D., M.A.C.R.

DIPLOMATES OF THE AMERICAN BOARD OF RADIOLOGY

Offices:

100 Medical Tower Bldg. — 336-8681
1217 West Cannon — 336-8627
900 W. Randol Mill Rd., Arlington, Texas 76010 — 277-7681

TRAVIS CLINIC ASSOCIATION AND THE NAN TRAVIS MEMORIAL HOSPITAL

JACKSONVILLE, TEXAS

STAFF

General Surgery:
L. L. Travis, M.D.
J. S. O'Hare, M.D.
R. K. Willms, M.D.

Orthopedic Surgery:
E. L. Mahon, Jr., M.D.

Urology:
H. F. Rives, M.D.

Pathology:
Harbert Davenport, Jr., M.D.

Internal Medicine:
J. T. Boyd, M.D.
F. H. Verheyden, M.D.
J. T. Scogin, M.D.
J. H. Pesnell, M.D.
Mary A. Bone, M.D.

Obstetrics and Gynecology:
J. C. Rucker, M.D.
J. D. Crawford, M.D.

Pediatrics:
M. L. Gray, M.D.

Radiology and Radioactive Isotopes:
L. W. Ralston, M.D.

William J. Fowler
Administrator of Nan Travis Memorial Hospital

J. G. Casey
Business Manager of Travis Clinic

MEDICAL ARTS CLINIC

Box 841
Corsicana, Texas

PEDIATRICS
JOHN W. GRIFFIN, M.D., F.A.A.P.*
JAMES E. SPEIER, M.D.

INTERNAL MEDICINE
ROBERT D. BONE, M.D., F.A.C.P.*
JAMES F. WITTEN, M.D., F.A.C.P.*
CHARLES I. BILTZ., M.D.*

OBSTETRICS & GYNECOLOGY
KELLY PAUL BURKHART, M.D., F.A.C.O.G.*

DERMATOLOGY
JOSEPH M. GLICKSMAN, M.D.

BUSINESS MANAGER
OWEN G. ELLIOTT, M.G.M.A.

SURGERY
LOUIS E. GIBSON, M.D., F.A.C.S.*
E. SCOTT MIDDLETON, M.D.

OPHTHALMOLOGY
ROBERT D. MERTZ, M.D., F.A.A.O.O.*
WILLIAM E. LAGOMARSINO, M.D.

EAR, NOSE, THROAT
PHILLIP M. AWTREY, M.D.,* F.A.A.O.O.

DENTISTRY
ROBERT A. LANG, D.D.S.

*Diplomate of the American Board

DIRECTORY RATES & DATA: Space is available to TMA members at $8.00 per column inch and listings must run for a minimum of six months. New listings are limited to those specialties recognized by the American Medical Association. A discount of 5% is allowed for six months' advance payment. Mail copy to Advertising Assistant, TEXAS MEDICINE, 1801 North Lamar Blvd., Austin, Texas 78701. Deadline is 20th of the month preceding publication month.

Texas Physicians' Directory

Allergy

DRS. FEIN AND KAMIN
Allergy and Immunology

Bernard T. Fein, M.D., F.A.C.A., Fellow, American Academy of Allergy
Peter B. Kamin, M.D., F.A.A.P., Diplomate, Sub-Board Pediatric Allergy
216 Medical Prof. Bldg., San Antonio, Texas, 226-7671, 227-6331

HOUSTON ALLERGY CLINIC
Clinical Allergy and Immunology

Richard L. Etter, M.D., F.A.C.A., F.A.A.A.
Richard H. Jackson, M.D., F.A.C.A.
Warren J. Raymer, M.D., F.A.C.A.
Ramon Garrido, M.D. (Certified American Board of Pediatrics)
Suite 156, Hermann Professional Building
6410 Fannin St., Houston, Texas 77025, 526-3281

V. E. FRIEDWALD, M.D., F.A.C.P.
Allergy

Diplomate American Boards of Internal Medicine and Allergy
2203 West Tennessee, Midland, Texas 79701, 682-5385

McGOVERN ALLERGY CLINIC
Diagnosis and Treatment of Allergic Diseases

John P. McGovern, M.D.
Orville C. Thomas, M.D.
Charles D. Haunschild, M.D.
Theodore J. Haywood, M.D.
Joseph T. Queng, M.D.
James A. Murray, M.D.
Hermann Gregory, M.D. (Military Leave of Absence)
Certified American Boards of Pediatrics and Allergy
6655 Travis Street, Houston, Texas 77025, 528-5591

HARRIS HOSEN, M.D., F.A.A.Pd.
Clinical Allergy and Immunology

2649 Procter Street, Port Arthur, Texas

ALLERGY CLINIC

Saul Grossman, M.D., F.A.C.A., Allergy-Dermatology
W. A. Crozier, M.D., F.A.C.A., Allergy-Immunology
2530 Morgan, Corpus Christi, Texas, 882-3487

STUART A. MASON, M.D.
Allergic Diseases

921 Eighth Avenue, Fort Worth, Texas 76104
Phone: 336-1574 If no answer: 924-4231

PHYLLIS HUFFMAN, M.D.
Fellow American Academy of Pediatrics
Certified by Sub-Board of Pediatric Allergy
Pediatric Allergy and Immunology

606 North Kent Street, Midland, Texas 79701
Telephone 915 682-9479

Cardiovascular Disease

EVERETT C. PRICE, M.D.
Diplomate American Boards of Internal Medicine and Cardiovascular Disease
Consultation, Cardiac Catheterization, and Angiography in Children and Adults

EKG interpretation by return mail
1705 Medical Towers Bldg., Houston, Texas 77025
523-4388 523-6949

Clinics

THE CLINIC-HOSPITAL OF SAN ANGELO
224-234 West Beauregard Avenue, San Angelo, Texas

R. M. Finks, M.D., Pediatrics
M. D. Knight, M.D., Surgery
W. H. Brauns, M.D., Internal Medicine
Roy E. Moon, M.D., Obstetrics and Gynecology
Chas. F. Engelking, M.D., Ear, Nose and Throat
R. A. Morse, M.D., Internal Medicine
Ralph R. Chase, M.D., Pediatrics
Tom R. Hunter, M.D., Surgery
Robert P. Gordon, C.P.A., Administrator
Dale W. Hayter, M.D., Ophthalmology
O. Sterling Gillis, III, M.D., Obstetrics and Gynecology
Consultant in Pathology—Lloyd R. Hershberger, M.D.
Consultant in Radiology—John E. Ballard, M.D.
John G. Bolen, M.D.
William T. Gordon, M.D.

THE FORT WORTH CLINIC
1221 West Lancaster Avenue, Fort Worth, Texas

John M. Church, M.D.
T. J. Coleman, M.D.
O. M. Phillips, M.D.
Wm. L. Asper, Bus. Mgr.
Robert L. Sewell, M.D.
John H. Sewell, M.D.
C. K. Holsapple, M.D.

FIFTH AVENUE CLINIC
650 Fifth Avenue, Fort Worth, Texas

MEDICINE
Sidney E. Stout, M.D.
Frank L. Bynum, M.D.
Ed Etier, Jr., M.D.

GENERAL PRACTICE
Donald S. Gibbs, M.D.

RADIOLOGY
Otto H. Grunow, M.D.

SEAT BELTS SAVE LIVES—
BUT ONLY IF YOU USE THEM

THOMAS-SPANN CLINIC AND HOSPITAL

1546 South Brownlee, Corpus Christi, Texas 78404
Telephone 884-3861

SURGERY
R. Gayle Spann, M.D., F.A.C.S. (Deceased)
S. T. Coleman, M.D., F.A.C.S. (Consultant)
Donald E. Jackson, M.D., F.A.C.S. (Consultant)

OPHTHALMOLOGY
L. David Wright, M.D., F.A.C.S.

GENERAL PRACTICE
Travis B. Phelps, M.D.
T. D. Harvey, M.D.
H. R. Rose, M.D.
C. L. Vernor, M.D.

ORTHOPEDICS
Carlos M. Yanez, M.D., F.A.C.S.

GYNECOLOGY
J. H. Thomas, M.D.

INTERNAL MEDICINE
William E. Morris, M.D
Gerald A. Reeves, M.D.
Pruett Moore, Jr., M.D.

RADIOLOGY
Crysup Sory, M.D.

ADMINISTRATOR
B. J. Clark

DIRECTOR OF NURSES
Clinic - Pat Parker
Hospital - Mrs. Joyce Petit

THE JOHN BUIST CHESTER HOSPITAL & THE CHESTER CLINICS

3330 S. Lancaster Road, Dallas, Texas
Telephone 376-5411

John B. Chester, M.D., F.A.C.S., Orthopedic Surgery
Gene W. Rogers, M.D., General Surgery
Douglas M. Hardy, M.D., Obstetrics & Gynecology
Ervin R. Miller, M.D., Cardiovascular Diseases
Ralph C. Disch, M.D., D.A.B.S., F.A.C.S., Surgery
Catherine P. Chester, M.D., Pediatrics & Allergy
Doyle L. Sharp, M.D., General Surgery
Arlan P. Larson, M.D., D.A.B.O.S., F.A.C.S., Orthopedic Surgery
Robert B. Curry, M.D., General Practice
Amado E. Dominguez, M.D., Diagnosis & Internal Medicine
Jose Newman, M.D., Internal Medicine
Alfredo Zevallos, M.D., Obstetrics & Gynecology
Souren Chakmakjian, M.D., D.A.B.P., Pediatric Cardiology
D. Owen Coons, M.D., Aerospace Medicine & General Practice
Emmett R. Hamby, D.D.S., General Dentistry
H. A. Mueller, M.D., Consultant in Radiology
Gerard Noteboom, M.D., Consultant in Pathology
F. Joseph Carabin, M.D., Consultant in Nuclear Medicine
Elizabeth Garnett, R.N., Superintendent of Nurses
E. B. Morgan, F.A.A.M.A., Administrator

LANCASTER OFFICE
525 W. Pleasant Run Rd., Lancaster, Texas; Telephone 227-2151
David E. Krebs, M.D., Pediatrics & Medicine
Charles W. Waldrop, M.D., General Practice
Miles W. Davis, M.D., General Practice
Garrett W. Maxwell, M.D., Internal Medicine

COUNTRY CLUB CORNERS OFFICE
7140 Baytree Drive, Dallas, Texas; Telephone 224-1181
Rudolf M. Flasdick, M.D., Diagnosis & Diseases of the Heart
J. A. Harris, M.D., General Practice

DeSOTO OFFICE
804 N. Hampton Rd., DeSoto, Texas; Telephone 223-7701
Herbert M. Hinckley, M.D., General Practice
David L. Webb, M.D., General Practice

DUNCANVILLE OFFICE
621 Hustead St., Duncanville, Texas; Telephone 298-3378
Terry S. Vincent, M.D., General Practice

BEELER-MANSKE CLINIC

9th Avenue N. at 5th Street N., Texas City, Texas 77590
Telephone 713 948-8521

Obstetrics & Gynecology
G. W. Beeler, M.D.

Internal Medicine
W. T. Matlage, M.D.
C. M. Maruri, M.D.

General Surgery
B. W. Hink, M.D., F.A.C.S.

General Practice
J. H. Cochrane, M.D.
J. W. O'Bryant, M.D.
O. O. Smith, M.D.

Clinic Manager
Stan M. Sheppard

Complete X-Ray, Physical Therapy and Laboratory Facilities

MALONE AND HOGAN CLINIC

901 Main Street, Big Spring, Texas 79720
Telephone 267-6361

OPHTHALMOLOGY AND OTOLARYNGOLOGY
P. W. Malone, M.D., F.A.C.S.
J. W. Tipton, M.D.

GENERAL SURGERY
J. E. Hogan, M.D., F.A.C.S.
C. B. Marcum, Jr., M.D., F.A.C.S.

ORTHOPEDIC SURGERY
P. H. Rhymes, M.D.

INTERNAL MEDICINE
J. H. Burnett, Jr., M.D.
W. A. Riley, M.D.
R. S. Griffin, M.D.
R. T. Torp, M.D.

OBSTETRICS AND GYNECOLOGY
M. A. Porter, M.D.

PEDIATRICS
J. M. Woodall, M.D.
M. W. Talbot, Jr., M.D., F.A.A.P.

RADIOLOGY
W. R. Cashion, M.D.

UROLOGY
G. F. Dillon, M.D.

CONSULTANTS IN PATHOLOGY
Jarrett E. Williams, M.D.
B. B. Trotter, M.D.

BUSINESS MANAGER
R. L. Heith

THE LORIMER CLINIC

901 West Leuda Street, Fort Worth, Texas 76104
Telephone 335-4333

SURGERY
W. S. Lorimer, Jr., M.D., F.A.C.S.
R. J. Turner, III, M.D., F.A.C.S.

INTERNAL MEDICINE
W. W. Moorman, M.D., F.A.C.P.
D. W. Johnston, M.D., F.A.C.P.
Stephen Eppstein, M.D.
A. R. Daniell, M.D.

Mrs. Evelyn Farr, Business Manager

RUGELEY AND BLASINGAME CLINIC

2100 North Fulton Street, Wharton, Texas
Telephone 713 532-1700

ADMINISTRATION
C. H. "Ham" Rugeley
Malcolm D. Rugeley

INTERNAL MEDICINE
R. D. Little, M.D.
D. W. Samuelson, M.D.

GENERAL PRACTICE
C. E. Woodson, M.D.

PEDIATRICS
F. W. Kolle, M.D.

NEUROPSYCHIATRY
R. R. Gleason, Jr., M.D.

DERMATOLOGY & SKIN CANCER
J. S. Stell, M.D.

GENERAL & THORACIC SURGERY
R. E. Goelzer, M.D.

GENERAL SURGERY
R. B. Caraway, Jr., M.D.

UROLOGY
H. Z. Fretz, M.D.
C. M. Collins, M.D.

OBSTETRICS & GYNECOLOGY
D. M. Voulgaris, M.D.
H. E. Secor, M.D.

OPHTHALMOLOGY
V. A. Black, M.D.

OTOLARYNGOLOGY
J. L. Holcomb, M.D.

DENTISTRY
C. J. Shumbera, D.D.S.
J. R. Kieler, Jr., D.D.S.

PATHOLOGY—CONSULTANT
H. M. Perches, M.D.

ANESTHESIOLOGY—CONSULTANT
C. G. Spears, M.D.

RADIOLOGY—CONSULTANT
L. D. O'Gorman, M.D.

DIAGNOSTIC CLINIC OF HOUSTON

6448 Fannin, Houston, Texas 77025
Telephone 713 526-2051

Internal Medicine and Diagnosis

CARDIOVASCULAR DISEASE
Thomas J. Fatheree, M.D.
Hugh F. Arnold, M.D.
Hugh H. Hanson, M.D.
Michael B. Raine, M.D.
Michael A. Modelski, M.D.
Sigmund W. Friedland, M.D.

ENDOCRINOLOGY AND METABOLIC DISEASES
H. Leland Kaplan, M.D.
Thomas G. Vandivier, M.D.
Charles H. Gregory, M.D.
R. Frederick Gregory, M.D.

ENDOCRINOLOGY, METABOLIC DISEASES AND DIRECTOR OF CLINICAL RESEARCH
Raymond L. Gregory, M.D.

GERIATRICS
Frederick G. Dorsey, M.D.

GASTROENTEROLOGY
Dolph L. Curb, M.D.
W. Tom Arnold, M.D.
Belton G. Griffin, M.D.
Frederick R. Lummis, Jr., M.D.
Dean C. Solcher, M.D.

HEMATOLOGY
Edmund N. Gouldin, M.D.
George W. Conrad, Jr., M.D.

HYPERTENSION AND RENAL DISEASES
K. Ronald Bingman, M.D.
R. Robert Durrett, M.D.

INFECTIOUS DISEASES
Lewie L. Travis, Jr., M.D.
Jack L. Reddin, M.D.

INTERNAL MEDICINE
Jeffrey Zatorski, M.D.

NEUROLOGY
Donald J. Russell, M.D.

ONCOLOGY
Lester L. Hoaglin, Jr., M.D.
Peter Sullivan, M.D.

Consultation By Appointment

PATHOLOGY
Jack P. Abbott, M.D.
Paul B. Radelat, M.D.

PULMONARY DISEASE
William M. Donohue, M.D.
Joel E. Reed, M.D.
Gene R. Lindley, M.D.

RADIOLOGY AND NUCLEAR MEDICINE
William L. Hinds, M.D.
Charles P. Eldridge, Jr., M.D.
David D. Lawrence, M.D.
Charles A. Spain, M.D.

RHEUMATOLOGY
John E. Norris, M.D.

ADMINISTRATION
C. G. Mercy, Administrator
Robert B. Hall, Assistant Administrator

LABORATORY
Clinical Pathology
Cytology

NUCLEAR MEDICINE
Isotope uptake, Gammagram and Therapy

ROENTGENOLOGY

PROCEDURES:
Bronchoscopy
Pulmonary Functions
Cardiac Catheterization
Electrocardiography-Phonocardiography
Esophagoscopy
Gastroscopy
Proctosigmoidoscopy

CLINIC OF THE SOUTHWEST
6437 High Star at Hillcroft, Houston, Texas 77036
Telephone 774-7671

INTERNAL MEDICINE
William C. Franklin, M.D.
Arthur B. Conde, M.D.

OBSTETRICS & GYNECOLOGY
Joy L. Deere, M.D.
Loren B. Goss, M.D.

PEDIATRICS
John R. Dunn, Jr., M.D.
Blanca S. Azios, M.D.

PHYSICAL THERAPY
Richard D. Tinsley, R.P.T.

GENERAL SURGERY
Harvey B. Koch, M.D.

UROLOGY
Glen E. Lewis, M.D.

DENTISTRY
Burley G. Ingram, D.D.S.

RADIOLOGY
Neil B. Longley, M.D.
Richard E. Schuette, M.D.

BUSINESS MANAGER
C. C. Walker

Colon & Rectal Surgery

ALVIN BALDWIN, JR., M.D., F.A.C.S.
Practice Limited to Diseases and Surgery of the Colon and Rectum

714 Doctors Building, 3707 Gaston Avenue, Dallas, Texas
Office Telephone 824-2573; Residence Telephone 361-4500

HUGH C. WELSH, M.D.
Proctology and Abdominal Surgery

2715 Fannin Street, Houston, Texas

J. WADE HARRIS, M.D., F.A.C.S.
JOHN E. COGAN, M.D., F.A.C.S.
Surgery of the Rectum and Colon

406 Hermann Professional Bldg., Houston, Texas

C. D. L. CROMAR, M.D.
Surgery of the Rectum and Colon

617 South Tatar Street, Pasadena, Texas 77502

Dermatology

ROGER W. MANAR, M.D.
Dermatology and Superficial X-Ray Therapy

1400 Eighth Street, Wichita Falls, Texas

BEDFORD SHELMIRE, M.D.
BEDFORD SHELMIRE, JR., M.D.
DAVID S. SHELMIRE, M.D.
Dermatology

1410 Medical Arts Bldg., Dallas, Texas

DRS. PIPKIN, RESSMANN & RICHARDSON
J. Lewis Pipkin, M.D.
Arthur C. Ressmann, M.D.
A. W. Richardson, M.D.
Dermatology
X-Ray and Radium in the Treatment of Skin Malignancies

714 Medical Arts Bldg., San Antonio, Texas

EVERETT R. SEALE, M.D.
Dermatology and Treatment of Skin Malignancies

1217 Hermann Professional Bldg., Houston, Texas

J. GILMORE BRAU, M.D.
Dermatology and Syphilology
X-Ray and Radium Therapy

Hours 9 to 1—3 to 5

3817 Brown Street, Dallas, Texas

J. FRANKLIN CAMPBELL, M.D.
EDMUND N. WALSH, M.D.
Dermatology and Syphilology, and Treatment of Skin Cancer, Radium and X-Ray Therapy

1410 Pruitt Street, Fort Worth, Texas

Leslie M. Smith, M.D.
H. D. Garrett, M.D.
John C. Wilkinson, M.D.

DRS. SMITH, GARRETT & WILKINSON
Dermatology and Syphilology X-Ray and Radium in the Treatment of Skin Malignancies

Medical Center, 1501 Arizona, El Paso, Texas

WALTER B. MANTOOTH, JR., M.D.
JOE M. LEHMAN, M.D.
ROBERT LEHMAN, M.D.
Dermatology, Syphilology, and Cancer of the Skin

3801 19th St., Suite 500, Lubbock, Texas

MARVIN E. CHERNOSKY, M.D.
Dermatology and Syphilology

703 Hermann Professional Bldg., Houston, Texas; Phone 526-3733

THOMAS L. SHIELDS, M.D.
Dermatology and Syphilology
X-Ray Therapy in the Treatment of Skin Malignancies

Hours 9 to 1—3 to 5

800 Fifth Ave., Fort Worth, Texas

DAVID R. WEAKLEY, M.D., F.A.C.P.
Dermatology
Treatment of Skin Malignancies

8548 Northwest Plaza Drive, Dallas, Texas; Phone 369-2321

315 North Shiloh Road, Garland, Texas; Phone 272-2561

M. A. (Mac) HAIRSTON, JR., M.D.
Dermatology, Hair Transplantation & Dermoplaning

Memorial City Professional Bldg., 902 Frostwood, Suite 184
(Between Memorial & Katy Fwy.)
Houston, Texas 77024, Phone 464-6369

JOHN B. McMASTER, JR., M.D.
Dermatology
Dermabrasion & Chemosurgery

416 M & S Tower, San Antonio, Texas 78205; Phone 222-2147

Eye, Ear, Nose, Throat

DRS. CANON, WATKINS, ANDERSON, NALLE AND ELLSASSER
Eye, Ear, Nose and Throat, Broncho-Esophagology and Allergy
R. T. Canon, M.D., F.A.C.S.
Wm. F. Anderson, M.D., DAB Oph., F.A.C.S.
M. G. Ellsasser, M.D., DAB Oph.
M. D. Watkins, M.D., F.A.C.S., A.I.C.S.
Ernest Nalle, Jr., M.D. DAB Oto., F.A.C.S., F.I.C.S.
West Texas Clinic, 1312 Main, Lubbock, Texas

W. HUBERT SEALE, M.D.
Eye, Ear, Nose & Throat

HUBERT JAMES SEALE, M.D.
Disease & Surgery of the Eye
1321 Hickory St., Abilene, Texas, Phone 673-3751

Gastroenterology

JAMES J. GORMAN, M.D., F.A.C.P.
Gastroenterology
Diagnosis, Gastroscopy
1111 El Paso National Bank Bldg., El Paso, Texas 79901

MILFORD O. ROUSE, M.D.
announces limitation of practice to consultation in hospitals.
Records of his patients are with Cecil O. Patterson, M.D., and Daniel Polter, M.D.,
1414 Medical Arts Building, Dallas, 742-6144

CECIL O. PATTERSON, M.D.
Gastroenterology, Gastroscopy, Esophagoscopy
1414 Medical Arts Building, Dallas, Texas, 742-6141

DRS. BAILEY, DOUGLAS AND FISHER ASSOCIATION
3434 Swiss Avenue, Suite 303, Dallas, Texas
Diseases of the Digestive System
Herbert A. Bailey, M.D.
F. Clark Douglas, M.D.
John W. Fisher, M.D.

W. CROCKETT CHEARS, JR., M.D.
Gastroenterology, Gastroscopy & Esophagoscopy
1027 Medical Arts Building, Dallas, Texas, 748-4975

General Surgery

J. PEYTON BARNES, M.D., F.A.C.S.
Surgery
1000 St. Joseph Professional Bldg., Houston, Texas 77002

1971 CONFERENCE ON LEGISLATION
TMA Headquarters Bldg., Austin, January 16

L. GONZALEZ CIGARROA, M.D., F.A.C.S.
Diplomate American Board of Surgery
Practice Limited to Surgery
1502 Logan Ave., Laredo, Texas

BURT B. SMITH, M.D.
Surgery
Emphasizing Breast, Thyroid and Gastro-Intestinal Surgery
728 Hermann Professional Bldg., Houston, Texas 77025, 523-8323

ADOLPH F. KAUFFMANN, M.D., F.A.C.S.
Diplomate American Board of Surgery
General Surgery
707 Fifth Ave., Fort Worth, Texas, Phone 332-7597

BRYAN V. WILLIAMS, M.D., F.A.C.S.
Diplomate American Board of Surgery
General Surgery
1506 St. Joseph Professional Bldg., Houston, Texas 77002, 227-5505

PAUL CARRILLO-RIVERA, M.D., F.A.C.S.
General, Pulmonary, Cardiovascular Surgery
105 University Towers, 1900 N. Oregon St., El Paso, Texas 79902
Telephone 915 533-2508

Internal Medicine

JOHN A. WIGGINS, JR., M.D.
Diseases of the Chest
Bronchoscopy
1105 Pennsylvania Ave., Fort Worth, Texas

HENRY N. GEMOETS, M.D., F.A.C.P., F.C.C.P.
Internal Medicine and Diseases of the Chest and Heart

THOMAS H. GEMOETS, M.D.
Internal Medicine and Diagnosis
1003 Memorial Professional Building
1010 Louisiana, Houston, Texas 77002, 222-7224

Neurology & Psychiatry

STEPHEN WEISZ, M.D.
Practice Limited to
Neurology and Psychiatry
1637 Medical Arts Bldg., Dallas, Texas, 747-5183

ALEX K. MUNSON, M.D.
Child Psychiatry
KERBEY LANE EVALUATION AND TREATMENT CENTER
Office Hours By Appointment
3400 Kerbey Lane, Austin, Texas 78703, 512 454-8718

HAUSER CLINIC
Psychiatry, Neurology and Electroencephalography

Section of Psychiatry
*Abe Hauser, M.D.
*Robert I. Hauser, M.D.
*Barry M. Brown, M.D.
*Harris M. Hauser, M.D.

Section of Neurology
*Harris M. Hauser, M.D.
*Gerald Ratinov, M.D.
Robert M. Gordon, M.D.
*Abe Hauser, M.D.

Section of Social Work
Ethel Feinsilver, M.S.

Administrator
Gordon D. Keller

808 Memorial Professional Building, Houston, Texas 77002
Telephone 224-5041

*Diplomate, American Board of Psychiatry and Neurology

Perry C. Talkington, M.D.
Charles L. Bloss, M.D.
Howard M. Burkett, M.D.
Jerry M. Lewis, M.D.
James K. Peden, M.D.
Claude L. Jackson, M.D.
Dode M. Hanke, M.D.
Doyle I. Carson, M.D.
Thomas H. Allison, M.D.
Stanley L. Seaton, M.D.
Maurice S. Green, M.D.
Joe W. King, M.D.
Keith H. Johansen, M.D.
Charles G. Markward, M.D.
Aretta J. Rathmell, M.D.
Donald N. Offutt, M.D.

practice limited to
PSYCHIATRY

4645 Samuell Blvd., Dallas, Texas
Timberlawn Psychiatric Hospital
4600 Samuell Blvd., Dallas, Texas
Telephone 381-7181

CHAPMAN ISHAM, M.D.
Diplomate American Board of Psychiatry
Child Psychiatry and Marriage Counseling
Hypnotherapy for Smoking and Obesity

3701 21st Street, Lubbock, Texas 79410, 795-4023

MEDICAL NEUROLOGY AND ELECTROENCEPHALOGRAPHY

205 Swiss Avenue Medical Building
3434 Swiss
Dallas, Texas 75204, 827-3610

Sheff D. Olinger, M.D.
Joseph S. Jenike, M.D.
Charles W. Barrier, M.D.

Hours By Appointment Only

THE FORT WORTH NEUROPSYCHIATRIC CENTER

*Bernard J. Dolenz, M.D.
*Herbert G. Rush, M.D.

1066 W. Magnolia Avenue, Fort Worth, Texas 76104, 336-5469

*Diplomates American Board of Psychiatry and Neurology

HOUSTON ASSOCIATES IN PSYCHIATRY AND NEUROLOGY

Houston, Texas

C. A. Iannucci, M.D.
Joe C. A. Eckhardt, Jr., M.D.
Alfred H. Vogt, M.D.
George M. Stevens, M.D.
Jules Bohnn, M.D.
Leroy Androes, M.D.
A. R. Martinez, Ph.D.
Ruth Searls, M.S.W.
Diana Sheer, M.S.W.
Dan DeShazo, M.S.W.
Beth Bowman, M.A.

Comprehensive Neuropsychiatric Evaluation and Treatment
Electroencephalography

1021 Hermann Prof. Bldg., 529-5721
6812 Staffordshire, 748-3780

PASADENA NEUROPSYCHIATRIC CLINIC ASSN.
Robert E. Hazlewood, M.D., Richard M. Orr, M.D.

Department of Psychology
T. E. Morosko, Ph.D., Allen Goss, Ph.D.

Practice Limited to Neurology and Psychiatry
Office Hours By Appointment

First Pasadena State Bank Building
1001 E. Southmore, Suite 1103, Pasadena, Texas 77502, 473-7646

W. ROBERT STOBBE, M.D.
Diplomate American Board of Psychiatry and Neurology
GENERAL PSYCHIATRY

706 Medical Towers, Houston, Texas 77025; Telephone 713 524-1306

Neurological Surgery

JAMES GREENWOOD, JR., M.D.
Neurosurgery

718 Hermann Professional Bldg., Houston, Texas 77025

Office: 528-5373; Residence: 528-4038

Morris Sanders, M.D.
Jack I. Woolf, M.D.

DRS. WOOLF AND SANDERS
Diplomate American Board of Neurological Surgery

Locke Medical Bldg., 6011 Harry Hines Blvd., Dallas, Texas, 631-1500

Watch out for the other guy!
DRIVE DEFENSIVELY

JACK STERN, M.D.
GARY C. HUTCHISON, M.D.
CLARK WATTS, M.D.
Neurological Surgery

8226 Douglas, Suite 609, Dallas, Texas 75225, 363-8524

Casey E. Patterson, M.D.
Charles W. Simpson, M.D.
Tom M. Nash, M.D.
James E. Bland, M.D.
DRS. NASH, PATTERSON & SIMPSON, ASSN.
Neurological Surgery
Suite 557, Locke Medical Building
6011 Harry Hines Blvd., Dallas, Texas 75235, 637-0420

ALBERT D'ERRICO, M.D.
Neurological Surgery

3707 Gaston Avenue, Dallas, Texas 75246, 824-2543

RONALD SMITH, M.D.
Neurological Surgery

901 South Lake, Fort Worth, Texas, 336-0551

GLENN R. CHERRY, M.D., F.A.C.S.
R. GORDON LONG, M.D.
Diplomate American Board of Neurological Surgery

712 North Washington, Dallas, Texas, 826-7060

ROBT. C. L. ROBERTSON, M.D., F.A.C.S.
JOSEPH W. ROBERTSON, M.D.
Neurological Surgery

2210 Maroneal, Houston, Texas 77025, 523-3684

WILLIAM J. NELSON, M.D.
Certified by the American Board of Neurological Surgery

Suite 300, University Towers
1900 N. Oregon St., El Paso, Texas 79902, 915 542-0643

CHARLES A. BORNE, JR., M.D.
Neurological Surgery

Suite 834, Sealy-Smith Professional Building
200 University Blvd., Galveston, Texas 77550, 713 763-1688

Nuclear Medicine

HERBERT C. ALLEN, JR., M.D.
Practice Limited to Nuclear Medicine

100 Hermann Professional Bldg., Houston, Texas 77025, 526-1501

ADDRESS CHANGE? Avoid missing or delayed mail. Send old and new address to Texas Medical Association, 1801 North Lamar Blvd., Austin, Texas 78701.

Ophthalmology

HOUSTON EYE ASSOCIATES
1121 Hermann Prof. Bldg., Houston, Texas 77025, 713 526-7261

Richard S. Ruiz, M.D., F.A.C.S.
Charles E. Russo, M.D.
Malcolm L. Mazow, M.D.
Robert H. Stewart, M.D.
Robert B. Wilkins, M.D.

DRS. MURPHY, ALPAR, TAYLOR & HOWELL
Ophthalmology
Weldon O. Murphy, M.D.
John J. Alpar, M.D.
Coleman Taylor, M.D.
J. Franklin Howell, Jr., M.D.
Diplomates of the American Board of Ophthalmology
2300 West 7th Avenue, Amarillo, Texas

ALBERT VAISER, M.D.
WILLIAM B. SNYDER, M.D.
Diseases and Surgery of the Retina

318 Medical Arts Building, Dallas, Texas, 748-0958

LIEVEN J. VAN RIET, M.D.
Ophthalmology
Medical—Surgical

Saint Joseph Professional Bldg., Houston, Texas 77002, 224-0654

W. REX HAWKINS, M.D.
Diseases of the Retina

608 Medical Center Professional Building

Houston, Texas 77025, 713 528-6341

DAVID R. STAGER, M.D.
Pediatric Ophthalmology

8226 Douglas Ave., Dallas, Texas 75225

ARTHUR M. CLEMENTS, M.D.
Surgery and Diseases of the Eye

Northlake Professional Bldg., 8535 Ferndale Road, Dallas, Texas 75238

Telephone 214 341-3407

BRYSON AND STRUVE ASSOCIATES
General Ophthalmology
J. Gordon Bryson, M.D.
C. A. Struve, M.D.
Disease and Surgery of the Retina
John A. Bryant, M.D.
3166 Reid Drive, P. O. Box 6374, Corpus Christi, Texas 78411
Telephone 512 853-7319

Do your patients understand your fees?

Displaying an AMA Fee Plaque serves as an invitation for patients to discuss medical costs with you. It shows you care and helps prevent doctor-patient misunderstanding. Send $1.25 to: Order Department, American Medical Association, 535 North Dearborn Street, Chicago, Illinois 60610.

Orthopedic Surgery

H. H. Beckering, M.D.
L. Ray Lawson, M.D.
George Truett James, M.D.
Robert D. Vandermeer, M.D.
Wynn M. Snoots, M.D.

W. B. CARRELL MEMORIAL CLINIC

2828 Lemmon Ave., Dallas, Texas

FORT WORTH BONE & JOINT CLINIC

918 8th Avenue, Fort Worth, Texas

Louis J. Levy, M.D.
Henry C. McDonald, Jr., M.D.
Cuvier P. Lipscomb, M.D.
Fred W. Sanders, M.D.

Ralph E. Donnell, M.D.
F. Carlton Hodges, M.D.

ORTHOPEDIC ASSOCIATES

Diplomates American Board of Orthopaedic Surgery

1133 N. 19th St., Abilene, Texas 79601

HOUSTON ORTHOPEDIC CLINIC

Joseph Barnhart, M.D.

Donald T. Lazarz, M.D.

1817 Dryden Road, Houston, Texas, 529-4389

LUBBOCK ORTHOPEDIC SURGERY CLINIC
Surgery of the Hand

Royce C. Lewis, Jr., M.D.
Kenneth C. Scholz, D.D.S., M.D.
Ray E. Santos, M.D.
Robert O. Bateman, M.D.

3702 21st St., Suite 9, Lubbock, Texas 79410, 806 795-8261

THE EL PASO ORTHOPEDIC SURGERY GROUP

Diplomates American Board of Orthopaedic Surgery

Louis W. Breck, M.D.
W. Compere Basom, M.D.
Morton H. Leonard, M.D.*
Oren H. Ellis, M.D.
Wellington J. Pindar, M.D.
Donald A. Shearer, Administrator

*Special Attention to Surgery of the Hand

1220 N. Stanton St., El Paso, Texas 79902
Telephone 533-7465

B. C. HALLEY, JR., M.D.
DAVID R. WEBB, JR., M.D.
Orthopaedic Surgery

3909 Worth at Washington, Dallas, Texas 75246, 821-1417

RUSS B. GRAHAM, M.D., F.A.C.S.
Orthopedic Surgery

306 Presbyterian Professional Building,
8210 Walnut Hill Lane, Dallas, Texas 75231, 824-7883

THE ORTHOPEDIC GROUP OF RICHARDSON

Charles E. Graham, M.D.
M. Gayle Glidewell, M.D.

812 S. Central Expressway, Richardson, Texas 75080, 231-6396

Orthopedic Surgery

L. LEE LANKFORD, M.D.
Diplomate American Board of Orthopaedic Surgery
Hand Surgery and Upper Extremity
Reconstructive Surgery

3707 Gaston Ave., Dallas, Texas 75246, 214 823-5351

THE ARLINGTON ORTHOPEDIC GROUP

H. W. Bendel, Jr., M.D.
E. E. Rising, Jr., M.D.
C. Poindexter, M.D.

Diplomate American Board of Orthopaedic Surgery

801 West Randol Mill Road, Arlington, Texas 76010, 817 261-8284

THE BOSWELL-EVANS ORTHOPAEDIC CLINIC

George M. Boswell, Jr., M.D., F.A.C.S.
Gerald W. Schofield, M.D.

James P. Evans, M.D.
Lewis R. Thompson, M.D.

4849 W. Lawther Dr., Dallas, Texas 75218, 348-8300

Otolaryngology

TOM BARR, M.D.
Ear, Nose, and Throat
Diseases of Larynx, and Laryngeal Surgery

Medical Arts Building, Dallas, Texas

HERBERT H. HARRIS, M.D., F.A.C.S., F.I.C.S.
Oto-Laryngology Broncho-Esophagology and
Laryngeal Surgery

907 Hermann Professional Bldg., Houston, Texas

MARVIN G. SHEPARD, M.D., F.A.C.S.
Practice Limited to Otology and Otological Surgery

Medical Tower Bldg., Suite 514, 712 N. Washington, Dallas, Texas

Hours By Appointment

W. P. ANTHONY, M.D.
Otology

662 South Henderson, Fort Worth, Texas 76104

DONALD N. MATHESON, M.D., F.A.C.S.
Diplomate American Board of Otolaryngology

800 Fifth Avenue, Fort Worth, Texas, 336-7133

TEXAS MEDICAL ASSOCIATION MEMBERS' RETIREMENT TRUST

This fully trusteed retirement program qualifies under the Keogh Act and is approved by IRS. For full information, write: TMA Members' Retirement Trust, 1801 North Lamar Blvd., Austin, Texas 78701.

JACK BLUM, M.D.
LLOYD F. RITCHEY, M.D.
Otolaryngology

8215 Westchester, Suite 135, Dallas, Texas

Pathology

A. B. CAIRNS, M.D.
GERARD NOTEBOOM, M.D.
MARC GARZA, M.D.
RONALD E. BUCHANAN, M.D.
WADE M. BRANNAN, M.D.

Diplomates American Board of Pathology

1105 N. Bishop, Methodist Hospital, Dallas, Texas

FORT WORTH MEDICAL LABORATORIES

John J. Andujar, M.D.
Dorothy Patras, M.D.

1404 Pennsylvania Ave., P. O. Box 1118, Fort Worth, Texas 76101

Telephone (817) 336-7137

BROWN & ASSOCIATES MEDICAL LABORATORY

Tissue Pathology, Exfoliative Cytology, Hematology, Serology, Clinical Chemistry, Bacteriology, Parasitology, Serum Protein Electrophoresis and Hemoglobin Electrophoresis

Wilson G. Brown, M.D.
Walter G. Olin, M.D.
S. J. Skinner, M.D.
George V. Miller, M.D.
John R. Thomas, M.D.
Joe B. Haden, M.D.

Diplomates American Board of Pathology

165 Hermann Prof. Bldg., Houston, Texas
Telephone 526-4031

Mailing Containers on Request—Office Pickup Service in Houston

DR. PREUSS PATHOLOGY LABORATORY
Exfoliative Cytology and Surgical Pathology

FRED S. PREUSS, M.D., F.C.A.P.

3607 Gaston Ave., Room 305, Dallas, Texas 75226, 823-6912
Specimen Containers on Request

NUCLEAR MEDICINE LABORATORIES OF TEXAS

Texas Medical Center

6411 South Main Street, Houston, Texas 77025

Completely Equipped Radioisotope Laboratory for Diagnostic Radioactive Tests in: Hematology, Thyroidology, Endocrinology, Gastroenterology, Cardiology, Neurology, Neurosurgery, Urology, Ophthalmology and Obstetrics-Gynecology

Herbert C. Allen, Jr., M.D., Director, 526-1501

TEXAS MEDICAL ASSOCIATION
MEMORIAL LIBRARY

A clinical library designed to assist the practicing physician

45,000 BOUND VOLUMES 1100 CURRENT JOURNALS
EXTENSIVE REPRINT COLLECTION 400 FILMS
AUDIO-DIGEST TAPES & AMA NEWS JOURNAL

1801 North Lamar Blvd., Austin, Texas 78701, 512 477-6704

John H. Childers, M.D. W. L. Crofford, M.D.
R. R. Rember, M.D. E. P. Jenevein, M.D.
E. H. Valentine, M.D.

MEDICAL LABORATORY SERVICE OF DALLAS

Clinical Pathology Surgical Pathology
Diagnostic Radioisotopes Exfoliative Cytology

6011 Harry Hines Blvd., Dallas, Texas 75235, 637-0210
(Mailing Containers Available Upon Request)

PRUITT MEDICAL LABORATORIES

Jack Pruitt, M.D.
Diplomate, American Board of Pathology

Tissue Pathology, Exfoliative Cytology, Clinical Pathology, Medicolegal Consultation

P. O. Box 160, Lufkin, Texas 75901, 634-4451

WACO CLINICAL PATHOLOGY LABORATORY

K. P. Wittstruck, M.D., F.C.A.P., Walter Krohn, M.D., F.C.A.P.
Harold M. Block, Jr., M.D., F.C.A.P.
Clinical Pathology
Surgical Pathology
Exfoliative Cytology
Medicolegal Consultation

Mailing Containers on Request
2112 Washington Ave., P. O. Box 3160, Waco, Texas 76707, 756-7226

GEORGE J. RACE, M.D. AND ASSOCIATES
Pathologists

421 Medical Tower Building,
712 North Washington, Dallas, Texas 75246, 214 824-1258

DELTA PATHOLOGY LABORATORIES

James W. G. Carman, M.D.
Clinical Pathology and Anatomic Pathology
Cytology

6209 Stuebner Airline, Houston, Texas 77018, 713 697-7875

Physical Medicine & Rehabilitation

TEXAS REHABILITATION HOSPITAL OF GONZALES
WARM SPRINGS FOUNDATION, INC.

P.O. BOX 58, GONZALES, TEXAS 78629

Facilities for Physical Restoration
Physical Therapy, Occupational Therapy, Speech Therapy, Recreational Therapy, School from first grade through twelfth grade

ROBERT M. IZARD, JR., M.D., Medical Director
LYNN SMITH, SR., Administrator

Plastic Surgery

THOMAS D. CRONIN, M.D., F.A.C.S.
RAYMOND O. BRAUER, M.D.
THOMAS M. BIGGS, M.D.
JAMES H. PENOFF, M.D.

Diplomates American Board of Plastic Surgery

PLASTIC SURGERY

5419 Caroline St., Houston, Texas 77004, 523-8131

WILLARD C. SELLMAN, JR., M.D.
Plastic, Maxillo-Facial and Hand Surgery

530 Locke Medical Building,
6011 Harry Hines Blvd., Dallas, Texas 75235, 637-4770

BROMLEY SMITH FREEMAN, M.D., F.A.C.S.
Diplomate American Boards of Surgery and Plastic Surgery

PLASTIC AND RECONSTRUCTIVE SURGERY
Tumors of the Head and Neck

1810 The Medical Towers, Houston, Texas 77025
Telephone 529-3579; Residence 782-1628

JOHN B. PATTERSON, M.D., F.A.C.S.
Diplomate American Board
Plastic Surgery

612 Doctors Bldg., Fort Worth, Texas, 336-0356

SIMON FREDRICKS, M.D., F.A.C.S.
Diplomate American Board of Plastic Surgery

Houston Office
1103 Medical Towers, Houston, Texas 77025, 523-5575

Pasadena Office
904½ E. Southmore, Pasadena, Texas 77502, 473-5488

DAVID A. GRANT, M.D., F.A.C.S.
Diplomate American Boards of Surgery and Plastic Surgery
Plastic & Reconstructive Surgery
Cosmetic Surgery

800 Fifth Avenue, Fort Worth, Texas 76104, 335-4751

CARL R. COERS, III, M.D.
Diplomate American Board of Plastic Surgery
Plastic, Reconstructive & Hand Surgery

800 Fifth Avenue, Fort Worth, Texas 76104, 335-4751

MARCUS L. FINLEY, M.D., F.A.C.S.
Diplomate American Board of Plastic Surgery
Plastic, Reconstructive and Hand Surgery

1115A Pennsylvania Avenue, Fort Worth, Texas 76104, 335-6439

VALENTIN GRACIA, M.D., F.A.C.S., F.I.C.S., D.A.B.
Aesthetic Surgery—Burns

1001 W. Rosedale, Fort Worth, Texas 76104, 336-0446

FRANCIS A. MORRIS, JR., M.D.
WILLIAM E. BARNES, M.D.
Diplomates American Board of Plastic Surgery
Plastic, Reconstructive and Hand Surgery

3100 Red River, Austin, Texas, 476-9149

Plastic Surgery
JOHN R. HILL, M.D., F.A.C.S.
Diplomate American Board of Plastic Surgery
Practice Limited to Plastic, Reconstructive and Hand Surgery
Medical Center Office:
272 Hermann Prof. Bldg., Houston, Texas 77025, 528-2481
Spring Branch Office:
9320 Westview, Houston, Texas 77055, 528-2481

E. FRANK DUNTON, M.D., F.A.C.S.
Plastic & Reconstructive Surgery and
Surgery of the Hand

Suite 104, 3434 Swiss Avenue, Dallas, Texas, 824-7290

W. W. SCHUESSLER, M.D., F.A.C.S.
Diplomate of American Board of Plastic Surgery
Plastic, Reconstructive & Maxillo-Facial Surgery

Suite 4-C Medical Center,
1501 Arizona Avenue, El Paso, Texas 79902, 533-6362

Radiology

AMARILLO RADIOLOGICAL GROUP
Practice Limited to Radiology
Royal Wertz, M.D., F.A.C.R.
Wilbur Q. Budd, M.D., D.A.B.R.

800 Rusk Street, Amarillo, Texas 79106, 373-8324

J. R. MAXFIELD, JR., M.D., M.A.C.R.
JACK G. S. MAXFIELD, M.D., M.A.C.R.
Radiological Center, Including Radioisotopes

2711 Oak Lawn, Dallas, Texas, 526-6661

MAURICE C. ARCHER, M.D., M.A.C.R.
MARY L. KILLINGSWORTH, M.D., M.A.C.R.

Diplomates of the American Board of Radiology

Doctors Bldg., 800 Fifth Avenue, Fort Worth, Texas, 332-3401

DRS. CARLSON AND BAREKMAN
Glenn D. Carlson, M.D., F.A.C.R.
William H. Barekman, M.D., D.A.B.R.
Agnes M. Guthrie, M.D., D.A.B.R.

X-Ray Diagnosis, X-Ray and Radium Therapy,
Radioisotopes

1221 Medical Arts Bldg., 741-3621
6011 Harry Hines Blvd., 631-7070
3607 Gaston Ave., 823-9961
Dallas, Texas

Harvey M. Lowry, M.D., F.A.C.R.
James R. Gish, M.D., D.A.B.R.
Edward A. Sheldon, M.D., D.A.B.R.
James P. Wills, M.D.

RADIOLOGY
109 Doctors Bldg., 838-4543
502 Goodhue Bldg., 838-2224
Baptist Hospital, 833-6421
Beaumont, Texas

JAMES L. CLIFFORD, M.D., D.A.B.R.
Cobalt 60 Rotational Therapy, X-Ray and
Radium Therapy
X-Ray Diagnosis, Radioisotopes

845 Clarksville St., Paris, Texas, 784-4624

TMA
ANNUAL
SESSION
MAY 6-9
HOUSTON

Thoracic Surgery

Donald L. Paulson, M.D.
Harold C. Urschel, Jr., M.D.

DRS. PAULSON AND URSCHEL
Thoracic and Cardiovascular Surgery

3810 Swiss Ave., Dallas, Texas, 824-2503

Thoracic and Cardiovascular Surgery
JAMES O. McBRIDE, M.D., F.A.C.S.

662 S. Henderson, Suite A, P. O. Box 1407, Fort Worth, Texas 76102
Telephones 332-7454, 738-4594

CHARLES T. MEADOWS, M.D.
Diplomate American Board of Thoracic Surgery
Thoracic and Cardiovascular Surgery
Broncho-esophagology

1101 North 19th, The Professional Bldg., Abilene, Texas, 673-8184

LeROY J. KLEINSASSER, M.D., F.A.C.S.
Diplomate American Board of Surgery &
The Board of Thoracic Surgery
Cardiovascular and Peripheral Vascular Surgery

The Doctors Bldg., 3707 Gaston Ave., Dallas, Texas 75246

Robert R. Shaw, M.D.
John L. Kee, Jr., M.D.

DRS. SHAW AND KEE
Thoracic Surgery

The Doctors Bldg., 3707 Gaston Ave., Dallas, Texas 75246, 826-5184

WILLIAM W. TAYLOR, M.D.
Diplomate Board of Thoracic Surgery
Thoracic, Cardiac, and Vascular Surgery

804 Locke Med. Bldg., 6011 Harry Hines Blvd., Dallas, Texas 75235
Telephone 637-4833

ALLAN L. GRAHAM, M.D.
Diplomate American Board of Surgery and
Board of Thoracic Surgery
Cardiovascular and Peripheral Vascular Surgery

502 Docotrs Bldg., 800 Fifth Ave., Fort Worth, Texas, 332-7879

ALTON C. LAWTON, M.D., F.A.C.S.
Diplomate American Board of Thoracic Surgery
Thoracic and Cardiovascular Surgery
Endoscopy

626 Doctors Bldg., 800 Fifth Ave., Fort Worth, Texas, 332-5791

Texas Medicine

For details on submitting manuscripts, send for a copy of "Information for Authors."

Mrs. Marilyn Baker
Managing Editor
TEXAS MEDICINE
1801 North Lamar Blvd., Austin, Texas 78701

Urology

CECIL M. CRIGLER, M.D., F.A.C.S.
Practice Limited to Urology

1519 Hermann Professional Bldg., Houston, Texas

JO C. ALEXANDER, M.D., KARL B. KING, M.D., FOSTER FUQUA, M.D., ELGIN W. WARE, JR., M.D., GEORGE E. HURT, JR., M.D., EUGENE R. TODD, M.D., DONALD E. JOHNSON, M.D. & ASSOCIATES
Urology

3707 Gaston Avenue, Dallas, Texas 75246

THE UROLOGY CLINIC
1415 Pennsylvania Ave., Fort Worth, Texas 76104

Dolphus E. Compere, M.D., M.S., F.A.C.S.
Diplomate of American Board of Urology
Grant F. Begley, A.B., M.D.
Diplomate of American Board of Urology
Hugh Lamensdorf, M.D.

H. M. GIBSON, JR., M.D., F.A.C.S.
Certified by American Board of Urology
Practice Limited to Urology

512 University Towers Bldg., 1900 N. Oregon St., El Paso, Texas
Telephones 532-8130 & 533-4765

MARVIN GREER RAPE, M.D.
Diplomate of American Board of Urology
NEWTON F. McDONALD, M.D.
Diplomate of American Board of Urology
Practice Limited to Urology

1703 St. Joseph Prof. Bldg., 2000 Crawford, Houston, Texas 77002

JOHN B. TRIBLE, M.D.
Practice Limited to Urology

1209-10 Medical Arts Bldg., Houston, Texas 77002, 222-7521

ERWIN C. WINKEL, M.D.
Practice Limited to Urology

Northwest Professional Center,
2925 West T.C. Jester Blvd., Houston, Texas, 681-0343

THE UROLOGY CLINIC
1010 Louisiana, Houston, Texas 77002, 227-1414
James S. Boren, M.D.
Robert I. Cox, M.D.

Diplomates American Board of Urology

JOHN F. COLLINS, JR., M.D.
Urology

Doctor's Park, 1400 Crescent, Denton, Texas 76201, 817 387-3828

Remember your less fortunate colleagues.
Give to the TMA Physicians Benevolent Fund.

Classified Advertising

Physicians Wanted

ORTHOPEDIC SURGEON AND TWO GP's needed by 19 doctor group. 100-bed fully accredited hospital. Salary open. Full partnership in one year. For additional details, write John B. Chester, M.D., 3330 South Lancaster Road, Dallas, Texas 75216.

GENERAL PRACTITIONER NEEDED to assume well-established practice in Milford, Texas. The community's only doctor recently suffered a heart attack and has moved. An eight room small clinic owned by the City is available rent free. Income limited only by interest and ability. Good school and churches. Twelve and 17 miles from two first-class bospitals, 48 miles south of Dallas, 48 miles north of Waco. Contact C. O. Miller, P.O. Box 546, Milford, Texas 76670, area code 214, 493-2511.

EXCELLENT OPPORTUNITY FOR PHYSICIANS in Carrizo Springs, Texas. Office space available in new professional building adjacent to hospital and nursing home. Excellent schools and housing in city. One general practitioner needed. For information write or call C. W. Vandervoort, 500 North 1st Street, Carrizo Springs, Texas 78834. Phone 876-2550.

UROLOGIST, board certified or eligible, to associate with a progressive and expanding multispecialty group in West Texas. Many fringe benefits including retirement program. No investment required. Adjoining accredited hospital. City population 35,000. Contact Ad-236, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

PEDIATRICIAN, board certified or eligible, to associate with a progressive and expanding multispecialty group in West Texas. Many fringe benefits including retirement program. No investment required. Adjoining accredited hospital. City population 35,000. Contact Ad-236, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

ORTHOPEDIC SURGEON, PEDIATRICIAN, OBSTETRICIAN AND TWO GENERAL PRACTITIONERS needed by 19 doctor-group. Salary open. Full partnership in one year. 100-bed fully accredited hospital. Many fringe benefits including tax-sheltered retirement plan. For additional details write Chester Clinic and Hospital Association, 3330 Sonth Lancaster Road, Dallas, Texas 75216, Attn: John B. Chester, M.D.

GENERAL PRACTITIONER OR GP-SURGEON WANTED in East Texas community of Crockett (Houston County). Office space available for solo practice or association with other physicians in area—106-bed new hospital. Center for industry, farming, livestock, and forestry operations. Excellent schools, churches, and recreational facilities available. For additional information contact Houston Connty Development Foundation, P.O. Box 307, Crockett, Texas 75835, area code 713, 544-2359.

PATHOLOGY RESIDENCIES AND INTERNSHIPS available in 600-bed general hospital. Fully approved four year program in anatomical and clinical pathology. Average annual specimens and tests—348,587. Interns—$6300; residents—$8100 up. Board and laundry. Charles B. Mitchell, M.D., Director of Laboratories, Harris Hospital, 1300 West Cannon, Fort Worth, Texas 76104.

GENERAL PRACTITIONER WANTED to join five man clinic in growing town of Clifton, 30 miles northwest of Waco near Lake Whitney. 41-bed fully accredited hospital with plans to expand by 30 beds. Salary to start, commensurate with present requirements; partnership later. Good schools, churches and hunting and fishing facilities. Contact V. D. Goodall, M.D., Goodall & Witcher Clinic, Clifton, Texas 76634.

PHYSICAL MEDICINE AND REHABILITATION RESIDENCY, 3-year, integrated with Baylor College of Medicine affiliated hospitals. Non-career $7,500-$8,700; career $11,905-$16,760 (license in any one of the states required). Nondiscrimination in employment. William P. Blocker, Jr., M.D., VA Hospital, Houston, Texas 77031.

M.D.'S TO DO GENERAL PRACTICE WITH SURGERY, Houston area, new offices in an expanding general hospital. Liberal guarantee first six months. Average monthly income of present doctors $8.000 plus. Pasadena Memorial Hospital, 4040 Red Bluff Road, Pasadena, Texas 77503. Area code, 713, 473-3311.

GENERAL PRACTITIONER TO JOIN 2 GP'S in Central Texas town between San Antonio and Houston on Interstate 10, 80 miles from Austin. Modern three-man clinic adjacent to 30-bed hospital being remodeled. Salary open. Please reply to Ad-293, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

WANTED BOARD CERTIFIED OR ELIGIBLE ANESTHESIOLOGIST in San Angelo, Texas. This is a private practice with fee for service. Direct all correspondence to O. G. Zacharias, M.D., 224 East Harris Avenue, San Angelo, Texas 76901.

NEWLY CONSTRUCTED AND EXPANDED multi-specialty clinic and 120-bed general hospital has openings for physicians in fields of general practice, radiology, urology, pathology, anesthesiology, and orthopedic surgery. Construction to be completed in February, 1971. Located in growing West Texas city of 180,000. Renumeration open depending on board certification and experience. Partnership in two years. Interested applicants send medical curriculum vitae to Ad-287, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

BOARD ELIGIBLE INTERNIST WANTED for 7-man medical department with well established multispecialty group in Dallas, Texas. $25,000 beginning annual salary, early partnership; liberal vacation and meeting time; life insurance, group hospitalization, retirement benefits and teaching opportunities. New facilities. Interviewing expenses paid. Please reply to Arthur L. Cook, Business Manager, Dallas Medical & Surgical Clinic, P. O. Box 28, Dallas, Texas 75221.

OPPORTUNITIES IN YOAKUM COUNTY, TEXAS. DENVER CITY, TEXAS. Actual need for four general practitioners. Three overworked general practitioners for the past six years until January 15, 1970. One man left at that time to enter industrial medicine, leaving two. His modern well equipped clinic available, rent free for six months, low rent for following six months, with option to buy, records available. This clinic on same block with hospital. Hospital is 50 beds, well equipped, has radiology, clinical and tissue pathology consultation on regular basis. Present two physicians will welcome one or two other physicians, will help introduce. Amicable working arrangement for time off, patient coverage and consultation. PLAINS, TEXAS. County seat of Yoakum County, 15 miles north of Denver City, excellent highway. Completely equipped modern clinic available for one dollar ($1.00) a month. Utilities furnished by city. Large enough for two physicians. Physicians in Denver will make same arrangements for coverage, etc. as outlined above. Yoakum County has excellent schools, good churches, Yoakum County Park between the two towns with very good grass, green nine hole golf course. Lubbock with Texas Tech University, one hour, twenty minutes away. Midland-Odessa area one hour, thirty minutes away. Contact administrator Yoakum County Hospital, Denver City, Texas, area code 806, 592-2121 or County Judge Gene Bennett, Plains, Texas, area code 806, 456-8606.

GENERAL PRACTITIONER WANTED to associate with five-doctor clinic, including one general surgeon. Community of 6,000 with fully accredited 53-bed hospital; country club and lakes close by. General surgery and Ob/Gyn interest especially wanted. Contact Bowie Clinic, P. O. Box 681, Bowie, Texas 76230.

$30,000.00 GUARANTEED FIRST YEAR with little or no practice expense. Private solo and group practices available. Maximum leisure time with family. Both small town and city locations. Not an employment agency. No cost to the doctor. Sanford Smith, P. O. Box 9836, Houston, Texas 77015. 713-453-5454.

GENERAL PRACTITIONER, OPHTHALMOLOGIST, INTERNIST: To affiliate with five other G.P.'s and three specialists in general and multi-specialty group near Houston, Texas. Liberal salary and extensive fringe benefits including retirement program and life and health insurance programs. Open staff hospital appointments in 125 bed general hospital. Rapidly growing industrial complex. Herbert H. Duke, Jr., M.D., The Medical and Surgical Group, Baytown, Texas 77520.

PSYCHIATRIC RESIDENCY in approved three year program. Effective connections with universities, medical schools, private clinics, and community centers. Outstanding faculty, and programs. Stipends with Texas license are $13,000, $14,000 and $15,000 per year. NIMH grants available. For full information write Anthony P. Rousos, M.D., Director of Training and Research, Austin State Hospital, 4110 Guadalupe, Austin, Texas 78751.

WANTED: PHYSICIANS WITH INTEREST IN SURGERY AND/OR OBSTETRICS to locate in progressive East Texas area with complete support of local medical staff. Contact Paul R. Bennett, 300 West Upshur, Gladewater, Texas. or phone AC 214, 845-2281.

INTERNIST, board certified or eligible to join four internists in 15-doctor, multi-specialty clinic in West Texas city of 35,000. Life and malpractice insurance, disability and retirement programs provided. Modern clinic building adjacent to accredited hospital. Starting salary $25,000. Contact Jack H. Burnett, Jr., M.D., Malone and Hogan Clinic, 901 Main Street, Big Spring, Texas 79720.

FAMILY PHYSICIAN—Preferably with some residency training who would like to associate with two physicians, ages 32 and 38, doing competent and comprehensive family practice in small East Texas town. Present physicians have residency experience, one is board certified. 50-bed county hospital now under construction, complete in May, 1971, Hill-Burton standards. Near Toledo-Bend and Sam Rayburn Lakes, hunting, fishing, tall timber. Practice consists of general family medicine including major surgery and obstetrics. New doctor would fit in according to his interests and abilities. Salary $2500/month with increases based on earning. Present doctors earning far more. Combination of income and working environment will be difficult to beat for doctor who prefers small town. Contact J. D. Bussey, M.D., 379-8155, 379-8156, Newton, Texas.

ATTENTION: GENERAL PRACTITIONERS-SURGEONS. If you would like the advantages of small city living together with a wide open field for practicing your profession, contact the Board of Directors, Taft Hospital District, 1220 Gregory Street, Taft, Texas 78390. A modern hospital and convalescent home is at your disposal. Added attraction: only 15 minutes by car from the Sparkling City by the Sea, Corpus Christi, Texas. Ideal climate, plus swimming, fishing, sailing, golfing, hunting, and social activities available. Write us for more details, or better still, come and see for yourself. You will be pleasantly surprised.

PEDIATRICIAN: BOARD CERTIFIED OR ELIGIBLE, to associate with one other pediatrician in 13-man multispecialty group. Liberal fringe benefits and retirement program. Modern, newly redecorated building within one block of two hospitals. City size over 100,000. Beginning salary $25,000 per year plus percentage. Please reply to Administrator, The Medical and Surgical Clinic, 1518 Tenth Street, Wichita Falls, Texas 76301 or phone AC 817, 723-1411.

CLASSIFIED AD RATES & DATA: Classified Advertising sells for $6.00 per issue for 50 words or less, payable in advance. Ad numbers can be substituted for formal addresses upon request at no extra cost. Name and address of ad number listings can not be given out unless specific permission to do so has been given. The advertising office will not contact ad number holders except by mail. Copy deadline is the 20th of the month preceding publication. Send copy to Advertising Assistant, TEXAS MEDICINE, 1801 North Lamar Blvd., Austin, Texas 78701.

WANTED: PUBLIC HEALTH OFFICER to assume position as City-County Health Officer immediately. Salary $27,000 per year with other benefits. New public health building under construction. Family practice residency program operated by county medical society will coordinate with public health program. Contact Elmer Roberts, City Manager, City Hall, Waco, Texas.

GENERAL PRACTICE. New hospital, nursing home, doctors office and clinic, completed January 1970, fully equipped. Need M.D. for general practice. Nursing home has 30 beds all occupied, hospital 22 beds. Clinic and offices furnished without cost to doctor. If interested contact Mr. L. Read, Administrator, P. O. Box 455, Groveton, Texas 75845, or phone AC 713, 642-6331 for details.

TWO FULL TIME PHYSICIANS WANTED FOR STUDENT HEALTH SERVICE. Campus of 14,000 students. Limited call duty, reasonable hours, liberal vacations, no major surgery. Semi-retired acceptable. Participation in retiremnt program, group hospitalization, and other fringe benefits. Salary with merit increases. Texas license and Basic Science Certificate required. Interested physician send complete medical resume of professional qualifications in first letter to: K. L. Nelson, M.D., Student Health Service, Texas A&M University, College Station, Texas 77841. Phone AC 713, 845-1511.

WANTED—GP—ASSOCIATE. Associate with well established GP. Large private and industrial practice. Same location 21 years. Well equipped laboratory, x-ray; clinic next door to fully accredited general hospital. Liberal guarantee. Access large metropolitan area. Excellent schools. Hunting and fishing. Contact Curtis J. Torno, M.D., 1029 East Thomas, Pasadena, Texas 77502 or call AC 713, 473-4457 collect.

EMERGENCY ROOM PHYSICIANS WANTED: Texas Hospital Consultants need emergency room physicians to help cover hospitals in Texas. Work for the patient on a fee-for-service basis. Excellent economic opportunity. Hospital privileges available. Call AC 512 732-3541 collect or write Texas Hospital Consultants, 114 West Glenview, San Antonio, Texas 78228.

INTERNAL MEDICINE AND OPHTHALMOLOGY. A fifteen man multispecialty group in a city of 15,000 needs board eligible or board certified physician in internal medicine and ophthalmology. Eligibility for partnership after two years. Excellent fringe benefits and retirement program. Please reply to Ad-295, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

WANTED: PSYCHIATRIST AND GENERAL PHYSICIANS for 900 bed mental hospital in Big Spring, Texas. JCAH accredited. Excellent psychiatric programs. Salary ranges from $20,000 to $25,500 depending on training and experience. Liberal vacation, holidays and sick leave. Write Preston E. Harrison, M.D., Superintendent, P. O. Box 231, Big Spring, Texas 79720.

WANTED YOUNG GENERAL PRACTITIONER to practice in group, reasonable guarantee. Share profits after expenses in proportion to work done by each associate. Location Gulf Coast, Texas. Reply to Ad-297, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

MOST INTERESTING TOWN IN TEXAS needs a general practitioner who is tired of the asphalt jungle. Compensation for services open to negotiation. New modern facility in construction. Contact Roger E. Marks, M.D., AC 817, 897-2215, or write P. O. Box 997, Glen Rose, Texas 76043.

RESIDENCIES—PHYSICAL MEDICINE AND REHABILITATION (Rehabilitation Medicine). Three year university residency program, new hospital with extensive PM&R department. Comprehensive in- and outpatient services. Basic stipend: $8,100-$9,300. Contact Arthur E. Grant, M.D., The University of Texas Medical School at San Antonio, 7703 Floyd Curl Drive, San Antonio, Texas 78229.

WANTED GENERAL SURGEON to join two GPs in small privately owned 29 bed hospital and clinic in Central Texas. Beginning salary $3,000 per month or may be on own. Call or write M. A. Childress, M.D., P. O. Box 289, Goldthwaite, Texas 76844, AC 915, 648-2212.

INTERNIST—AUSTIN, TEXAS. Brackenridge Hospital seeking board certified or board eligible internist for position immediately available for clinical instructor in medicine. Contact R. W. Pape, M.D., Director of Medical Education, Brackenridge Hospital, Austin, Texas. Telephone AC 512, 478-8571.

Situations Wanted

RADIOLOGIST, board certified, wants to relocate to Central Texas. Willing to do general radiology with hospital or private group. Please reply to Ad-289, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas

BOARD CERTIFIED GENERAL SURGEON completing university thoracic and cardiovascular residency July, 1971. Military service completed. Desire association or small group practice with eventual partnership. Please reply to Ad-294, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

GP, TEXAS LICENSE, VERY ACTIVE, seeks association or to buy interest in practice by the Gulf Coast or border. Will also consider other good locations. Please reply giving full details to Ad-296, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

OB/GYN WITH OR WITHOUT GENERAL PRACTICE. Caucasian male. Texas resident. Seven years GP, three years OB/GYN residency. Currently private, solo, OB/GYN. Curriculum vitae upon request. Please reply to Ad-298, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

Miscellaneous

M.A. PSYCHOLOGIST, eligible Texas certification. Desires association with hospital, clinic, group practice, psychiatrist in metropolitan setting. Eight years experience in diagnostics, group, individual, marital, play, therapies, vocational guidance. One year supervisory experience in forming and directing children's crisis short-term treatment unit. Prefer Central, South Central Texas area. Vita. references available. Please reply to Ad-286, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

HOMESTEAD

CHILD PLACEMENT AGENCY

and

HOMESTEAD MATERNITY HOME

1250 W. Rosedale

335-5942 **336-7905**

Fort Worth, Texas

Licensed Adoption Service and Private, Confidential maternity care provided unwed expectant mothers. Obstetrical services by a Diplomate of THE AMERICAN BOARD. Also pediatric care furnished by a licentiate of THE AMERICAN BOARD.

Seeking an associate or looking for a good practice location?

Contact: Physicians Placement Service
Texas Medical Association
1801 North Lamar Blvd.
Austin, Texas 78701

ONCOLOGY

Oscar L. Morphis, M.D., F.A.C.R.
Radiation Therapy
Radium Therapy

R. P. O'Bannon, M.D., F.A.C.R.
Radiation Therapy

Norris Gilfillan, M.D., F.A.C.S.
Chemotherapy

Tom B. Bond, M.D., F.A.C.R.
Consultant

Jack M. Morgan, M.S., F.A.C.R.
Consultant-Physicist

1550 West Rosedale, Suite 620 Fort Worth 336-2028

Advertising Directory

Arch Laboratories
Dicarbosil 41

Beverly Hills Hospital and Clinic 117

Blue Cross-Blue Shield of Texas 7

The Brown Pharmaceutical Company
Android 118
Cerebro-Nicin 118

Burroughs Wellcome & Company, Inc.
Empirin 119

Campbell Soup Company 69

Casualty Indemnity Exchange
Malpractice Insurance 39

Custom Home Elevator Co.
Welcolator 107

Dallas Medical & Surgical Clinic and Hospital 2nd Cover

First Texas Pharmaceuticals, Inc.
Amylofene 43

Francis Hospitels Incorporated
Convalescent Care 30

Highland Hospital 82

Homestead Child Placement 136

Humco Laboratory
Vasomist 42

Hynson, Westcott and Dunning, Inc.
Lactinex 123

Ives Laboratories, Inc.
Cyclospasmol 106-107
Isordil 40-41

Mead Johnson Laboratories
Mucomyst-10 32-33

Kelsey-Seybold Clinic 77

King's Daughters Clinic Back Cover

Lederle Laboratories
Achrocidin 138
Achrostatin-V 45
Declostatin 37

Eli Lilly and Company
Ilosone 20

Loma Linda Foods
Soyalac 31

The Martin X-Ray and Radium Clinic 95

Medical Arts Clinic, Corsicana 124

The Medical Protective Company
Professional Liability Insurance 95

Medicenter of America
Recuperative Care 44

The Wm. S. Merrell Company
Kolantyl 34

The National Drug Company
AVC 84
Orenzyme Bitabs 83
Quinamm 36
Tepanil Ten-tab 35

Oncology—Fort Worth 136

Ortho Comfort Stores
Electrically Adjustable Beds 82

William P. Poythress & Company, Inc.
Antrocol 120
Mudrane 102
Trocinate 85
Uro-Phosphate 38

T. Rowe Price Growth Stock Fund, Inc. 41

The Prudential Insurance Company of America
TMA Group Insurance Plan 96

Radiology Associates of Fort Worth 124

A. H. Robins Company
Dimetapp Extentabs 121
Phenaphen 122
Silain-Gel 8-9

Roche Laboratories
Efudex 10-12
Librium 101
Menrium 110-111

Scott and White Clinic Back Cover

G. D. Searle & Company
Demulen 70-71

Starlite Village Clinic 124

Stuart Pharmaceuticals
Mylanta 72

Surgical Mechanical Research, Inc.
Medical and Dental Equipment 45

Terrell's Laboratories and Medical Group 1

Texas Medical Association
Directory of Continuing Education Courses 18
Physicians' and Wives' Art Exhibit 42
South Pacific Adventure 3rd Cover

Timberlawn Psychiatric Hospital 77

Torbett, Hutchings, Smith Memorial Hospital 2nd Cover

Travis Clinic and Nan Travis Memorial Hospital 124

Turner's Clinical & X-Ray Laboratories 95

Wallace Engraving Co.
Salinas Lithographs 73-74

Wichita Falls Clinic-Hospital 107

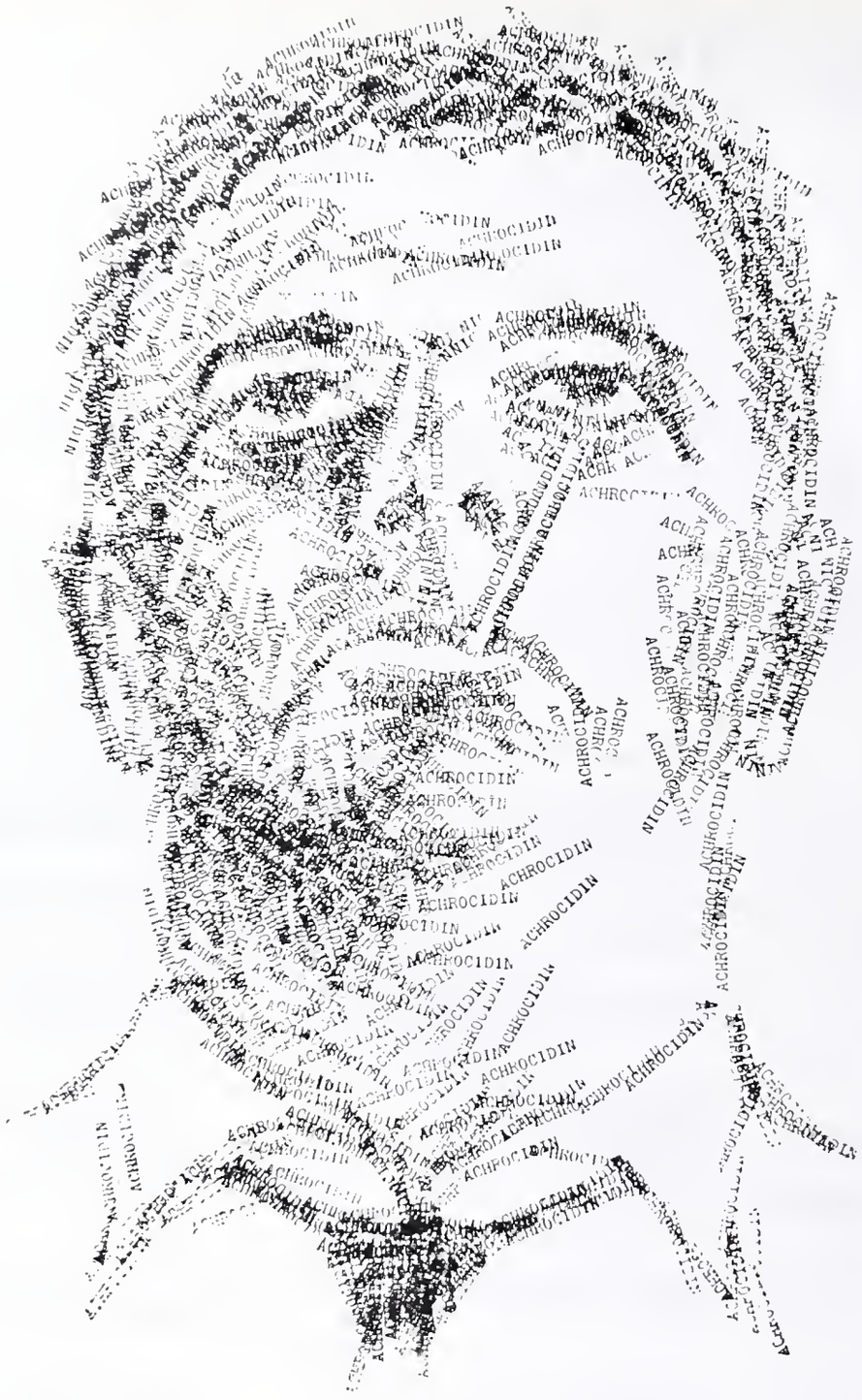
Physicians' Directory 125-134

Classified Advertisements 135-136

ADVERTISING RATES & DATA: Available on request from the Advertising Director, Texas Medicine. Advertising plates should be sent directly to the printer. Space reservations, copy and proofs should be sent to the Advertising Director. Represented nationally by the State Medical Journal Advertising Bureau, Inc., 1010 Lake Street, Oak Park, Ill. 60301.

ADVERTISING & BUSINESS OFFICES: Texas Medical Association, 1801 North Lamar Blvd., Austin 78701; Telephone: 512-477-6704.

PRINTING OFFICES: Texas Medicine, c/o Stafford-Lowdon Company, 1114 West Daggett, Fort Worth 76104.



Achrocidin® Tablets and Syrup

Tetracycline HCl—Antihistamine—Analgesic Compound

Each tablet contains: ACHROMYCIN® Tetracycline HCl 125 mg.; Phenacetin 120 mg.; Caffeine 30 mg.; Salicylamide 150 mg.; Chlorothen Citrate 25 mg.

ACHROCIDIN Tetracycline HCl—Antihistamine—Analgesic Compound Tablets and Syrup are recommended for the treatment of tetracycline-sensitive bacterial infection which may complicate vasomotor rhinitis, sinusitis and other allergic diseases of the upper respiratory tract, and for the concomitant symptomatic relief of headache and nasal congestion. For children and elderly patients you may prefer caffeine-free ACHROCIDIN Syrup. Each 5 cc contains: ACHROMYCIN Tetracycline equivalent to Tetracycline HCl 125 mg.; Phenacetin 120 mg.; Salicylamide 150 mg.; Ascorbic Acid (C) 25 mg.; Pyrilamine Maleate 15 mg.

Contraindications: Hypersensitivity to any component.

Warning: In renal impairment, since liver toxicity is possible, lower doses are indicated; during prolonged therapy consider serum level determinations. Photodynamic reaction to sunlight may occur in hypersensitive persons. Photosensitive individuals should avoid exposure; discontinue treatment if skin discomfort occurs.

Precautions: Drowsiness, anorexia, slight gastric distress can occur. In excessive drowsiness, consider longer dosage intervals. Persons on full dosage should not operate vehicles. Nonsusceptible organisms may overgrow; treat superinfection appropriately. Treat beta-hemolytic streptococcal infections at least 10 days to help prevent rheumatic fever or acute glomerulonephritis. Tetracycline may form a stable calcium complex in bone-forming tissue and may cause dental staining during tooth development (last half of pregnancy, neonatal period, infancy, early childhood).

Adverse Reactions: *Gastrointestinal*—anorexia, nausea, vomiting, diarrhea, stomatitis, glossitis, enterocolitis, pruritus ani. *Skin*—maculopapular and erythematous rashes; exfoliative dermatitis; photosensitivity; onycholysis, nail discoloration. *Kidney*—dose-related rise in BUN. *Hypersensitivity reactions*—urticaria, angioneurotic edema, anaphylaxis. *Intracranial*—bulging fontanels in young infants. *Teeth*—yellow-brown staining; enamel hypoplasia. *Blood*—anemia, thrombocytopenic purpura, neutropenia, eosinophilia. *Liver*—cholestasis at high dosage.

Upon adverse reaction, stop medication and treat appropriately.

Lederle LEDERLE LABORATORIES, A Division of American Cyanamid Company, Pearl River, New York 10965 535-9

Texas Medicine

Medicine & Religion

Rocky Mountain Spotted Fever

Chronic Hepatitis

DECEMBER 1970

U. C. SAN FRANCISCO
MEDICAL CENTER LIBRARY
JAN 12 1971

Torbett, Hutchings, Smith Memorial Hospital
And The Torbett Clinic

306 Coleman Street
Post Office Box 60

Marlin, Texas

Telephone: WE 6-3561

GENERAL SURGERY
Howard O. Smith, M.D., F.A.C.S.
D. R. Swetland, M.D., F.A.C.S.
Howard L. Smith, M.D., F.A.C.S.

INTERNAL MEDICINE
W. F. McKinley, Jr., M.D.
James S. Bussell, M.D.
C. G. Brown, M.D.

EYE, EAR, NOSE AND THROAT
S. W. Hughes, M.D.

ALLERGY
Walter S. Smith, M.D.*

OBSTETRICS AND PEDIATRICS
M. A. Davison, M.D., F.A.C.O.G.
W. L. Reese, M.D., F.A.C.O.G.
William Pickvance, M.D.

RADIOLOGY
J. M. Brown, M.D., F.A.C.R.

PATHOLOGY
Ronald E. Henderson, Jr., M.D.
Kent Smith, M.D.

UROLOGY
Howard O. Smith, M.D., F.A.C.S.

DENTISTRY
B. E. Latimer, D.D.S.

NEUROPSYCHIATRY
S. B. Morrison, M.D.

DERMATOLOGY
Maurice C. Barnes, M.D., D.A.B.D.

Administrator:
J. D. Norris, Jr.

Superintendent of Nurses:
Ruby Lowrance, R.N.

Howard O. Smith, M.D., FACS, Chairman of the Board of Trustees, of Torbett, Hutchings, Smith Memorial Hospital and the Torbett Clinic which opened January, 1963. The original hospital was founded by Dr. J. W. Torbett, Sr., in 1898.

The Torbett Clinic and Memorial Hospital continues to utilize the Marlin Hot Mineral Water and other forms of physical therapy as an adjunct in the treatment of arthritis and allied rheumatic conditions.

*Expired 4-24-69.

THE DALLAS MEDICAL & SURGICAL CLINIC AND HOSPITAL

4105 Live Oak Street

DALLAS, TEXAS

Telephone TA 3-4151

*Geo. M. Underwood, M.D., F.A.C.P., Diagnosis & Gastroenterology, D.A.B. Internal Medicine & Gastroenterology
P. E. Luecke, Sr., M.D., F.A.A.P., Pediatrics Diplomate American Board Pediatrics
*G. A. Davidson, B.S., M.D., Dermatology
*Wm. H. Potts, B.A., F.A.C.P., Internal Medicine
*Ozro T. Woods, M.D., Surgery, Emphasizing Tumors
*Richard M. Smith, M.D., F.A.C.P., Diagnosis & Internal Medicine
J. Wilbur Bourland, Jr., M.D., Obstetrics & Gynecology
Harry M. Spence, M.D., D.A.B.U., F.A.C.S., Urology
Wells M. Wade, D.D.S., Dental Surgery
Halcuit Moore, M.D., F.A.A.P., Pediatrics Diplomate American Board Pediatrics
John B. Bourland, M.D., Gynecology & Obstetrics Diplomate American Board OB-GYN
Raymond W. Burford, M.D., D.A.B.R., Radiology
Henry G. Montgomery, M.D., F.A.C.S., D.A.B.S., Surgery
Edwin M. Cleveland, M.D., Internal Medicine
John B. Allen, M.D., Internal Medicine Diplomate American Board Internal Medicine
R. M. Burnside, M.D., D.A.B.O., Ophthalmology
*Adam D. Green, M.D., Surgery
Morris E. Magers, M.D., Internal Medicine Diplomate American Board Internal Medicine
B. Celia Slaughter, M.D., F.A.A.P., Pediatrics Diplomate American Board Pediatrics
D. W. Shuster, M.D., D.A.B.O., Otolaryngology and Otologic Surgery
P. E. Luecke, Jr., M.D., Pediatrics, F.A.A.P., Diplomate American Board Pediatrics
Channing Woods, M.D., Internal Medicine
William W. Hoffman, M.D., D.A.B.U., F.A.C.S., Urology
James M. Copps, M.D., D.A.B.O., Ophthalmology
Joe B. Caldwell, M.D., D.A.B.R., Radiology
Terry D. Allen, M.D., D.A.B.U., Urology
J. Boyd Hollabaugh, D.D.S., General Dentistry
George P. Fosmire, M.D., F.A.C.S., D.A.B.S., General Surgery
Richard C. Stone, M.D., Internal Medicine and Gastroenterology
Daniel L. Maddox, D.D.S., General Dentistry
William N. New, M.D., Dermatology
Landon W. Stewart, M.D., Internal Medicine
William S. Wolff, M.D., Surgery
George S. Phalen, M.D., Orthopedic Surgery
Richard B. Dulany, M.D., Urology
William F. Walton, D.D.S., General Dentistry
Miss Billye J. Norris, R.N., Director of Nurses
C. H. Rosamond, Administrator
Arthur L. Cook, Associate Administrator

*Inactive status

TERRELL'S LABORATORIES

T. C. TERRELL, M.D., F.C.A.P., F.A.C.P., DIRECTOR
JOHN S. TERRELL, M.D., F.A.A.P., ASSISTANT DIRECTOR

FORT WORTH, TEXAS

211 Medical Arts Building

DEPARTMENT OF PATHOLOGY
T. C. Terrell, M.D., F.C.A.P., F.A.C.P.
May Owen, M.D., F.C.A.P., F.A.C.P.
Robert Hausman, M.D., F.C.A.P.
Joan Windmiller, M.D., F.A.A.P.

DEPARTMENT OF RADIOLOGY
H. W. Banker, M.D., D.A.B.R., M.A.C.R.
Ernest E. Holt, M.D., D.A.B.R., M.A.C.R.
James C. Moore, M.D., D.A.B.R., M.A.C.R.

DEPARTMENT OF CHEMISTRY
LaMonte A. Tucker, Ph.D.

DEPARTMENT OF BACTERIOLOGY & MYCOLOGY

CONSULTING & ANALYTICAL SERVICES

PATHOLOGY, FORENSIC PATHOLOGY & VETERINARY PATHOLOGY: Histology, Cytology.
CLINICAL PATHOLOGY: Serology, Bacteriology & Mycology, Parasitology, Hematology.
INDUSTRIAL & CLINICAL CHEMISTRY: Radioassay, SMA-12 survey and other Automated Procedures. Hormone Chemistry, Chromatography, Electrophoresis, Immunochemistry.
TOXICOLOGY: Drugs, Water, Foods & Biological materials.
MANUFACTURING DEPARTMENT: Allergenic Extracts and Treatment Sets, Mounting Media, Specifically Prepared Reagents and Stains for Laboratory Use.

TERRELL MEDICAL GROUP

FORT WORTH, TEXAS

210 Medical Arts Building

INTERNAL MEDICINE Diagnosis, Allergy, Cardiology	T. C. Terrell, M.D., F.C.A.P., F.A.C.P. Elizabeth A. Taylor, M.D.
NEUROPSYCHIATRY Electroencephalography	Henry G. Gardiner, Jr., M.D.
PEDIATRICS Pediatric Hematology Adolescent Medicine & Pediatric Consultation	Joan Windmiller, M.D., F.A.A.P. John S. Terrell, M.D., F.A.A.P.
CLINICAL PSYCHOLOGY	Michael W. Wheeler, Ph.D.

Texas Medicine

VOLUME 66 NUMBER 12 DECEMBER 1970

Devoted to the interests of the medical profession and public health in Texas

BOARD OF PUBLICATION
Charles P. Hardwicke, MD, Austin
Chairman
James A. Hallmark, MD, Fort Worth
John M. Smith, Jr, MD, San Antonio
Vice Chairman
R. Harvey Bell, MD, Palestine
N. L. Barker, MD, Paris
C. W. Yates, MD, Rosenberg
Don G. Harrel, MD, Dallas

TMA OFFICERS
Walter Walthall, MD, San Antonio
President
C. Lincoln Williston, Austin
Executive Secretary

EDITORIAL AND BUSINESS OFFICES
1801 N Lamar Blvd, Austin 78701
Telephone: 477-6704
Marilyn Baker, Managing Editor
Rae Vajgert, Assistant Managing Editor
Sharon Timmons, Assistant Editor
Sharon Walker, Editorial Assistant
Judy Harris, Editorial Secretary
E. Maxwell Jones, Business Manager
Jon R. Hornaday Advertising Director
Anne Shelnutt, Advertising Assistant

PRINTING OFFICES
c/o Stafford-Lowdon Company
1114 West Daggett, Fort Worth 76104

Subscriptions: $3 per year for members;
$6 for nonmembers; $8 for foreign;
$3 for medical students.
Single copy: $1.

Copyright 1970 by The Texas Medical Association.
Owned and issued monthly by the Association.

SCIENTIFIC ARTICLES

42 Epidemiology of Rocky Mountain Spotted Fever and Murine Typhus

Dr. J. Justin Older is now a resident in ophthalmology at Stanford University School of Medicine, Stanford, Calif. He conducted the work on spotted fever and murine typhus while serving as epidemic intelligence service officer of the United States Public Health Service assigned as a medical consultant to the Communicable Disease Service of the Texas State Department of Health, Austin.

46 The Problem of Chronic Hepatitis

Dr. William D. Davis, Jr, of New Orleans, is head of the Department of Internal Medicine and Section on Gastroenterology at Ochsner Clinic and is professor of clinical medicine at Tulane University School of Medicine, New Orleans. He is a diplomate of the American Board of Internal Medicine and is a certified gastroenterologist. His article was presented originally at the 1970 Annual Session of the Texas Medical Association.

54 Coagulation Testing in the Surgical Patient

Dr. N. O. Hill is director of the Blood Bank Division of the Wadley Institutes of Molecular Medicine, Dallas. His coauthors are Dr. H. J. Ridgway (PhD), senior research investigator, and Dr. R. J. Speer (PhD), chairman, Department of Chemistry, Granville C. Morton Cancer and Research Hospital Division of the Institutes.

58 Treatment with Lithium Carbonate; Results in 35 Cases

Dr. Wade H. Lewis is chairman of the Department of Psychiatry, Santa Rosa Medical Center, San Antonio, and is the chief investigator in an ongoing study of the use of lithium carbonate in treatment of psychiatric disorders. He is a diplomate of the American Board of Psychiatry and Neurology. His coauthor, Dr. Orlando R. Suris, is a resident in psychiatry at Santa Rosa Medi-

PUBLICATION INFORMATION

Texas Medicine is published monthly by the Texas Medical Association.

Second Class Postage paid at Austin, Texas, with additional entry at Fort Worth, Texas, under Act of March 3, 1879.

Contributions, previously unpublished, are welcomed for review; suggestions for preparation are available from the Editorial Offices. News and other items should be sent to the Editorial Offices by the 10th of the month preceding the month of publication. All contributions are sent at the owner's risk.

Contents

cal Center. Before leaving his native Cuba, Dr. Suris practiced in Havana for 14 years, specializing in internal medicine.

64 Quinidine Intoxication from Alkali Ingestion

Dr. Myron B. Zinn is clinical associate professor of medicine at The University of Texas Medical School at San Antonio; in private practice, he specializes in cardiovascular diseases. Dr. Zinn is a diplomate of the American Board of Internal Medicine and its subspecialty Board of Cardiovascular Disease.

72 Building a Foundation

Dr. Ann H. Hughes practices child psychiatry in Dallas and is a diplomate of the American Board of Psychiatry and Neurology. Formerly, she was director of the Division of Child and Adolescent Services, Texas State Department of Mental Health and Mental Retardation. Her coauthors are June Smith Oliver (MSSW), now on the Austin staff of the Texas Department of Public Welfare; and Harold K. Dudley, Jr (MS), of Austin, who is the acting director of the MH/MR Division of Child and Adolescent Services.

78 Lateral Unilobular Thyroid

Dr. Eugene A. Ellingson is a diplomate of the American Board of Surgery and has practiced in Houston since 1949. He is a fellow of the American and International Colleges of Surgeons and a member of the Texas Surgical Society as well as other professional organizations.

82 Trends in Cerebral Palsy Treatment

Dr. Hyman R. Soboloff practices orthopedic surgery in New Orleans. A diplomate of the American Board of Orthopaedic Surgery, he also is active in the American Academy of Cerebral Palsy and currently serves on its executive committee. Dr. Soboloff is professor of clinical orthopedics at Tulane University School of Medicine and is on the Governor's Commission (Louisiana) and President's Commission on Handicapped Children.

92 Radiologic Findings in Nonspecific Ulcerative Colitis: A Pictorial Review

Dr. Preston Copeland is a resident in radiology at The University of Texas Medical Branch, Galveston, from which he was graduated in 1968. He interned at Austin's Brackenridge Hospital. His coauthor, Dr. Melvyn H. Schreiber, is professor of radiology at the Medical Branch.

EDITORIALS

25 Religion Affects Practice of Medicine
Dr. Grant F. Begley

26 Survival of Organized Medicine Depends on Overall Unification
Dr. Dewey W. Johnston

27 What Nourishes Infants Best?
Dr. Lewis A. Barness

35 Physicians, Administrators Need Each Other
Dr. Walter Walthall

DEPARTMENTS

4 Association & Late News

11 Highlights of Coming Meetings

17 Continuing Education Courses

97 News

102 Ophthalmologist also soothes ears . . . with organ music!

107 The Changing Face of Texas Medicine

108 Communication is goal of TMA's Public Relations and Advertising Division

113 Pamphlets

114 Personals

116 Welcome to Dr. Fink's Woodworking Shop!

119 Medicine in Literature

120 Recent Deaths

ON THE COVER

Religion and medicine are inextricably joined simply because faith can have a profound effect on the sick person's response to medical treatment. Thus the clergyman and physician each have something to offer the patient, especially if they work together in caring for the whole person. The editorial beginning on page 25 emphasizes that what matters most, from the medical standpoint, is the physician's understanding of and respect for *the patient's beliefs* even if they are quite different from his own.

NEXT MONTH

In January look for editorials on continuing education and utilization review procedures. Scientific articles will be on the pertussis syndrome, pulmonary perfusion, complications of angiography, radiographic demonstration of small amounts of intraperitoneal fluid, mannitol in treatment of oliguria, treatment of causalgia, surgery for peptic ulcer, intermittent intussusception of the jejunum, and a CPC.

Association &

Panelists at TMA January meeting to probe state and national legislation, while speakers focus on change, national health insurance, and manpower

Two legislative panel sessions, focusing on important medical and health issues at both the national and the state level, will highlight the Texas Medical Association's 1971 Conference on Legislation, set for Jan. 16 in Austin.

One panel, entitled "What's Happening In Congress?; Medical and Health Bills Passed in 1970; Proposals for the 92nd Congress," will feature officers and members of the American Medical Association's Council on Legislation.

Members of TMA's Council on Medical Jurisprudence and Council on Public Relations and Public Service, plus representatives of the TMA General Counsel's office, will participate in the other session, "Medical and Health Issues Facing the 62nd Texas Legislature."

Other speakers and topics scheduled for the day-long conference include Dr. Walter Walthall of San Antonio, TMA President, "1971—New Vistas and Challenges for Texas Medicine"; Walter H. Johnson, Jr., of New York City, chairman of the board of Myers-Infoplan International, Inc., "The Anatomy of Change"; Dr. Ernest B. Howard of Chicago, AMA executive vice president, "National Health Insurance, 1971-72"; and Dr. Malcolm C. Todd of Long Beach, Calif., member of the AMA Council on Health Manpower, "Trends and Developments in Health Manpower."

Registration for the conference will begin at 8:30 a.m., with free coffee being served in the Reading Room of the TMA Headquarters Building. Presentations are slated to begin at 9 a.m. in the Sam Thompson Room and will last until 10:50 a.m.

The first panel session, "What's Happening In Congress?; Medical and Health Bills Passed in 1970; Proposals for the 92nd Congress," will provide participants with insight into current legislative topics.

The AMA council members will meet in Austin for their regular winter meeting on Friday and will conclude their sessions Saturday afternoon after presentation of their panel to the TMA conference. TMA member Dr. Harvey Renger of Hallettsville serves on the council.

All conference participants are encouraged to ask questions of the panel members and to make comments regarding the subject of the panel.

Invitations have also been extended to the legislative councils of the state medical associations in New Mexico, Oklahoma, Arkansas, and Louisiana.

Following a luncheon hosted by TMA, Dr. Truman Blocker, president of The University of Texas Medical Branch, will be presented the TMA Distinguished Service Award. After the presentation, Texas physicians will have an opportunity to hear Rep. G. F. Mutscher, speaker of the Texas House of Representatives, talk on "Issues Facing the 62nd Texas Legislature." New and transfer physicians in the Association will adjourn to their own session at the conclusion of Rep. Mutscher's address, while other TMA members will hear a second panel presentation.

Moderator for the second panel session, "Medical and Health Issues Facing the 62nd Texas Legislature," will be Dr. Joseph T. Ainsworth of Houston, member of the TMA Council on Medical Jurisprudence. Completing the panel will be Dr. Joe T. Nelson of Weatherford, chairman of TMA Council on Medical Jurisprudence, speaking on "Abortion; Licensure for Paramedical Groups; Chiropractic"; Dr. Sam A. Nixon of Floresville, member of the TMA Council on Public Relations and Public Service, "Immunizations"; Philip R. Overton of Austin, TMA general counsel, "Amendments to the Medical Practice Act; Emergency Room Care; The Texas Professional Association Act"; and Sam V. Stone, Jr., of Austin, TMA assistant general counsel, "Drug Legislation; Proposals for Controlling Drug Abuse."

Winding up the conference will be a hospitality hour at the Madrid Room of the Sheraton Crest Inn. Hosts for the evening entertainment will be The Medical Protective Company.

HOWARD

TODD

MUTSCHER

WALTHALL

Dr. Herrmann recipient of AMA service award

Dr. George R. Herrmann, professor of medicine at The University of Texas Medical Branch, Galveston, has been selected as the recipient of the American Medical Association's Distinguished Service Award. Dr. Herrmann was chosen by the House of Delegates at the AMA's 1970 Clinical Convention at Boston, Mass. He will receive the award at the 1971 Annual Convention at Atlantic City in June.

Dr. Herrmann has a bibliography of 360 titles in current medical journals and is the author of three textbooks. He holds the Distinguished Service Award from both the Texas Medical Association and the American Heart Association and the first jeweled key award of the American College of Cardiology.

He has been associated with The University of Texas Medical Branch since 1931. He previously was with the University of Michigan, Tulane University, and the Cardiographic Laboratory at Charity Hospital, New Orleans. He holds four degrees, including MD and PhD, from the University of Michigan. He is a diplomate of the National Board of Medical Examiners, and is board-certified in internal medicine and cardiology.

_ate News

Committee additions to H.R. 17550 concern MDs

Officers of the Texas Medical Association and members of the Association's Council on Medical Jurisprudence and Board of Councilors have been called upon to write or wire their congressmen regarding the proposed Bennett Amendment to the Social Security Act.

The amendment, which calls for a Professional Standards Review Organization, has been adopted by the Senate Finance Committee as part of H.R. 17550 and is to be considered by the Senate in early December.

The Senate Finance Committee also voted to include chiropractic services as a benefit for payment under Medicare in H.R. 17550. This action is in contrast to the US House of Representatives, which last summer voted down the proposal to include such services as a Medicare benefit. Sen. John Tower (R., Tex.) pointed out in response to an earlier inquiry by a Texas physician that the Senate voted to include chiropractic services as a benefit both at the time of enactment of the Medicare program in 1965 and later in 1967. "In both instances," writes Sen. Tower, "the House of Representatives voted to exclude such coverage, and the House position prevailed in the Conference committee appointed to resolve the differences."

In a letter to the physicians, Dr. Joe T. Nelson, chairman of the Council on Medical Jurisprudence, asked TMA officers and council and board members to write or wire Sen. Tower or Sen. Ralph W. Yarborough expressing their disapproval of the amendment. The letter cited six reasons that the proposal does not merit the support of the medical profession in the state:

"1. The Texas Medical Association and county medical societies have devoted considerable efforts to implementing functional review mechanisms during the past two years. An effective plan of Consultative Review has been approved, and it has been adopted by county medical societies.

"2. The Bennett Amendment provides no assurance that physicians' services will be reviewed by their peers. Peer review should be confined to physician services and such other services over which the physician has direct control and responsibility.

"3. At the same time, the physician should not be held solely responsible for the cost and utilization of federal programs which were designed, formulated, and implemented without the consultation of physicians or their medical societies.

"4. Blue Shield research economists calculate the cost of implementing Professional Standards Review Organization as ranging from a low of $102,000,000 to a high of $240,000,000.

"5. Advance review of admissions to health care facilities, if this is a provision for elective procedures, often would create difficulties and would not be in the best interest of patients.

"6. National or regional norms of health care services for various illnesses and health conditions are potential detriments to the provision of high-quality care."

Dr. Nelson requested physicians to urge Texas senators to oppose any congressional action on peer review until the next session of Congress, with the objective of developing a practical and workable plan that will merit the support of Texas physicians, and to fully utilize effective plans that have been previously established by medical societies.

Additional materials available for campaign

Continuing the Texas Medical Association's educational campaign on venereal disease, three additional avenues of attack on the problem are now available to local county medical societies, interested physicians, and other groups.

A leaflet on VD carries out the outdoor poster theme, "VD is sex pollution." Urging the public to get the facts and to seek early treatment, the leaflet provides basic information on who is contracting the disease, how it is contracted, what signs of trouble are to be expected, how the presence of the disease is determined and, finally, what should be done by anyone who suspects he may have VD.

The leaflet also presents these facts: "The venereal diseases syphilis and gonorrhea have become the number one infectious disease problem in the US. More than one million new cases are contracted each year . . . Texas in 1969 had the highest syphilis rate in the nation and also ranked very high in the incidence of gonorrhea."

In addition to the leaflet now available free of charge from the TMA Public Relations Division, two films on VD can be obtained from the film librarian, TMA Memorial Library. "VD? See Your Doctor" is a 22-minute color sound movie designed for high school, college, and adult audiences. Through the story of Linda and John, both victims of gonorrhea, the film points out the symptoms of both gonorrhea and syphilis and explains the serious consequences of VD.

Another sound color film, 16 minutes long, is entitled "A Quarter Million Teenagers." Directed toward junior and senior high school students, this film takes a factual, unemotional approach to the problem. This type of approach, rather than a dramatic one, is used on the basis that if teenagers can recognize symptoms of the disease, if they can understand transmission, consequence, and cure, then the foundation for eventual control of VD will be established.

Demand for both films is great, however, and requesters should apply at least one month in advance of tentative showing date.

Pfizer Laboratories, the organization whose grant made possible the printing of the VD billboard posters, has also assembled a packet of information on VD for use in public education programs. These packets are available from local Pfizer representatives or from Harry H. Harrison, regional manager, Pfizer Laboratories, P.O. Box 22249, Dallas 75222.

The Texas State Department of Health also has gathered together information on the disease. Designed primarily as a resource aid, this packet may be obtained by writing Joe D. Pair, state supervisor, venereal disease program, State Department of Health, 1110 West 49th Street, Austin 78756.

AMA selects Dallas for 1976 Annual Convention

The House of Delegates has awarded the 1976 Annual Convention of the American Medical Association to Dallas. It will mark the first time in many years that the large summer meeting of the AMA has been held in a city other than New York City, Atlantic City, Chicago, or San Francisco.

The invitation was tendered to the AMA by the Texas Medical Association and the Dallas County Medical Society. The AMA held its Clinical Convention in Dallas in 1959 and in Houston in 1968.

Congress to begin study of four proposals for national health insurance soon

A storm of controversy was created in November, 1945, when President Harry S. Truman sent Congress a special message calling for a comprehensive medical insurance plan for people of all ages. It was to be financed by a 4% rise in Social Security taxes.

President Truman's plan was met with extreme opposition, both from the Congress and from the public, and his proposal failed completely. Some 20 years later, however, Congress approved two amendments to this same Social Security Act, and the Medicare and Medicaid programs were born.

Now, in 1970, Congress is looking at a new group of legislative proposals to the Social Security Act, each designed to cure a variety of medical, social, or political ills.

Again, the federal government is called upon to play the primary role in correcting what is now routinely referred to as the "health-care crisis."

The vehicle for easing this "crisis," according to the proponents of four separate bills now before Congress, is national health insurance. The four proposals in the NHI derby are the American Medical Association's Medicredit plan, Reuther plan, Javits bill, and Griffiths bill.

AMA's Medicredit plan (The Health Insurance Assistance Act of 1970, H. R. 18567) is a plan that would financially help anyone who is not eligible for Medicare to buy health-care coverage under a credit system computed on the individual's net taxable income. The credit—in other words, the federal government's contribution toward the purchase of health insurance—would range from 98% if the taxpayer's income tax was between $301 and $325 to 10% if the tax liability exceeded $1,300. With tax liability of $300 or less, the government would pay the full cost of health coverage.

The program would be voluntary; estimates of its annual cost vary from $6 billion to $15 billion. Benefits would include 60 days of inpatient care, subject to a $50 deductible; outpatient care subject to a 20% coinsurance of the first $500; physicians' services, also subject to a 20% coinsurance of the first $500; and no deductible for low-income policyholders.

Proponents of the plan feel that the impact on doctors would be light, as the program would not change the health-care delivery system, but would simply subsidize it and set up controls in which state medical societies would participate.

The Reuther plan (The Health Security Program, S. 4297) would set up a national health insurance system that would restructure the delivery of health care and would control costs and quality. The federal government would pay 40% of the cost of the system from general revenues; employers would contribute 35% through a tax on payrolls; and individuals would pay 25% through a tax on earnings up to $15,000 a year.

The bill's sponsors, including Sen. Edward Kennedy (D., Mass.), Ralph Yarborough (D., Tex.), and Eugene McCarthy (D., Minn.), and the "Committee of 100 for National Health Insurance" estimate the annual cost at $37 billion. Opponents of the plan estimate the yearly cost will be closer to $60 billion.

Benefits would include all necessary physicians' services, unlimited inpatient and outpatient hospital care, unlimited home care, nursing-home care up to 120 days during a spell of illness, limited psychiatric services, approved drugs, dental care up to the age of 15, and the services of optometrists and podiatrists.

Predictions are that the impact on the medical profession would be extremely heavy. The plan calls for fee schedules to be imposed on fee-for-service physicians, and payments under the program would have to be accepted as payment in full. There would be annual budgets for each geographical area, with preference in allocations from this fund going to doctors in prepayment groups, to physicians who would accept capitation payments, and to salaried doctors in institutions. The remaining funds, if any, would go to fee-for-service physicians.

Everybody in the United States would be eligible to participate in the program. Implementation would start in 1971, with the plan covering infants, pre-school children, and adolescents in elementary and secondary schools. In the next 4 years, coverage would be expanded at a rate of 10-year age groups per year.

The Javits bill (S. 3711) would establish a national health insurance program by gradually extending Medicare coverage to the entire population. Basically, benefits would include the same as those now available under Medicare. Other benefits, such as annual checkups and eye and ear examinations, would be included as the program is expanded.

Annual cost is estimated at $10.5 billion the first year and increasing to $68.1 billion in the fifth year. Financing would be accomplished by broadening the Social Security base from the present $7,800 to a maximum of $15,000 for employees and the self-employed, and thus providing two-thirds of the cost of the plan. The federal government would contribute the remaining one-third of the cost to cover the elderly, the disabled, the unemployed, and the poor.

Reportedly, Sen. Jacob K. Javits (R., N.Y.), the bill's sponsor, envisions the program as one in which practicing physicians would retain most, if not all, of their present prerogatives. Nonetheless, the bill contains incentives to promote group practice as a basis for local health-service systems, and it refers to "appropriate and reasonable" fees, which might mean a scaling down of fees that do not appear to be reasonable.

Past Auxiliary head named to new post

Installed in November as president of the Woman's Auxiliary to the Southern Medical Association was Mrs. Ramsay H. Moore, a past president of the Woman's Auxiliary to the Texas Medical Association.

Mrs. Moore has been president of the Woman's Auxiliary to the Dallas County Medical Society and was named an honorary life president of the TMA Auxiliary. She has also served as southern regional chairman for community service of the Woman's Auxiliary to the American Medical Association.

Her husband was the late Dr. Ramsay Hudson Moore, Dallas pediatrician.

Reminder for Keogh Act program contributors

The deadline is fast approaching for enrolling in and contributing to a Keogh Act retirement program and claiming it as a 1970 tax deduction.

Those doctors who have not contributed to the Texas Medical Association-sponsored Keogh Act retirement program and whose tax year ends Dec. 31 must enroll in and contribute to the program *before* Dec. 31 in order to claim their 1970 tax deduction.

Another service is being offered to participants in the TMA program. In addition to annual investment reports, the trustee for the TMA program, Mercantile National Bank of Dallas, is now sending computerized reports to participants after each investment. The report will keep them up to date on the number and value of their shares.

The Griffiths bill (H. R. 15779), sponsored by Rep. Martha W. Griffiths (D., Mich.), hopes to provide comprehensive health care for all persons who have resided in the United States for at least one year. Care would be provided through a national system of prepayment plans, set up principally by groups, medical societies, and hospitals, all to be under contract to the federal government.

Benefits would include unlimited hospitalization and physicians' services, including surgery; prescription drugs; nursing-home care; physical checkups and other preventive medicine measures; rehabilitation services; eye care and allowances for glasses; and dental care for all under 16.

Estimated annual cost is $36 billion. Financing would be accomplished by broadening the Social Security base from the present $7,800 up to $15,000, with employees paying 1% of this base and employers 3%. The federal government would match the employer's contribution, and patients would pay the first $2 of the cost of each visit to a doctor's office after the first visit, which would be free.

Although a fee-for-service physician could practice solo and contract with the program through his local medical society, the pressure would be toward prepaid, group practice. Although doctors could stay out of the program if they wanted to, most would be economically compelled to join.

Which of these four major proposals seems to have the best chance of being enacted? Present indications show the Reuther plan (S. 4297) to be running first. The plan has strong support within Congress and is being pushed by a powerful coalition of labor unions, consumer groups, social reform organizations, many industrial leaders, and some segments of medicine. AMA's Medicredit bill is reportedly gaining support among Congressmen who are concerned about the costs of implementing the other proposals and how they would radically change the present system of health-care delivery. In third place seems to be the Javits bill. It was formulated with the help of former secretary of the Department of Health, Education, and Welfare Wilbur J. Cohen and is reportedly backed by New York Gov. Nelson A. Rockefeller and other key political figures. Also to some Congressmen, the Javits bill represents a good compromise between the Reuther and AMA Medicredit proposals. Martha Griffiths' bill is considered by observers to have the least support of the four.

That national health insurance has immense political appeal cannot be denied. Advocates of the Reuther, Javits, and Griffiths bills constantly refer to high costs, inadequate care, and the non-availability of care as arguments for more extensive governmental participation in the delivery of health care. Complaints come not only from consumer groups and labor unions; major corporations are looking for relief from the increasing costs of providing employee hospital-surgical-medical and drug-expense coverages, and some public health administrators claim that the present method of providing medical services is outworn, expensive, and inefficient.

Other voices warn that expensive national health insurance programs are not the answer. The *Washington Daily News* has editorialized, "To argue that national health insurance is the only way to improve medical care in this country is a little like saying that more people would be rich if only the money were available. The money isn't available. Neither is the the medical care. And the health insurance bill now being promoted in Congress by Sen. Edward M. Kennedy (D., Mass.) isn't likely to expand the supply either. The Kennedy proposal seems to be based on the idea that neither Congress nor the medical profession will rectify the shortage of doctors and other medical practitioners until the demand for health services reaches crisis proportions. Thus, instead of trying to correct the weakness in the . . . Medicare and Medicaid programs, the federal government would launch into a new program guaranteed to put an even greater strain on a health-care system that simply isn't doing the job . . . Insurance plans, no matter how elegant, do not treat patients or make hospitals more efficient; in fact, they tend to drive up the cost of medical care by stimulating a demand for services without increasing the supply."

The speaker of the AMA House of Delegates, Dr. Russell B. Roth of Erie, Pa., has said, "We have learned, I hope, that simply pouring billions of dollars into a system that is already overstrained won't work."

HEW Secretary Elliot L. Richardson told the American College of Surgeons that total national health insurance would create a "cumbersome" federal machine, would cost enormous amounts of money, and would not solve the nation's health problems. "Rather than a scheme that places all health-care efforts under federal control," he said, "I believe we need to make a more orderly, and substantially less disruptive, attack on the basic defects in health status and access to care."

The prevailing mood, however, suggests that there will be a program of national health insurance, and only the final form remains to be determined. What happens next will be decided by the 92nd Congress when it convenes in January, 1971.

Annual Session plans continue to develop

Each day more plans for the 1971 Annual Session, May 6-9 in Houston, become more final, and more out-of-state guests accept invitations to speak.

Some recent developments in this changing picture of Annual Session revolve around the informal Continental Breakfast Round Table presentations, the popular Curbstone Consultations, the Forum of Original Research, and featured entertainment.

Thirteen Continental Breakfast Round Table presentations are scheduled for the 1971 Annual Session. Six will be offered on Friday, May 7, from 8:15 a.m. to 9:30 a.m., and the other seven will be held on Saturday, May 8, at the same time as those on Friday.

Although the presentations are given primarily for those in general practice, all physicians attending the conference may participate in the informal sessions. Format of the presentation includes 20 to 25 minutes of lecture by a guest speaker, followed by approximately 45 minutes of informal discussion between the speaker and those attending the presentation. A continental breakfast of coffee, juice, and rolls precedes the lecture and helps set an informal atmosphere.

Friday Round Table presentations will be "Treatment of Leukemia—Yea or Nay," a joint presentation by Dr. William H. Crosby of the New England Medical Center Hospital, Boston, and Dr. James F. Holland, chief of medicine, Roswell Park Memorial Institute, Buffalo; "Inguinal Hernia—Surgical Therapy," Dr. Lloyd M. Nyhus, Warren H. Cole, professor and head of the department of surgery, The Abraham Lincoln School of Medicine, University of Illinois College of Medicine, Chicago; "Female Sexuality," Dr. Leon Salzman, director of psychoanalytic training, Tulane University Medical School, New Orleans, and clinical professor of psychiatry at New York Medical College, New York; "Injuries Associated with Seat Belts," Dr. William S. Smith, head of the section of orthopaedic surgery, University Hospital, University of Michigan Medical Center, Ann Arbor; "Aesthetic Surgery of Face and Ears," Dr. Peter Randall, professor of plastic surgery, University of Pennsylvania School of Medicine, Philadelphia; and "Diagnosis and Treatment of Bacterial Pneumonia," Dr. Morton M. Ziskind, professor of medicine, pulmonary diseases section, Tulane Uni-

versity School of Medicine, New Orleans.

On Saturday, physicians may attend presentations on "Incompetent Urethra," Dr. C. Paul Hodgkinson, chairman of the department of gynecology-obstetrics, Henry Ford Hospital, Detroit; "Hiatus Hernia: Facts and Fancies," Dr. Philip Kramer, associate professor of medicine, University Hospital, Boston University Medical Center; "Testing for Hepatitis," Dr. Chang Ling Lee, professor of pathology, Chicago Medical School, University of Health Sciences, Chicago; "Speech and Language Disorders in the Young Child and the Value of Early Childhood Education," Dr. Sylvia O. Richardson, assistant director, Learning Disabilities Program, Children's Hospital and Children's Neuromuscular Diagnostic Clinic, Cincinnati; "Crash Protection of Motor Vehicle Occupants," Col. John P. Stapp, USAF (MC) (Ret.), science adviser, National Highway Safety Bureau, Washington, D.C.; "Pulmonary Thromboembolism," Dr. Henry N. Wagner, Jr., professor of medicine, radiology, and radiological science, The Johns Hopkins Medical Institutions; and "Clinical Entities in Uveitis," Dr. A. Edward Maumenee, director, The Wilmer Institute, Johns Hopkins Hospital, Baltimore.

Also set for Friday and Saturday are the popular Curbstone Consultations. Presented for the ninth year, these informal discussion sessions will be held from 5 p.m. to 6 p.m. both evenings in the Emerald Room of the Shamrock Hilton Hotel. Moderators for the 20 planned consultations have been selected, and three or four additional table participants will be secured for each table.

The Curbstone Consultations are person-to-person conversational discussions of cases or problems between the round table experts and the physicians visiting the tables. Physicians may move from one table to another at any time, and they are encouraged to ask questions and to comment on various aspects of each subject under discussion. Broad subject topics have been selected for the unrehearsed discussions and should be of interest to the specialist, as well as to the general practitioner. Free beer, coffee, and soft drinks are served during the discussions.

Topics and moderators for Friday Curbstone Consultations include "Orthopaedic Foot Problems in Children," Dr. Sam A. Nixon of Floresville; "Antepartum Diagnosis of Congenital Anomalies," Dr. L. Charles Powell of Galveston; "You and the Law," the Honorable Dan Walton of Houston, United States District Judge, 178th District Court; "The Drug Abuse Problem," Dr. Jerry M. Lewis of Dallas; "Physical Therapy Modalities in Your Office," Dr. Ariel Bar-Sela of Houston; "Combining Immunizing Agents in Infancy," Dr. Louise C. Crow of Houston; "What's New in Treatment of Venereal Disease," Dr. W. Christopher Duncan of Houston; "Differential Diagnosis of Jaundice," Dr. Robert S. Nelson of Houston; "Surgery in the Aged," Dr. Robert S. Sparkman of Dallas; and "Common Skin Problems," Dr. J. Murray Riddell, Jr., of Fort Worth.

Saturday presentations and moderators will be "The Intrauterine Contraceptive Device," Dr. Hiram P. Arnold of Houston; "Youthful Dissent—Politics or Psychopathology," Dr. Doyle I. Carson of Dallas; "Rehabilitation of the Stroke Patient," Dr. Arthur E. Grant of San Antonio; "Diagnosis and Treatment of Recurrent Abdominal Pain in Children," Dr. Ben H. White of Austin; "Management of Rheumatoid Arthritis," Dr. John E. Norris of Houston; "Unplanned Pregnancy: (a) In Public Schools, (b) In College," Dr. Paul C. Trickett of Austin; "Air Conservation," Dr. James H. Sterner of Houston; "Learning Disabilities in Children," Dr. Irvin A. Kraft of Houston; "Psychiatric Drugs in Medical Practice," no moderator named yet; and "Antibiotics and Surgery," Dr. Ronald C. Jones of Dallas.

In addition to the out-of-state lecturers who will serve as moderators of the Continental Breakfast Round Table presentations and to other guests who previously accepted invitations to speak, there are 12 who have recently sent word that they will be able to attend the 1971 Annual Session.

These newest guests include Dr. Frank J. Ayd, Jr., editor and publisher of *The Medical-Moral Newsletter* and *International Drug Therapy Newsletter,* and associate editor of *Medical Counterpoint,* Baltimore; Dr. Walter C. Bornemeier, president of the American Medical Association, Chicago; Dr. Philip S. Brachman, director of the Epidemiology Program of the Public Health Service, Center for Disease Control, Department of Health, Education, and Welfare, Atlanta; Dr. Ronald J. Catanzaro, medical director of the Florida Alcoholic Rehabilitation Program and clinical instructor in psychiatry, University of Miami School of Medicine, West Palm Beach, Fla.

Also, Dr. Donald L. Cooper, director, Oklahoma State University Student Health Center, Stillwater; Dr. Eric Denhoff, chief of pediatrics, Miriam Hospital, and medical director of Meeting Street School for Cerebral Palsy, Providence, R.I.; Dr. Stanley Deutsch, chairman of the department of anesthesiology, Michael Reese Hospital and Medical Center, Chicago; Dr. Donald B. Effler, chief of thoracic surgery section, Cleveland Clinic, Cleveland, Ohio.

Completing the list are Dr. Robert H. Jebsen, professor and director of the department of physical medicine and rehabilitation, Cincinnati General Hospital, University of Cincinnati; Dr. Chester M. Pierce, professor of psychiatry and neurology, Harvard Medical School, Boston; Dr. A. Edward O'Hara, professor of radiology, Thomas Jefferson University Hospital, Philadelphia; and Dr. Maus W. Stearns, Jr., chief of the colon and rectal service, Memorial Hospital, Cornell University Medical College, New York.

Not only will Annual Session participants be treated to a full program of medical speakers, but those who wish may also learn about what is currently happening in the field of original research. For the second time, the Council on Annual Session plans to sponsor a Forum of Original Research, which will be conducted from 9 a.m. to 5 p.m. on Thursday, May 6.

The forum offers researchers and clinicians an opportunity to present highlights of their work and to discuss points with colleagues. Presentations will last 10 minutes, with a 3-minute discussion period following. While papers in any science basic to medicine and in pertinent clinical work are suitable, presentations will be grouped into major areas under the two categories, "Basic Sciences" and "Clinical Medicine."

Physicians, medical students, teachers, researchers, and others involved in original research are invited to submit abstracts for consideration to Dr. Thomas M. Runge, forum coordinator, Texas Medical Association, 1801 North Lamar Boulevard, Austin 78701, before Jan. 1, 1971. Additional information concerning the forum is available from Dr. Runge upon request.

While the major objectives of the Annual Session are to present current scientific information to Texas physicians and to conduct the business of TMA, entertainment is by no means neglected.

Physicians and their friends are invited to attend a cocktail party/dinner/dance, which the Astroworld Hotel will sponsor for Annual Session participants on Saturday, May 8. The hospitality hour will begin at 7:30 p.m., and dinner is planned for 8:30 p.m. Party hosts have also promised outstanding entertainment. The price of the combination party/dinner/dance will be $18 per person (inclusive of tax and gratuity) and will cover the cost of the dinner, cocktail reception, and entertainment.

With such outstanding features being planned this year, involved physicians will not want to miss the 1971 Annual Session.

If you were
in the hospital–
this would be
your finest
Christmas card!

BLUE CROSS® and BLUE SHIELD®′

Hospital and Health Care Coverage
(GROUP HOSPITAL SERVICE, INC.)

Medical and Surgical Benefits
(GROUP LIFE & HEALTH INSURANCE COMPANY)

OF TEXAS

MAIN AT NORTH CENTRAL EXPRESSWAY ■ DALLAS, TEXAS 75222

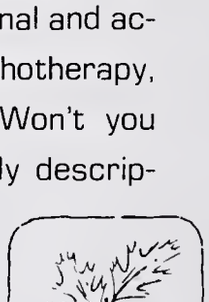
® American Hospital Association
®′National Association of Blue Shield Plans

The San Marcos campuses.

All told, the Brown Schools have five campuses for the treatment of developmental disorders including learning disabilities, neurological impairment, mental retardation, and emotional disturbance.* This illustration depicts three of those campuses, adjoining one another in San Marcos but differing in the types of students they enroll and in the level of training they provide.

These three campuses, considered in combination with the two in nearby Austin, offer both children and adults suffering from developmental disorders the benefits of prevocational and academic training, psychotherapy, and milieu therapy. Won't you write for a completely descriptive catalogue?

Write:
The Registrar
Department No. K-1
THE BROWN SCHOOLS
P.O. Box 4008
Austin, Texas 78751
or call: (512) 478-6662



Paul M. White, M.D.
Medical and Psychiatric Director
Jackson R. Day, M.D.
Director, The Oaks
Residential Treatment Center
T. C. McCormick, Jr., M.D.
Staff Psychiatrist

THE BROWN SCHOOLS

FIVE SEPARATE CAMPUSES
AUSTIN SAN MARCOS, TEXAS
ESTABLISHED 1940

*Our fifth campus, the Oaks, is solely for the treatment of emotionally disturbed children and adolescents.

TEXAS MEDICAL ASSOCIATION CONFERENCE ON LEGISLATION

New vistas and challenges for Texas medicine will be discussed by Texas Medical Association President Dr. Walter Walthall at the opening of the Association's 1971 Conference on Legislation. The Conference will be held in Austin on Jan. 16, and will feature guest speakers Walter H. Johnson, Jr., New York City, chairman of the board, Myers-Infoplan International, Inc., who will discuss the anatomy of change; Dr. Ernest B. Howard, Chicago, executive vice president, American Medical Association, speaking on national health insurance, 1971-72; and Dr. Malcolm C. Todd, Long Beach, Calif., member, Council on Health Manpower, American Medical Association, who will discuss trends and developments in health manpower. Drs. William O. LaMotte, Jr., Wilmington, Del.; Rex E. Kenyon, Oklahoma City; and Ernest T. Livingstone, Portland, Ore., all members of American Medical Association's Council on Legislation, will speak on social security amendments of 1970, important medical and health bills passed in 1970, and proposals for the new congress. Speaker of the Texas House of Representatives, G. F. Mutscher, Brenham, will discuss issues facing the 62nd Texas Legislature. Abortion, immunizations, amendments to the Medical Practice Act, emergency room care, the Texas Professional Association Act, and proposals for controlling drug abuse are subjects to be covered in a panel session on Medical and Health Issues Facing the 62nd Texas Legislature. Panel participants will be Dr. Joe T. Nelson, Chairman, TMA Council on Medical Jurisprudence; Dr. Sam A. Nixon, member, TMA Council on Public Relations and Public Service; and Philip R. Overton, LLB, and Sam V. Stone, Jr., LLB, TMA General Counsel. See Conference story on page 4.

Contact: C. Lincoln Williston, 1801 N. Lamar Blvd., Austin 78701, executive secretary.

INTERNATIONAL MEDICAL ASSEMBLY OF SOUTHWEST TEXAS

San Antonio Convention Center will be the site of the 35th annual meeting of International Medical Assembly of Southwest Texas, Jan. 28-29. Guest speakers will be Drs. William B. Bean, department of internal medicine, University of Iowa College of Medicine, Iowa City; I. Brodsky, director, division of hematology, Hahnemann Medical College of Philadelphia; Eduardo Salazar, Instituto Nacional de Cardiologia, Mexico City; James F. Toole, University of California at San Diego, La Jolla, Calif.; Henry J. Norris, Armed Forces Institute of Pathology, Washington, DC; Aaron Grossman, chairman, department of pediatrics, Chicago Medical School, Chicago; Oliver H. Beahrs, department of surgery, Mayo Clinic, Rochester, Minn.; Carl R. Feind, department of surgery, Columbia University College of Physicians and Surgeons, New York City; Isao Hirata, Jr., surgeon-in-chief, department of university health, Yale University, New Haven, Conn.; and John L. Ochsner, department of surgery, Ochsner Clinic, New Orleans. A convention trip to Acapulco, Queretaro, and Mexico City will follow the meeting.

Contact: Sid Cockrell, 202 West French Place, San Antonio 78212, executive officer.

HIGHLIGHTS OF COMING MEETINGS

CURRENT MEETINGS IN TEXAS

TEXAS SOCIETY OF PATHOLOGISTS will commemorate its fiftieth anniversary with a Golden Jubilee Celebration, Jan. 29-31, at the Statler Hilton Hotel in Dallas. The scientific program will be presented by eight Texas pathologists and guest speaker Dr. John T. Ellis, professor and chairman, department of pathology, Cornell University Medical College, New York. Dr. Ellis will discuss "Undergraduate Pathology Teaching in Changing Times." Other speakers and their topics are Drs. Rolland C. Reynolds, UT Southwestern Medical School at Dallas, "Laboratory Diagnosis of Fungi and Higher Bacteria: A Continuing Problem"; Harlan J. Spjut, Baylor College of Medicine, Houston, "Effects of Oophorectomy on Induction of Colonic Tumors in the Rat"; Gerald A. Beathard, UT Medical Branch, Galveston, "The Effects of Lymphocyte Depletion by Chronic Thoracic Duct Drainage"; Stephan E. Ritzmann, UT Medical Branch, Galveston, "Monoclonal Gammopathies—Present Status"; Ronald W. Alexander, UT Medical School at San Antonio, "Electron Microscopy of Renal Biopsies in Lupus Erythematosus"; Robert G. Freeman, UT Southwestern Medical School at Dallas, "Immunopathology and Ultrastructure of Cutaneous Lesions of Lupus Erythematosus"; Alain J. Marengo-Rowe, UT Medical School at San Antonio, "Hemoglobin Variants in the Old World"; and David Marrack, Baylor College of Medicine, Houston, "Wither (Whither) Your Bones —A Talk About Calcium Metabolism." Contact: Dr. Vernie Stembridge, UT Southwestern Medical School at Dallas, 5323 Harry Hines Blvd., Dallas 75235, general arrangements chairman.

TEXAS RADIOLOGICAL SOCIETY's annual scientific program will be held at the Fairmont Hotel in Dallas, Jan. 29-30. Out-of-state speakers will include Drs. John Evans, New York Hospital, New York City; David Reese, Mayo Clinic, Rochester, Minn.; David H. Baker, Columbia University College of Physicians and Surgeons, New York City; Vera Peters, Princess Margaret Hospital, Toronto, Ontario, Canada; and Stanley M. Wyman, president, American College of Radiology, Cambridge, Mass. Other speakers will be Drs. Fred Bonte, professor and chairman, department of radiology, UT Southwestern Medical School at Dallas; Mary Ester Gaulden (PhD), Emma Freeman associate professor of radiology, UT Southwestern Medical School at Dallas; Mark Fleming, resident in radiology, St. Joseph Hospital and UT M.D. Anderson Hospital and Tumor Institute, Houston; and George J. Abdo, senior resi-

dent in radiology, UT Medical Branch at Galveston. Presentations will include pseudotumors of the kidney; non-tumors of the posterior fossa; the newborn chest; therapy in early carcinoma of the breast; the college—past, present and future; the proposed American Board of Nuclear Medicine; biological consequence of diagnostic radiation doses; knee arthrography; and neurofibromatosis. Contact: Dr. Francis E. O'Neill, 1128 Nix Prof. Bldg., San Antonio 78205, program chairman.

CURRENT NATIONAL MEETINGS

AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE will meet in Chicago Dec. 26-31, with headquarters at the Conrad Hilton Hotel. Subjects to be covered in symposia include mood, behavior and drugs; crime, violence and social control; problems in the meaning of death; advances in human genetics and their impact on society; separation and depression; and industrial approach to urban problems. Also included in the program will be general lectures that include illustrated and demonstration lectures; panel discussions on themes of general interest; and current science films. Contact: Dr. Dael Wolfe, 1515 Massachusetts Ave., NW, Washington, DC 20005, executive officer.

NATIONAL CONFERENCE ON CANCER OF THE COLON AND RECTUM, sponsored by the American Cancer Society, will take place Jan. 7-9 at the Hotel del Coronado in San Diego. Authorities in epidemiology, etiology, detection, diagnosis, and treatment will discuss the rectal and colon cancer problem in the United States and programs and approaches to the control of the disease. Presentations will center on epidemiology and pathogenesis; etiology and host factors; detection and diagnosis; management of colon and rectal cancer and polyps; and rehabilitation of the patient with colostomy. Contact: Dr. Ronald N. Grant, American Cancer Society, 219 E. 42nd St., New York 10017, vice president for professional education.

MORE HIGHLIGHTS OF COMING MEETINGS

■ Denotes Texas meetings.

ALSO IN JANUARY

ARIZONA HEART ASSOCIATION, Fourteenth Annual Cardiac Symposium, Phoenix, Jan. 22-24, 1971. Arizona Heart Association, 1720 E. McDowell Rd., Phoenix 85006.

■ FIFTH DISTRICT MEDICAL SOCIETY, annual, San Antonio, Jan. 29, 1971. S. E. Cockrell, Jr., 202 W. French Place, San Antonio 78212, Exec. Officer.

FEBRUARY

AMERICAN ACADEMY OF ALLERGY, annual, Chicago, Feb. 20-24, 1971. James O. Kelley, 756 N. Milwaukee St., Milwaukee, Wis. 53202, Exec. Officer.

AMERICAN COLLEGE OF CARDIOLOGY, annual, Washington, DC, Feb. 3-7, 1971. William D. Nelligan, 9650 Rockville Pike, Bethesda, Md. 20014, Exec. Dir.

AMERICAN SOCIETY OF ABDOMINAL SURGEONS, New Orleans, Feb. 14-17, 1971. Dr. Blaise F. Alfano, 675 Main St., Melrose, Mass., Exec. Sec.

■ FIRST DISTRICT MEDICAL SOCIETY, annual, Pecos, February, 1971. Dr. John Emmett, 1900 N. Oregon, El Paso, Sec.

INTERNATIONAL ACADEMY OF PROCTOLOGY, 23rd annual congress and teaching seminar, Mexico City, Feb. 26-March 5, 1971. Dr. Alfred J. Cantor, 147-41 Sanford Ave., Flushing, NY 11355, Exec. Sec.

PAN-PACIFIC SURGICAL ASSOCIATION, annual, Honolulu, Feb. 26-March 3, 1972. Harriet N. DeVault, 236 Alexander Young Bldg., Honolulu 96813, Exec. Sec.

■ TEXAS PUBLIC HEALTH ASSOCIATION, annual, Fort Worth, Feb. 28-March 3, 1971. Joseph N. Murphy, Jr., PO Box 5192, Austin 78703, Exec. Sec.

MARCH

AMERICAN ACADEMY OF ORTHOPAEDIC SURGEONS, annual, San Francisco, March 6-11, 1971. John K. Hart, 430 N. Michigan Ave., Chicago 60611, Exec. Sec.

AMERICAN ASSOCIATION OF PATHOLOGISTS AND BACTERIOLOGISTS, annual, Montreal, Quebec, March 6-9, 1971. Dr. K. M. Brinkhous, Dept. of Pathology, University of North Carolina, Chapel Hill, NC 27514, Sec.

AMERICAN COLLEGE OF ALLERGISTS, annual, San Francisco, March 28-April 1, 1971. Dr. John D. Gillaspie, 2141 14th St., Boulder, Colo. 80302, Exec. Sec.

AMERICAN COLLEGE OF PHYSICIANS, annual, Denver, March 28-April 2, 1971. Dr. Edward C. Rosenow, Jr., 4300 Pine St., Philadelphia 19104, Exec. Dir.

AMERICAN COLLEGE OF RADIOLOGY, annual, St. Louis, March 29-April 3, 1971. William C. Stronach, 20 N. Wacker Dr., Rm. 2920, Chicago 60606, Exec. Dir.

AMERICAN COLLEGE OF SURGEONS, Phoenix, March 1-3; New Orleans, March 15-17, 1971. Dr. C. Rollins Hanlon, 55 E. Erie St., Chicago 60611, Dir.

AMERICAN MEDICAL ASSOCIATION, 24th national conference on rural health, Atlanta, March 25-26, 1971. AMA, Council on Rural Health, 535 N. Dearborn, Chicago 60610.

AMERICAN SOCIETY OF INTERNAL MEDICINE, annual, Denver, March 26-28, 1971. W. R. Ramsey, 525 The Hearst Bldg., San Francisco 94103, Exec. Officer.

■ DALLAS SOUTHERN CLINICAL SOCIETY, annual, Dallas, March 15-18 1971. Millard J. Heath, 433 Medical Arts Bldg., Dallas 75201, Exec. Officer.

NEW ORLEANS GRADUATE MEDICAL ASSEMBLY, annual, New Orleans, March 8-11, 1971. Irma B. Sherwood, 1430 Tulane Ave., New Orleans 70112, Exec. Sec.

SOCIETY FOR CRYOSURGERY, annual, Hollywood, Fla., March 1-5, 1971. Dr. John G. Bellows, 30 N. Michigan Ave., Chicago 60602, Sec.

■ SOCIETY OF NUCLEAR MEDICINE, Southwestern Chapter, annual, Houston, March 19-21, 1971. Dr. Herbert C. Allen, Jr., 100 Hermann Prof. Bldg., Houston 77025, Sec.-Treas.

■ TEXAS ASSOCIATION OF OBSTETRICIANS AND GYNECOLOGISTS, annual, Corpus Christi, March 5-6, 1971. Dr. J. L. Jinkins, Jr., 200 University Blvd., Galveston 77550, Sec.-Treas.

■ TEXAS UROLOGICAL SOCIETY, annual, Wichita Falls, March 11-13, 1971. Dr. Charles Dryden, 1605 Tenth St., Wichita Falls 76301, Sec.-Treas.

US-MEXICO BORDER PUBLIC HEALTH ASSOCIATION, annual, Tucson, March 29-April 2, 1971. Dr. Jorge Jimenez-Gandica, 501 US Court House, El Paso 79901, Sec.

APRIL

■ AEROSPACE MEDICAL ASSOCIATION, annual, Houston, April 26-29, 1971. Dr. Merrill H. Goodwin, Washington Nat'l Airport, Washington, DC 20001, Exec. Sec.

AMERICAN ACADEMY OF NEUROLOGY, annual, New York City, April 26-May 1, 1971. Stanley A. Nelson, 4005 W. 65th St., Minneapolis 55435, Exec. Sec.

AMERICAN ACADEMY OF PEDIATRICS, St. Louis, April 19-22, 1971. Dr. Robert G. Frazier, 1801 Hinman Ave., Evanston, Ill. 60204, Exec. Dir.

AMERICAN ASSOCIATION OF ANATOMISTS, annual, Philadelphia, April 18-23, 1971. Dr. Russell T. Woodburne, Dept. of Anatomy, The University of Michigan, 4643 Medical Science Bldg., Ann Arbor, Mich. 48104, Sec-Treas.

AMERICAN ASSOCIATION FOR THORACIC SURGERY, Atlanta, April 26-28, 1971. Ada Hanvey, 7710 Carondelet Ave., St. Louis 63105, Admin. Asst.

AMERICAN COLLEGE HEALTH ASSOCIATION, annual, San Francisco, April 27-30, 1971. James W. Dilley, 2807 Central St., Evanston, Ill. 60201, Exec. Dir.

AMERICAN COLLEGE OF SURGEONS, Montreal, Quebec, Canada, April 5-7, 1971. Dr. C. Rollins Hanlon, 55 E. Erie St., Chicago 60611, Dir.

AMERICAN GERIATRICS SOCIETY, annual, Chicago, April 23-24, 1971. Dr. Edward Henderson, 10 Columbus Circle, New York 10019, Exec. Dir.

AMERICAN PEDIATRIC SOCIETY, annual, Atlantic City, April 28-May 1, 1971. Dr. C. D. Cook, 333 Cedar St., New Haven, Conn. 06514, Exec. Sec.

AMERICAN SOCIETY FOR CLINICAL PHARMACOLOGY AND THERAPEUTICS, annual, Atlantic City, April 29-May 1, 1971. Dr. Richard T. Smith, 1718 Gallagher Rd., Norristown, Pa. 19401, Sec.-Treas.

ASSOCIATION OF AMERICAN PHYSICIANS AND SURGEONS, INC., Chicago, April 15-17, 1971. Frank K. Woolley, 230 N. Michigan Ave., Suite 1000, Chicago 60601, Exec. Dir.

■ BAYLOR COLLEGE OF MEDICINE, seventh annual orthopaedic symposium, Houston, April 22-24, 1971. Dr. W. Malcolm Granberry, 6624 Fannin St., Houston 77025, Chrmn.

MORE HIGHLIGHTS OF COMING MEETINGS

■ EIGHTH DISTRICT MEDICAL SOCIETY, annual, Galveston, April, 1971. Dr. Paul J. Cunningham, 200 University Blvd., Galveston, Sec.-Treas.

INDUSTRIAL MEDICAL ASSOCIATION, annual, Atlanta, April 19-22, 1971. Howard N. Schulz, 55 E. Washington, Chicago 60602, Exec. Dir.

SOUTHWESTERN SURGICAL CONGRESS, annual, Las Vegas, April 19-22, 1971. Dr. Jack A. Barney, 301 Pasteur Medical Bldg., Oklahoma City 73103, Sec.-Treas.

■ ST. LUKE'S EPISCOPAL HOSPITAL, annual orthopaedic symposium, Houston, April 22-24, 1971. Dr. W. Malcolm Granberry, 6624 Fannin, Houston 77025, Chrmn.

■ TEXAS MEDICAL ASSISTANTS ASSOCIATION, annual, Dallas, April 28-May 3, 1971. Mrs. Jo Alice Thompson, 2321 Hillsboro, Dallas 75228, Sec.

■ TEXAS STATE BOARD OF EXAMINERS IN THE BASIC SCIENCES, Dallas, Galveston, Houston, San Antonio, April 16-17, 1971. Mrs. Betty J. Anderson, 1012 Sam Houston State Office Bldg., Austin 78701, Exec. Sec.

■ THIRTEENTH DISTRICT MEDICAL SOCIETY, annual, Abilene, April, 17, 1971. Dr. W. H. Neil, 104 Doctors Bldg., 800 Fifth Ave., Fort Worth 76104, Sec.

MAY

AMERICAN ACADEMY OF FACIAL PLASTIC AND RECONSTRUCTIVE SURGERY, annual, San Francisco, May 25-27, 1971. Dr. Carl N. Patterson, 1110 W. Main, Durham, NC 27701, Sec.

AMERICAN ACADEMY OF PSYCHOANALYSIS, Washington, DC, May 8-10, 1971. Charlotte Bruskin, 40 Gramercy Park N., New York 10010, Exec. Sec.

AMERICAN ASSOCIATION OF PLASTIC SURGEONS, annual, Williamsburg, Va., May 23-27, 1971. Dallas F. Whaley, 29 E. Madison St., Suite 812, Chicago 60602, Exec. Dir.

AMERICAN CANCER SOCIETY, INC., second national conference on breast cancer, Los Angeles, May 17-19, 1971. Esther Kelley, Professional Education, American Cancer Society, Inc., 219 E. 42nd St., New York 10017.

■ AMERICAN COLLEGE OF CHEST PHYSICIANS, Texas Chapter, annual, Houston, May 9, 1971. Dr. George P. Noon, 1200 Moursund Ave., Houston 77025, Sec.-Treas.

AMERICAN COLLEGE OF OBSTETRICIANS AND GYNECOLOGISTS, annual, San Francisco, May 3-6, 1971. Dr. Michael Newton, 79 W. Monroe St., Chicago 60603, Exec. Dir.

■ AMERICAN COLLEGE OF SURGEONS, North Texas Chapter, annual, Dallas, May 15, 1971. Dr. Ronald F. Garvey, 6011 Harry Hines Blvd., Dallas 75235, Sec.-Treas.

AMERICAN DERMATOLOGICAL ASSOCIATION, annual, Skytop, Pa., May 16-20, 1971. Dr. Barrett Kennedy, 1542 Tulane Ave., New Orleans 70112, Exec. Sec.

■ AMERICAN PHYSICAL THERAPY ASSOCIATION, TEXAS CHAPTER, annual, San Antonio, May, 1971. Hilda McKethan, 4162 Monaco Dr., Corpus Christl 78411, Sec.

AMERICAN PROCTOLOGIC SOCIETY, annual, Las Vegas, May 9-13, 1971. Harriette Gibson, 320 W. Lafayette, Detroit 48226, Exec. Officer.

AMERICAN PSYCHIATRIC ASSOCIATION, annual, Washington, DC, May 3-7, 1971. Dr. Walter E. Barton, 1700 18th St., NW, Washington, DC 20009, Med. Dir.

AMERICAN PUBLIC HEALTH ASSOCIATION, Southern Branch, annual, Memphis, May 19-21, 1971. Frederick W. Hering, 1025 South 18th St., Birmingham 35205, Exec. Sec.

AMERICAN SOCIETY FOR AESTHETIC PLASTIC SURGERY, annual, Boston, May 16-19, 1971. Dr. Simon Fredricks, 1103 Medical Towers, Houston 77025, Sec.

AMERICAN THORACIC SOCIETY, annual, Los Angeles, May 17-19, 1971. Robert G. Weymueller, 1740 Broadway, New York 10019, Exec. Sec.

AMERICAN UROLOGICAL ASSOCIATION, INC., annual, Chicago, May 17-20, 1971. Richard J. Hannigan, 1120 N. Charles St., Baltimore 21201, Exec. Sec.

MEDICAL LIBRARY ASSOCIATION, annual, New York City, May 30-June 3, 1971. Helen Brown Schmidt, 919 N. Michigan Ave., Chicago 60611, Exec. Dir.

■ NATIONAL LEAGUE FOR NURSING, Dallas, May 10-14, 1971. Margaret E. Walsh, 10 Columbus Circle, New York 10019, Sec.

NATIONAL TUBERCULOSIS AND RESPIRATORY DISEASE ASSOCIATION, annual, Los Angeles, May 16-19, 1971. Dr. Robert J. Anderson, 1740 Broadway, New York 10019, Mng. Dir.

SOUTH CENTRAL ASSOCIATION OF BLOOD BANKS, annual, Little Rock, May, 1971. Elsie Howard, 2109 Commerce St., Dallas 75201, Exec. Officer.

STUDENT AMERICAN MEDICAL ASSOCIATION, annual, St. Louis, May 4-8, 1971. Charles C. Hewitt, JD, 2635 Flossmoor Rd., Flossmoor, Ill. 60422, Exec. Officer.

■ TEXAS DENTAL ASSOCIATION, annual, Houston, May 16-19, 1971. Bill Howard, 3707 Gaston Ave., Dallas 75246, Exec. Sec.

■ TEXAS HOSPITAL ASSOCIATION, annual, San Antonio, May 16-19. 1971. O. Ray Hurst, PO Box 4553, Austin 78751, Exec. Vice-Pres.

■ TEXAS MEDICAL ASSOCIATION, 104th annual session, Houston, May 6-9, 1971. C. Lincoln Williston, 1801 N. Lamar Blvd., Austin 78701, Exec. Sec.

■ TEXAS RHEUMATISM ASSOCIATION, annual, Houston, May 8, 1971. Dr. J. E. Norris, 6448 Fannin, Houston 77025, Sec.

JUNE

AMERICAN DIABETES ASSOCIATION, annual, San Francisco, June 17-23, 1971. J. Richard Connelly, 18 E. 48th St., New York 10017, Exec. Dir.

AMERICAN NEUROLOGICAL ASSOCIATION, annual, Washington, DC, June 14-16, 1971. Dr. Samuel A. Trufant, Cincinnati General Hospital, Cincinnati 45229, Exec. Sec.

AMERICAN PHYSICAL THERAPY ASSOCIATION, annual, Boston, June 27-July 2, 1971. Royce P. Noland, 1156 15th St., NW, Washington, DC 20005, Exec. Dir.

SOCIETY OF NUCLEAR MEDICINE, annual, Los Angeles, June 28-July 2, 1971. Margaret Glos, 211 E. 43rd St., New York 10017, Exec. Officer.

JULY

ROCKY MOUNTAIN CANCER CONFERENCE, annual, Denver, July 16-17, 1971. F. C. Schmidt, 1764 Gilpin St., Denver 80218, Exec. Officer.

SEPTEMBER

AMERICAN ASSOCIATION OF MEDICAL CLINICS, Cleveland, Sept. 15-18, 1971. Dr. Edward M. Wurzel, Box 949, 719 Prince St., Alexandria, Va. 22313, Exec. Dir.

AMERICAN ASSOCIATION OF OBSTETRICIANS AND GYNECOLOGISTS, annual, Hot Springs, Va., Sept. 9-11, 1971. Dr. Charles A. Hunter, 1100 W. Michigan, Indianapolis 46202, Sec.

AMERICAN ASSOCIATION OF OPHTHALMOLOGY, Las Vegas, Sept. 19-20, 1971. Lawrence A. Zupan, 1100 17th St., NW, Washington, DC 20036, Exec. Sec.

AMERICAN MEDICAL ASSOCIATION, 13th National Conference on Physicians and Schools, Chicago, Sept. 30-Oct. 2, 1971. AMA, Department of Health Education, 535 N. Dearborn St., Chicago 60610.

FLYING PHYSICIANS ASSOCIATION, INC., annual, Mackinac Island, Michigan, Sept. 26-Oct. 1, 1971. Harriett C. Carriere, 801 Green Bay Rd., Lake Bluff, Ill. 60044, Sec.

■ PANHANDLE DISTRICT MEDICAL SOCIETY, Lubbock, Sept. 18, 1971. Mrs. Carlie Umphres, PO Box 3276, Amarillo 79106, Exec. Sec.

■ TEXAS PEDIATRIC SOCIETY, Houston, Sept. 23-25, 1971. Dr. Pat A. Cato, 1015 E. 32nd St., Austin 78705, Sec.

WORLD MEDICAL ASSOCIATION, annual, Ottawa, Canada, Sept. 12-18, 1971. Miss M. L. Natwick, 10 Columbus Circle, New York 10019, Exec. Sec.

OCTOBER

AMERICAN ACADEMY OF FAMILY PHYSICIANS, Miami Beach, Oct. 4-7, 1971. Mac F. Cahal, Volker Blvd. at Brookside, Kansas City, Mo. 64112, Exec. Dir.

AMERICAN COLLEGE OF CHEST PHYSICIANS, annual, Philadelphia, Oct. 24-28, 1971. Dr. Alfred Soffer, 112 E. Chestnut St., Chicago 60611, Exec. Dir.

AMERICAN COLLEGE OF SURGEONS, annual, Atlantic City, Oct. 18-22, 1971. Dr. C. Rollins Hanlon, 55 E. Erie St., Chicago 60611, Dir.

AMERICAN HUMANE ASSOCIATION, annual, Rochester, NY, Oct. 17-21, 1971. Rutherford T. Phillips, PO Box 1266, Denver 80201, Exec. Dir.

AMERICAN PUBLIC HEALTH ASSOCIATION, annual, Minneapolis, Oct. 11-15, 1971. Dr. James R. Kimmey, 1740 Broadway, New York 10019, Exec. Dir.

AMERICAN SOCIETY OF CLINICAL PATHOLOGISTS, annual, Boston, Oct. 22-30, 1971. Albert G. Boeck, Jr., 710 S. Wolcott Ave., Chicago 60612, Exec. Officer.

AMERICAN SOCIETY OF PLASTIC AND RECONSTRUCTIVE SURGEONS, INC., annual, Montreal, Canada, Oct. 3-8, 1971. Dallas F. Whaley, 29 E. Madison St., Suite 812, Chicago 60602, Exec. Dir.

ASSOCIATION OF AMERICAN PHYSICIANS AND SURGEONS, INC., St. Louis, Oct. 7-9, 1971. Frank K. Woolley, 230 N. Michigan Ave., Suite 1000, Chicago 60601, Exec. Dir.

Your help is needed to inform Texans about the seriousness of venereal disease.

Venereal disease continues to strengthen its position as the number one communicable disease in the nation simply because people are not aware of the seriousness of the VD problem within their own communities or of the dangerous consequences of the disease.

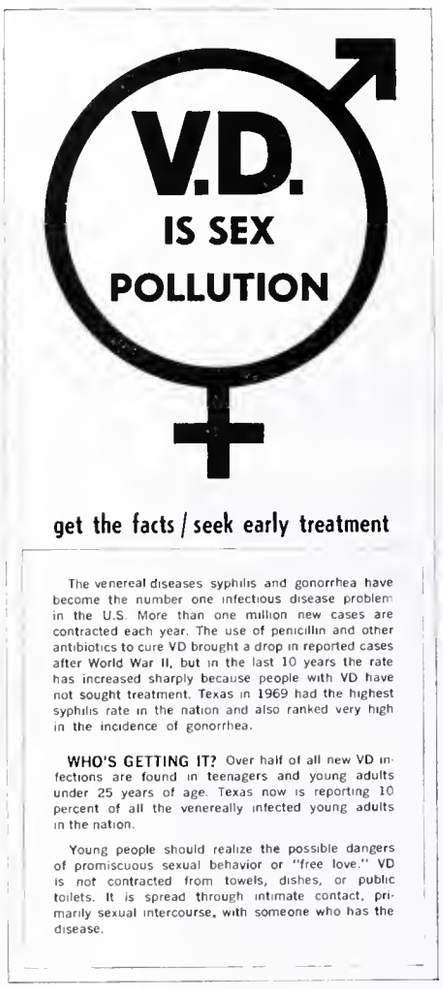
Texas had the highest syphilis rate in the nation last year and also ranked very high in the incidence of gonorrhea.

As part of a state-wide educational program on VD, the Texas Medical Association has produced an informative pamphlet for free distribution to the public. You can help in this educational program by ordering this pamphlet and distributing it in your community.

Particular attention needs to be directed toward young people. The majority of venereal disease cases in Texas are among the 15 to 24 year old age group and our state now is reporting 10 percent of all the venereally infected young adults in the nation.

Governor Preston Smith, in officially proclaiming Venereal Disease Awareness Month, stated that "all citizens are urged to learn of the price they pay for their silence on the subject of venereal diseases, and are encouraged to participate in venereal disease education programming."

Your assistance is needed to help control the serious spread of VD in Texas.



ORDER THIS INFORMATIVE PAMPHLET TODAY

— FREE — FROM TMA

CLIP AND MAIL TO: PUBLIC RELATIONS DIVISION
TEXAS MEDICAL ASSOCIATION
1801 NORTH LAMAR BLVD.
AUSTIN, TEXAS 78701

Please send me_____copies of the pamphlet, "VD Is Sex Pollution."

Name_____

Address_____

City_____ **State**_____ **Zip**_____

CONTINUING EDUCATION COURSES

Sinton-Taft Seminar: Sponsored by the Gulf Coast Academy of General Practice, in cooperation with the Charles H. Ewing Community Hospital and the staffs of Sinton and Taft hospitals, this seminar will take place in Taft, Tex., on Jan. 14. Featured speakers will be Drs. John V. Goode, Dallas; Grady Lamar Hallman, Jr., Houston; and George A. Pankey, New Orleans. Topics to be covered are the diagnosis and treatment of life-threatening infections in the geriatric patient, the use of local anesthesia in general surgery, reconstruction versus transplantation-heart surgery, carcinoma of the breast, peripheral vascular disease, and cutaneous manifestations of infectious diseases.

The seminar is approved for 7 hours of credit by the AAGP. For more details, contact Dr. A. F. Tasch, 402 Green Ave., Taft 78390.

Public Health Laboratory Workshops: Designed for the benefit of public health, hospital, clinical, and other medical laboratories, the following courses will be presented in Austin by the Texas State Department of Health:

Public Health and Medical Bacteriology, Jan. 18-22, 1971.

Public Health and Medical Mycology, Feb. 16-19, 1971.

There is no registration fee for the courses. Contact Dr. J. V. Irons (ScD), Director of Laboratories, Texas State Department of Health, 1100 W. 49th St., Austin 78756.

Hematology: The University of Texas Graduate School of Biomedical Sciences at Houston, Division of Continuing Education, will present a course on hematology, Jan. 21-22, in Houston. This will be a practical, brief, refresher course, with emphasis on the diagnosis, natural history, and pathophysiology of hematological disorders. The program is acceptable for 11 prescribed hours by the AAGP and tuition fee is $35. For more information write: The UT Graduate School of Biomedical Sciences at Houston, Division of Continuing Education, PO Box 20367, Houston 77025.

Coronary Atherosclerotic Heart Disease: Offered by the department of medicine, Emory University School of Medicine, in association with American College of Physicians and American Heart Association, this three-day program will take place at Grady Memorial Hospital Auditorium in Atlanta, Ga., Jan. 13-15. Three facets of coronary atherosclerotic heart disease problems—prevention, treatment, and rehabilitation—will be discussed by experts. Guest faculty will include Dr. C. Gunnar Blomqvist, assistant professor of internal medicine, UT Southwestern Medical School at Dallas.

Requests for information should be directed to the Registrar, Postgraduate Courses, American College of Physicians, 4200 Pine St., Philadelphia 19104.

Surgery of the Hand: This course will consider aspects of trauma to the hand including reconstructive surgery. Specific subjects in the fields of rheumatoid arthritis, and congenital defects will be presented. Offered by University of Colorado School of Medicine, the course will be held Feb. 16-19 in Denver. Tuition fee is $90. For further information and detailed programs, write to the Office of Postgraduate Medical Education, University of Colorado School of Medicine, 4200 East Ninth Ave., Denver 80220.

Allergy: American Academy of Allergy will present a two-day postgraduate course at Palmer House in Chicago, Feb. 20-21. The course will consist of four general areas of presentation: new developments in cellular immunology; viral immunology; recent progress in reagin research; and clinical immunology. Full information may be obtained from the Academy's Executive Office, 756 N. Milwaukee St., Milwaukee, Wisc. 53202.

Immunoprophylaxis and Chemotherapy of Infectious Diseases: The University of Arizona College of Medicine is offering a course on recent advances in the immunoprophylaxis and chemotherapy of infectious diseases, Feb. 5-7, 1971. Co-sponsored by American College of Physicians and American Academy of Pediatrics, the course will be held at the Statler Hilton Inn in Tucson. Recent advances in infectious diseases, immunology, and clinical microbiology will be summarized and integrated with existing information to provide the practicing physician with the current consensus for appropriate management of these clinical problems. Emphasis will be placed on newer antibiotics and immunizing agents as well as on methods for the diagnosis and prevention of infectious diseases. The format consists of lectures, panels, open forum sessions, demonstrations, question and answer periods, and small group discussions with individual faculty members.

Contact Dr. Edward C. Rosenow, Jr., c/o ACP, 4200 Pine St., Philadelphia, Pa. 19104.

Medical Oncology: An approach to management of patients with cancer and hematologic malignancies, built on a theoretical background in experimental therapeutics, pharmacology, cell population kinetics, and immunology, will be developed in a program to be held March 8-12, 1971, at Shamrock-Hilton Hotel, Houston. Offered by Texas Medical Center, Houston, and co-sponsored by American College of Physicians, this course will emphasize the medical and psychological aspects of supportive care of the patient under treatment. Case material will further illustrate specific diseases, diagnostic techniques, complications of management, and results of therapy.

Contact Dr. Edward C. Rosenow, Jr., c/o ACP, 4200 Pine St., Philadelphia, Pa. 19104.

Teaching Conference: The Children's Research and Education Foundation of the Santa Rosa Medical Center, Children's Hospital, announces its 9th Annual Teaching Conference to be held in conjunction with the department of pediatrics, UT Medical School at San Antonio, April 3-4.

The conference is accredited for 8 elective hours by the American Academy of Pediatrics. More information may be obtained from Dr. Howard A. Britton, chairman, department of pediatrics, The Children's Hospital, Santa Rosa Medical Center, PO Box 7330, Station A, San Antonio 78207.

PUBLISHED TO REPLACE A PREVIOUS ADVERTISEMENT WHICH THE FOOD AND DRUG ADMINISTRATION CONSIDERED MISLEADING

The Food and Drug Administration has requested that we bring to your attention a recent promotional campaign for Garamycin Injectable (gentamicin sulfate) which featured a nationwide *in-vitro* hospital survey involving a comparison of sensitivity patterns of Garamycin Injectable and seven other antibiotics.

The FDA considers the advertising misleading in several respects such as:

The *in-vitro* chart contained in the ads, which compared Garamycin Injectable with seven other antibiotics, implied that Garamycin Injectable is clinically more effective than the seven other compared antibiotics. THE FACTS ARE (1) THAT DIRECT EXTRAPOLATION OF NONCLINICAL FINDINGS TO CLINICAL EFFECTIVENESS IS UNWARRANTED, AND (2) THAT THE ADVERTISED *IN-VITRO* COMPARISONS DO NOT CONSTITUTE A VALID BASIS FOR SUGGESTING THAT GARAMYCIN INJECTABLE HAS GREATER CLINICAL EFFECTIVENESS THAN THE COMPARED ANTIBIOTICS.

The *in-vitro* chart and information contained under the ad heading, "Indications" presented *in-vitro* data results in such a way as to imply that the drug is indicated for Gram-positive bacteria, such as *Staphylococcus aureus*. GARAMYCIN INJECTABLE IS NOT APPROVED FOR INFECTIONS DUE TO ANY GRAM-POSITIVE ORGANISMS.

We emphasize that Garamycin Injectable is approved for use only in infections due to susceptible strains of gram-negative bacteria, including Pseudomonas aeruginosa, and species of indole-positive and indole-negative Proteus, Escherichia coli, and Klebsiella-Aerobacter.

Injectable Garamycin®

brand of gentamicin sulfate injection

Schering

Each cc. contains gentamicin sulfate equivalent to 40 mg. gentamicin

BRIEF SUMMARY

INDICATIONS GARAMYCIN Injectable is clinically effective in infections due to susceptible strains of gram-negative bacteria, including Pseudomonas aeruginosa, and species of indole-positive and indole-negative Proteus, Escherichia coli, and Klebsiella-Aerobacter. Bacteriologic studies should be conducted to identify the causative organism and to determine its sensitivity to gentamicin sulfate. Sensitivity discs of the drug are available for this purpose. If the susceptibility tests indicate that the causative organism is resistant to gentamicin sulfate, other appropriate antibiotic therapy should be instituted.

This drug should be limited to the treatment of serious infections caused by gram-negative bacteria, particularly Pseudomonas aeruginosa, Proteus and other susceptible organisms, with due regard for relative antibiotic toxicity. Therefore, the drug should be considered for use against gram-negative: 1. Bacteremia; 2. Infected surgical wounds; 3. Severe soft tissue infections, including burns complicated by sepsis; 4. Respiratory tract infections; and 5. Selected cases of urinary tract infection.

CONTRAINDICATIONS GARAMYCIN Injectable is contraindicated in individuals with a history of hypersensitivity or toxic reactions to gentamicin.

WARNINGS Patients receiving treatment with GARAMYCIN should be under close clinical observation because of the toxicity associated with the use of this drug. Ototoxicity, vestibular and auditory, can occur in patients, primarily those with pre-existing renal damage, treated with GARAMYCIN Injectable, usually for longer periods or with higher doses than recommended.

GARAMYCIN Injectable is potentially nephrotoxic, and this should be kept in mind when it is used in patients with pre-existing renal impairment. Kidney function diminished by infection of the upper urinary tract may, however, improve during effective treatment with GARAMYCIN Injectable.

Concurrent administration of potentially ototoxic drugs such as streptomycin and kanamycin or of potentially nephrotoxic drugs such as polymyxin, colistin, and kanamycin with gentamicin sulfate has not been shown to afford any clinical advantages and, moreover may result in additive toxicity. Monitoring of vestibular, cochlear, and renal function will provide guidance for therapy in such cases.

PRECAUTIONS In patients with impaired renal function in whom serious infection develops, serum concentrations of the drug may rise, with consequently increased risk of ototoxicity. In these patients or in those in whom recommended dosage or duration of therapy must be exceeded as a life-saving measure, routine studies of kidney function should be performed when possible. These may be supplemented by evaluation of the vestibular and auditory function and measurement of serum concentration of the drug when feasible. Serum concentration of gentamicin should be maintained below the range of 10-12 mcg./ml. to reduce risk of ototoxicity.

Ordinarily, treatment should not be given for more than 7 to 10 days or be repeated unless required for serious infection not responsive to other agents.

As with other antibiotics, treatment with GARAMYCIN Injectable may occasionally result in overgrowth of nonsensitive organisms. If superinfection occurs, appropriate therapy is indicated.

Safety for use in pregnancy or the potential for fetal ototoxicity or nephrotoxicity have not been established. Studies in pregnant animals have not revealed teratogenic or ototoxic effects in the fetus. GARAMYCIN Injectable should not be used in pregnant patients or in women of childbearing age unless its use is deemed advisable by the physician.

ADVERSE REACTIONS The overall incidence of ototoxicity considered related to treatment with GARAMYCIN Injectable was 2.8 per cent (16 of 565 patients). Contributory factors (two or more factors were relevant to most patients) were as follows: 10 had azotemia, 10 received a total of 1 gram or more of the drug, 7 had recently received other potentially ototoxic antibiotics (streptomycin or kanamycin), and 5 were over 60 years of age. Six also had decreased high-tone hearing acuity, which returned to or toward normal in the 4 patients retested.

Analysis of BUN data indicated that 4 (2%) of 172 patients showed increases in BUN that were probably related to treatment with GARAMYCIN Injectable. Of 20 increases probably or possibly related to treatment, 7 were reversible, 9 occurred in terminal patients, and 4 had no follow-up.

Other adverse reactions associated with treatment were one instance each of urticaria, decreased hematocrit, and reversible depression of granulocytes with normal bone marrow. Other rarely reported and possibly treatment-related adverse reactions were anemia, increased reticulocyte count, rash, purpura, drug fever, hypotension, convulsions, twitching, salivation, nausea, vomiting, increased transaminase activity (SGOT or SGPT), increased serum bilirubin, decreased serum calcium, and joint pain.

PACKAGING GARAMYCIN Injectable, 40 mg./cc., 2-cc. multiple-dose vials, for intramuscular administration.

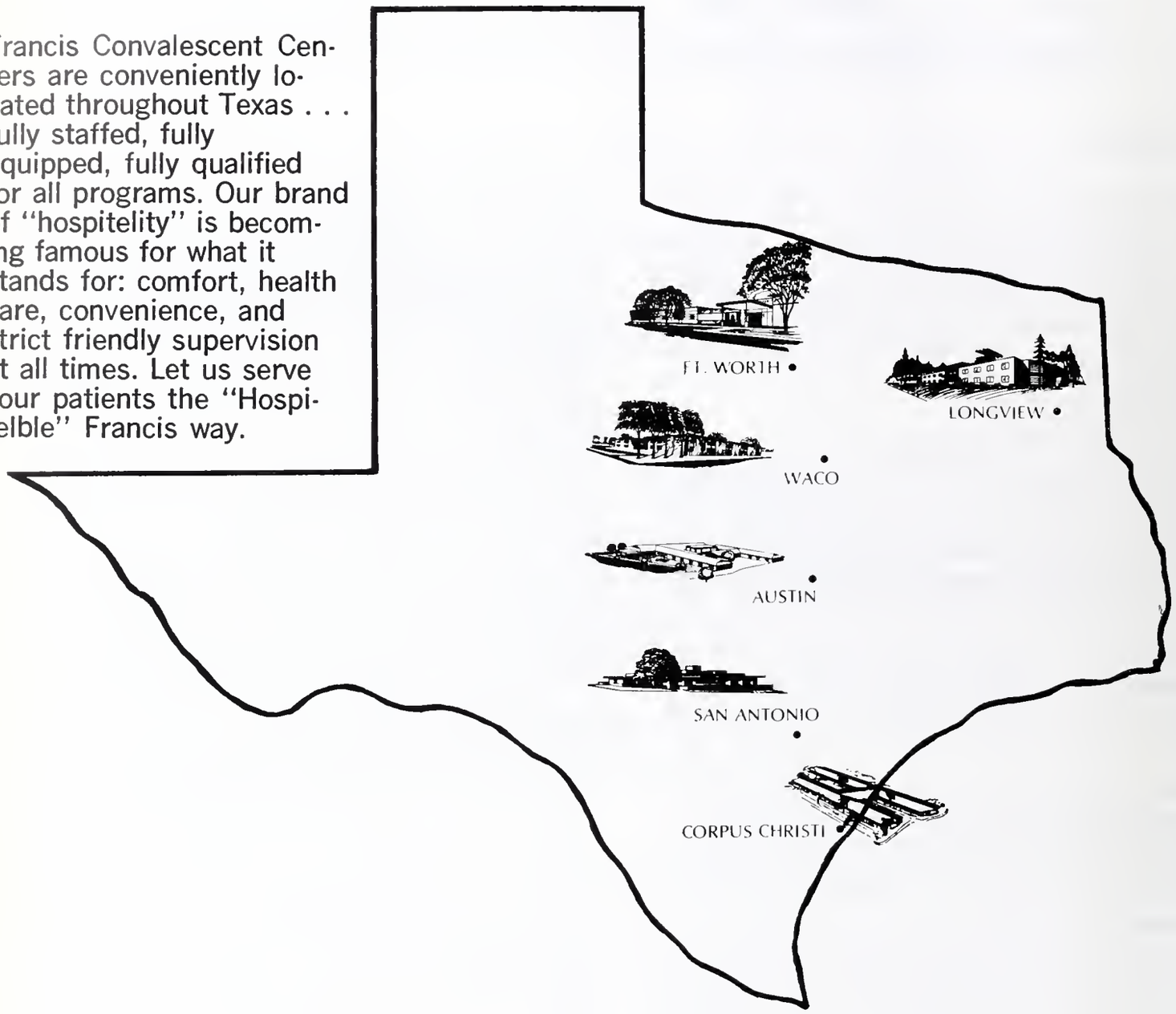
SCHERING CORPORATION, UNION, NEW JERSEY 07083

SCH-2620

FRANCIS HOSPITELS INCORPORATED

FRANCIS CONVALESCENT CENTERS
DIVISION OF FRANCIS HOSPITELS, INC.

Francis Convalescent Centers are conveniently located throughout Texas . . . fully staffed, fully equipped, fully qualified for all programs. Our brand of "hospitelity" is becoming famous for what it stands for: comfort, health care, convenience, and strict friendly supervision at all times. Let us serve your patients the "Hospitelble" Francis way.



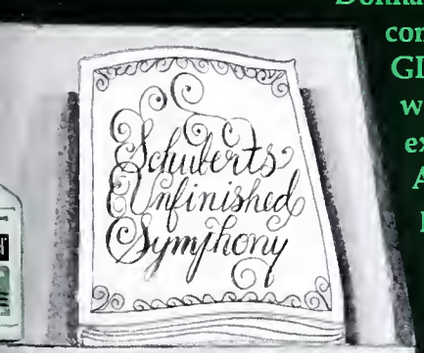
FRANCIS HOSPITELS, INC., 7129 Highway 290 East, Austin, 512 454-2725

FRANCIS CONVALESCENT CENTERS—WACO: Francis Hospitel, 2501 Maple Avenue, Ph. 752-0311; AUSTIN: Retirement Inc., 6909 Burnet Road, Ph. 452-5719; FORT WORTH: Francis Convalescent Center, 1000 6th Avenue, Ph. 335-1903; CORPUS CHRISTI: Francis Convalescent Center, 3050 Sunnybrook, Ph. 853-9981; LONGVIEW: Highland Pines, 1100 N. 4th Street, Ph. 753-7661; SAN ANTONIO: San Pedro Manor, 616 West Russell, Ph. 732-5181.

The concert was just underway,
When to the conductor's dismay
Cramps and diarrhea,
Did so quickly appear,
The maestro no longer could stay.

Because diarrhea with cramping, nausea, and painful straining can strike at the most inopportune time, it takes a comprehensive agent to treat the total diarrheal syndrome and help get the patient back on the job. That's why so many physicians rely on Donnagel, especially during the fall and winter months when "flu" and viral gastroenteritis usually hit their peak.

Donnagel is much more than just a simple kaolin-pectin combination. It also contains the belladonna alkaloids to calm GI hypermotility and help relieve the distressing discomforts which so often accompany diarrhea. Certainly it's less expensive and more convenient than taking two medications. And the dosage is lower too. Available in the handy 4-oz. plastic bottle at pharmacies everywhere on your prescription or recommendation.



When diarrhea and its discomforts separate a man from his job . . .

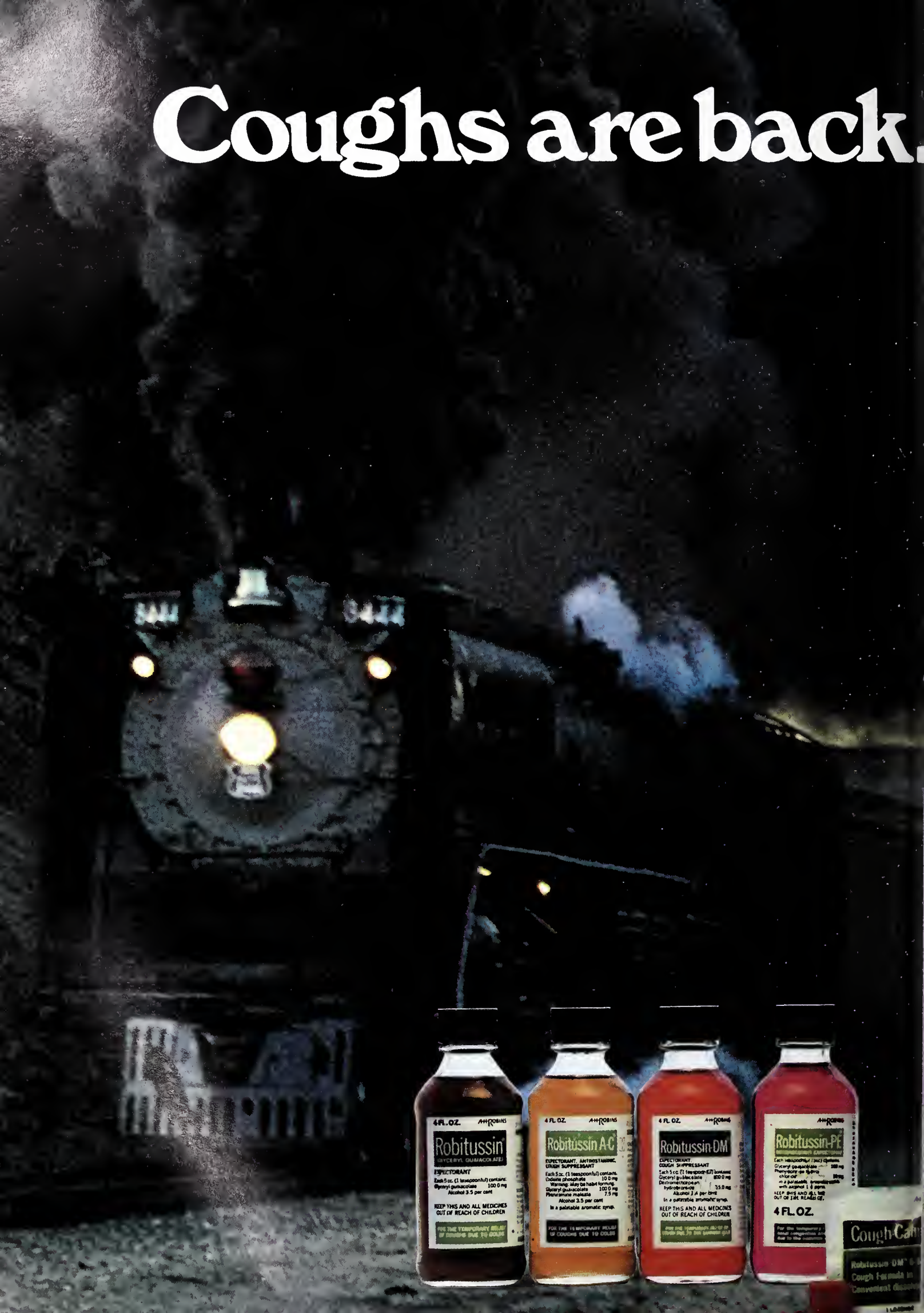
Donnagel®

Each fluid ounce contains: Kaolin, 6 g.; Pectin, 142.8 mg.; Hyoscyamine sulfate, 0.1037 mg.; Atropine sulfate, 0.0194 mg.; Hyoscine hydrobromide, 0.0065 mg.; Sodium benzoate (preservative), 60 mg.; Alcohol, 3.8%.

A·H·ROBINS

A. H. Robins Company,
1407 Cummings Drive,
Richmond, Va. 23220

Coughs are back.



clear the tract with the

Robitussin® Line

The coughing season is here again. Time to rely on the four Robitussins and Cough Calmers to help clear the lower respiratory tract. All contain glyceryl guaiacolate, the efficient expectorant that works systemically to help increase the output of lower respiratory tract fluid. The enhanced flow of less viscid secretions soothes the tracheobronchial mucosa, promotes ciliary action, and makes thick, inspissated mucus less viscid and easier to raise. Available on your prescription or recommendation.

For coughs of colds and "flu"

Robitussin®

Each 5 cc. contains:

Glyceryl guaiacolate	100.0 mg.
Alcohol, 3.5%	

For unproductive allergic coughs

Robitussin A-C®

Each 5 cc. contains:

Glyceryl guaiacolate	100.0 mg.
Pheniramine maleate	7.5 mg.
Codeine phosphate	10.0 mg.
(warning: may be habit forming)	
Alcohol, 3.5%	

Non-narcotic for 6-8 hr. cough control

Robitussin-DM®

Each 5 cc. contains:

Glyceryl guaiacolate	100.0 mg.
Dextromethorphan hydrobromide	15.0 mg.
Alcohol, 1.4%	

Clears sinuses and nasal stuffiness as it relieves cough

Robitussin-PE®

Each 5 cc. contains:

Glyceryl guaiacolate	100.0 mg.
Phenylephrine hydrochloride	10.0 mg.
Alcohol, 1.4%	

Robitussin-DM in solid form for "coughs on the go"

Cough Calmers™

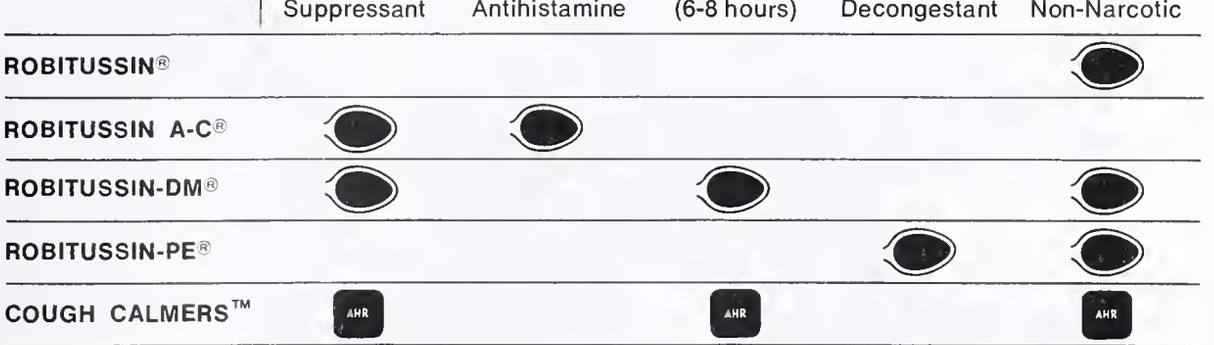
Each Cough Calmer contains:

Glyceryl guaiacolate	50.0 mg.
Dextromethorphan hydrobromide	7.5 mg.

Select the Robitussin® "Clear-Tract" Formulation That Treats Your Patient's Individual Coughing Needs:

Robitussin® extra benefit chart

All 5 Robitussins have an EXPECTORANT-DEMULCENT action. Keep this handy chart as a guide in selecting the formula that provides the *extra* benefits you want for your patient.



A. H. Robins Company, Richmond, Va. 23220 A-H-ROBINS

Each 5 cc. contain erythromycin estolate equivalent to 250 mg. erythromycin base.
When mixed as directed, each 5 cc. will contain erythromycin estolate equivalent to 125 mg. erythromycin base.
When mixed as directed, each cc. will contain erythromycin estolate equivalent to 100 mg. erythromycin base.
Each 5 cc. contain erythromycin estolate equivalent to 125 mg. erythromycin base.
Each tablet contains erythromycin estolate equivalent to 125 mg. erythromycin base.
Each Pulvule® contains erythromycin estolate equivalent to 125 mg. erythromycin base.
Each Pulvule contains erythromycin estolate equivalent to 250 mg. erythromycin base.
ILOSONE® LIQUID ERYTHROMYCIN ESTOLATE ORAL SUSPENSION, U.S.P. 125
SHAKE WELL BEFORE USING
ILOSONE® LIQUID ERYTHROMYCIN ESTOLATE ORAL SUSPENSION, U.S.P. 250
ILOSONE® CHEWABLE ERYTHROMYCIN ESTOLATE TABLETS, N.F. 125 mg.
ILOSONE® ERYTHROMYCIN ESTOLATE CAPSULES, N.F. 125 mg.
ILOSONE® ERYTHROMYCIN ESTOLATE CAPSULES, N.F. 250 mg.
The many forms of Ilosone®
Erythromycin Estolate
Lilly
Additional information available upon request.
Eli Lilly and Company
Indianapolis, Indiana 46206
900761

Editorials

RELIGION AFFECTS PRACTICE OF MEDICINE

All mankind seems to have a basic hunger for understanding of God and yet the physician and clergyman, both of whom are involved with helping their fellow man to more abundant life, have traditionally appeared to be the antithesis of each other regarding religious matters. While the preacher said of death, "God wills it," the physician cursed his own ineptness and fretted, "If only I knew a little more!"

Today these attitudes are changing; physicians and clergymen are realizing that they both have an important place beside the sickbed and that they need to work in harmony. The physician needs to learn anything he can about his patient's fears, family problems, beliefs, and motivations for life. And the clergyman needs to understand his parishioner's illness, its seriousness, its implications, its economic stresses, and the patient's guilt feelings, fears, doubts, and unnamed dreads.

The effort to bring medicine and religion closer together is not an attempt to turn clergymen into "junior psychiatrists." Nor is it an open invitation to the preacher to get his theological licks in while some poor sinner is flat on his back.

Part of the program is to help the sick person's minister be an adequate representative of *the patient's image of God,* because there are many ways to see Him.

Another part of the program is to help the physician recognize that religion does have something to do with medical decisions. I am a Presbyterian, but when I treat an illness that affects the body, mind, and spirit of the person in my care, it is what *he* believes that is important. His beliefs, not mine, are the ones that affect his response to treatment. His beliefs, not mine, are the ones that cause him to feel fear, doubt, and guilt.

If my patient does not believe in blood transfusions, what I think about them does not matter. If I treat a Roman Catholic for a fertility problem, the fact that I see nothing wrong with collecting a sperm specimen in a bottle for study is unimportant; what matters is that my patient believes coitus interruptus is evil and masturbation is unthinkable. I need to know what the Orthodox Jew believes about food, organ transplants, and autopsies; I need to know what the Christian Scientist believes in his innermost soul.

It is the faith of the patient that we doctors need to understand and respect. Whether our own

religious belief is strong or nonexistent, it is a human conviction which we have no right to impose on any other person—especially when he is ill and frightened.

No longer are physicians and clergymen on opposite sides of a controversy. We are at last beginning to converse with each other about our common responsibility to the sick.

Here are some medical problems that deserve conversations with men of God:

A mother of four small children has a lump in her breast and is making plans to enter the hospital for biopsy and possibly radical surgery. What does she fear? What can we do? If you were her doctor, would you call her minister? If you were her minister, would you call her doctor? How can we, working together, help her through this fear-ridden crisis?

A young man with a new job and a new son—working hard to make ends meet—is hit by a car driven by an uninsured motorist, and sustains a compound, comminuted fracture of the tibia. He lies in bed with ropes and pulleys and sandbags and pain—and bills. No money is coming in, but it is costing $100 a day just to lie there, and for how long? What can we do? Can the preacher help? Can the doctor help more than just by putting things together and putting on a cast? What are this man's fears and frustrations? What is his faith?

A lifelong friend brings his anguished problem: His daughter, a fine and intelligent girl, is pregnant. The young man—honorable and filled with remorse—is willing, but not eager to marry her. How do you help return a sorrowful human to a useful life with dignity, and rebuild sufficient self respect?

Being a doctor can be a lonely business sometimes. Being a clergyman must be a lonely business, too. When it comes to care of the whole person, I believe we are both on the same team.

We physicians can take a new look at what Ambroise Paré wrote nearly 400 years ago: "I dressed him and God healed him."

Grant F. Begley, MD, Fort Worth.

SURVIVAL OF ORGANIZED MEDICINE DEPENDS ON OVERALL UNIFICATION

By his own nature and by his training the physician acquires certain characteristics, chiefly individuality, self-reliance, and independent judgment. These qualities are assets to him as a practicing physician, but they become liabilities in the realm of organized medicine. The overall effect is a perfusion of words and thoughts but ineffective action. Individually, physicians' respect, deeds, intentions, and purposes usually are beyond reproach. As a group, their actions become ineffectual, often ambiguous, and lacking in solidarity or unified purpose—all because of the same traits that make them strong individuals.

In this perspective we now find ourselves poorly consolidated, fragmented, splintering, and becoming more divided. As frustration increases, further frantic efforts result only in greater fragmentation of efforts; the final result is even poorer communication and diminished overall effectiveness. Is it not appropriate to ask (and government has asked), "Is there any group that can speak with authority and responsibility for American medicine—and back up its words with any assurance of capability of carrying them out?"

It is, therefore, absolutely necessary that we as physicians, with some sense of urgency, develop consensus and strength of purpose, and unite ourselves behind one organization. It is irresponsible to continue other organizations and to form new ones if they are not complementary to our primary one. Failure to intermesh their activities with those of medicine's primary organization and to be informed as to its actions and purposes by way of competent liaison is reprehensible.

The very fact that such organizations have been formalized points to organized medicine's failure to communicate. The imperfections that exist in our own attempt at unified purpose and action must be resolved, and those responsible for representing the individual practice of medicine must pursue their responsibility with an increased sense of accountability.

To avoid direct domination by others in the future, the physician's only course is to insist that the attributes characteristic of the individual physician also characterize organized medicine. There is a basic requirement, in my view, for accomplishing this: a single organization, with unified purpose and action, must represent and speak for all of us and be backed by our individual pledges of support.

Organized medicine must accept this challenge and, in turn, offer improved mechanisms for communication and representation.

All secondary organizations must be complementary and supportive in unified efforts toward a single purpose; otherwise, their existence will be only detrimental to us all.

Let us stand together, for surely if we can't, our collapse is imminent.

Dewey W. Johnston, MD, Fort Worth.

WHAT NOURISHES INFANTS BEST?

Infant feeding has become simultaneously complicated and simplified in the past decade. It has become complicated because the beneficial and simple practice of breast feeding has lessened and a plethora of different formulas confronts the physician. It has become simplified for the person who does not care or has not learned the differences between the various formulas available; he need only instruct the mother to open a can and pour it into the baby!

The history of infant feeding is helpful in explaining some of the pitfalls still present in artificial feeds. For a baby to live before the 18th century, breast feeding was almost requisite. In Europe, the Industrial Revolution led to many attempts to introduce artificial feeding. Because milk was the natural food of all mammals, the area's domestic mammals supplied the artificial feed for the infant. The mortality of infants fed artificial formulas varied, but ranged between 15 and 50%.[1]

About 1870, Czerny and Keller and others noted that one of the differences was the higher protein content of the artificial feed. When they lowered the protein content by diluting the milk, mortality decreased and the practice of diluting cow's milk was widely adopted.

When it was noted that babies similar to those who previously died were now living, studies of infant nutrition and development were begun. This was the era of systematic study of infant nutrition.

Sterility or compatible bacteriology
Efficiency; supply adjusts to demand
Low protein (1.0-1.2%)
Lactose as milk sugar
Calcium-phosphorus ratio (2:1)
Casein-lactoprotein ratio (1:4)
Polyunsaturated fats 50%
Linoleic acid 1.4% of calories
Lower electrolyte content
Factors in immunity
Lower allergenicity
Lower strontium content

1. Differences and advantages of human milk.

Since babies lived but did not grow well when fed diluted milks, various carbohydrates were added to increase the caloric content. Only recently have the peculiar advantages of lactose to the infant been recognized. These include the establishment of an acid flora of the stool, lower incidence of diaper rash, better absorption of calcium, and less neonatal tetany.[2]

The modification of animal milk is not the only factor in making milks artificial. Even milk at the store is an artificial product.[3] A diluted milk formula with sugars added was relatively satisfactory for growth of infants, and was the usual artificial feed until fairly recently when two major groups of advances were made.

The first was in the 1920s when the electric refrigerator began to replace the ice box. This allowed milk formulas to be kept with lower bacterial proliferation, and reduced the incidence of summer diarrhea.

The second was the recognition and correction of the vitamin deficiencies, particularly vitamins C and D, in the content of artificial milk feeds.

Stimulated by Gyorgy[4,5] and others during the past 30 years, nutritionists, pediatricians, and the milk industry have been concerned with determining why human milk is superior for the human infant (Fig 1), and have attempted to modify

Deficiency in iron
Deficiency in vitamins C, D(?)
Production of jaundice due to progesterone (rare)
Inadequate protein for premature infants
Inadequate nutrients after 1 year
Antibody loss with storage
Increased DDT content

2. Disadvantages of human milk.

artificial milks to more nearly resemble human milk. The result is the present plethora of formulas. The most recent attempts involve the alteration of the calcium-phosphorus ratio of cow's milk, the modification of cow's milk protein to improve biological value, the lowering of total electrolytes, and the substitution of polyunsaturated vegetable fats for butterfat.

With the better of these formulas, neonatal tetany has decreased, edema and toxicity during hot weather have lessened, and the fat in the formula is better absorbed. Whether arteriosclerosis and other degenerative diseases can be lessened is a hope with little proof. Indeed, the further modification of fat is expected to be a large part of the technological change in infant feeding of this decade.

One factor of human milk which will probably not be included in artificial foods for some time is gamma globulin. The presence of this labile factor is partly responsible for the lower incidence of gastrointestinal and respiratory virus infections in the breast-fed infant.[6]

The relatively few disadvantages of breast feeding are listed in Fig 2. Except for the jaundice-producing factor,[7] these probably have little significance to the infant, or can be readily avoided.

In spite of many warnings,[8] some infants still are overfed with formula or milk. Except for the cat, few mammals except man drink any milk after the weaning period. Recently, it has been suggested that factors in cow's milk may cause iron deficiency anemia, the most widespread

nutritional deficiency in this country.[9] Since the protein of milk is expensive and not of the quality formerly assumed, it seems logical to return to the practice of breast feeding. If this is not possible, then those milks most nearly like human milk with lower protein and electrolyte content, lactose as carbohydrate, and fatty acids similar to human milk, should be used in the preweaning period. If a better protein can be engineered with the milk, it should be so adapted. After weaning, if the child likes milk, he should be allowed 500-750 ml a day, but no one food should be fed in such quantities as to limit the intake of other essentials.

As more is learned of infant feeding, it becomes obvious that the practice of feeding any formula just so the infant grows, is potentially dangerous. It is imperative that physicians approach infant feeding with humility, and that they attempt to learn the significance of any variant from human milk, lest some minor variant permanently imprint future generations.

Lewis A. Barness, MD, Philadelphia.

REFERENCES

1. Wickes IG: History of infant feeding; nineteenth century continued; nineteenth century concluded and twentieth century. Arch Dis Child 28:416-422, 495-502, 1953.

2. Duncan DL: Physiological effects of lactose. Nutrition Abstr & Rev 25:309-320, 1955.

3. Robertson CJ: A food technologist looks at the future of American dairying. Nutr Rev 27:303-305, 1969.

4. Gyorgy P: Trends and advances in infant nutrition. West Va Med J 53:131-138, 1957.

5. Barness LA, Gyorgy P: Research advances in infant nutrition, in Bourne G, Ed: World Review of Nutrition and Dietetics, vol 3. London, Pitman Medical Publishers, Ltd, pp 1-20, 1962.

6. Plotkin SA, Katz M, Brown RE, et al: Oral poliovirus vaccination in newborn African infants. The inhibitory effect of breast feeding. Amer J Dis Child 111:27-30, 1966.

7. Arias IM, Gartner LM, Seifter S, et al: Prolonged neonatal unconjugated hyperbilirubinemia associated with breast feeding and a steroid, pregnane-3 (alpha), 20 (beta)-diol, in maternal milk that inhibits glucuronide formation in vitro. J Clin Invest 43:2037-2047, 1964.

8. Smith CA: Overuse of milk in the diets of infants and children. JAMA 172:567-569, 1960.

9. Gross S: The relationship between milk protein and iron to hematologic values in infancy. J Pediat 73:521-530, 1968.

Investigative work supported in part by USPHS grant AM-02231.

ANNOUNCING
THE THIRTY-FOURTH ANNUAL MEETING
of
THE NEW ORLEANS GRADUATE
MEDICAL ASSEMBLY

Conference Headquarters — The Roosevelt Hotel

March 8, 9, 10, 11, 1971

GUEST SPEAKERS

Chas. Ronald Stephen, M.D., Dallas, Tex.
Anesthesiology
Alejandro F. Castro, M.D., Washington, D.C.
Colon and Rectal Surgery
Alexander A. Fisher, M.D., Woodside, L.I., N.Y.
Dermatology
Thomas P. Almy, M.D., Hanover, N.H.
Gastroenterology
Jack H. Hall, M.D., Indianapolis, Ind.
General Practice
Denis Cavanagh, M.D., St. Louis, Mo.
Gynecology
John T. Galambos, M.D., Atlanta, Ga.
Internal Medicine
Roger F. Palmer, M.D., Miami, Fla.
Internal Medicine
Nathan S. Schlezinger, M.D., Philadelphia, Pa.
Neurology
Ernest W. Page, M.D., San Francisco, Calif.
Obstetrics
Henry F. Allen, M.D., Boston, Mass.
Ophthalmology
Phillip L. Day, M.D., San Antonio, Tex.
Orthopedic Surgery
Edley H. Jones, M.D., Vicksburg, Miss.
Otolaryngology
John A. Shively, M.D., Columbia, Mo.
Pathology
Max D. Cooper, M.D., Birmingham, Ala.
Pediatrics
William B. Seaman, M.D., New York, N.Y.
Radiology
Robert S. Litwak, M.D., New York, N.Y.
Surgery
Edward R. Woodward, M.D., Gainesville, Fla.
Surgery
James F. Glenn, M.D., Durham, N.C.
Urology

Lectures, clinicopathologic conference, round-table luncheons, medical motion pictures, technical exhibits, and entertainment for visiting wives.

This program is acceptable for twenty-two (22) prescribed hours and eight (8) elective hours by the American Academy of General Practice.

(All-inclusive registration fee — $35.00)

For information concerning the Assembly meeting write Secretary, The New Orleans Graduate Medical Assembly, Room 1538, 1430 Tulane Avenue, New Orleans, Louisiana 70112.

Medicine and Cowboys
Sixty Years Ago
And Today's Politics

by E. O. Nichols, M.D.

Fourth Printing — Price $3.00

ENLARGED EDITION

If you wish to purchase copies of this publication
CONTACT: MRS. GREGORY, FRONT OFFICE
715 Houston Street, Plainview, Texas 79072
Call 296-2765
Mailed Postage Free Anywhere in U.S.A.

ONCOLOGY

Oscar L. Morphis, M.D., F.A.C.R.
Radiation Therapy
Radium Therapy

R. P. O'Bannon, M.D., F.A.C.R.
Radiation Therapy

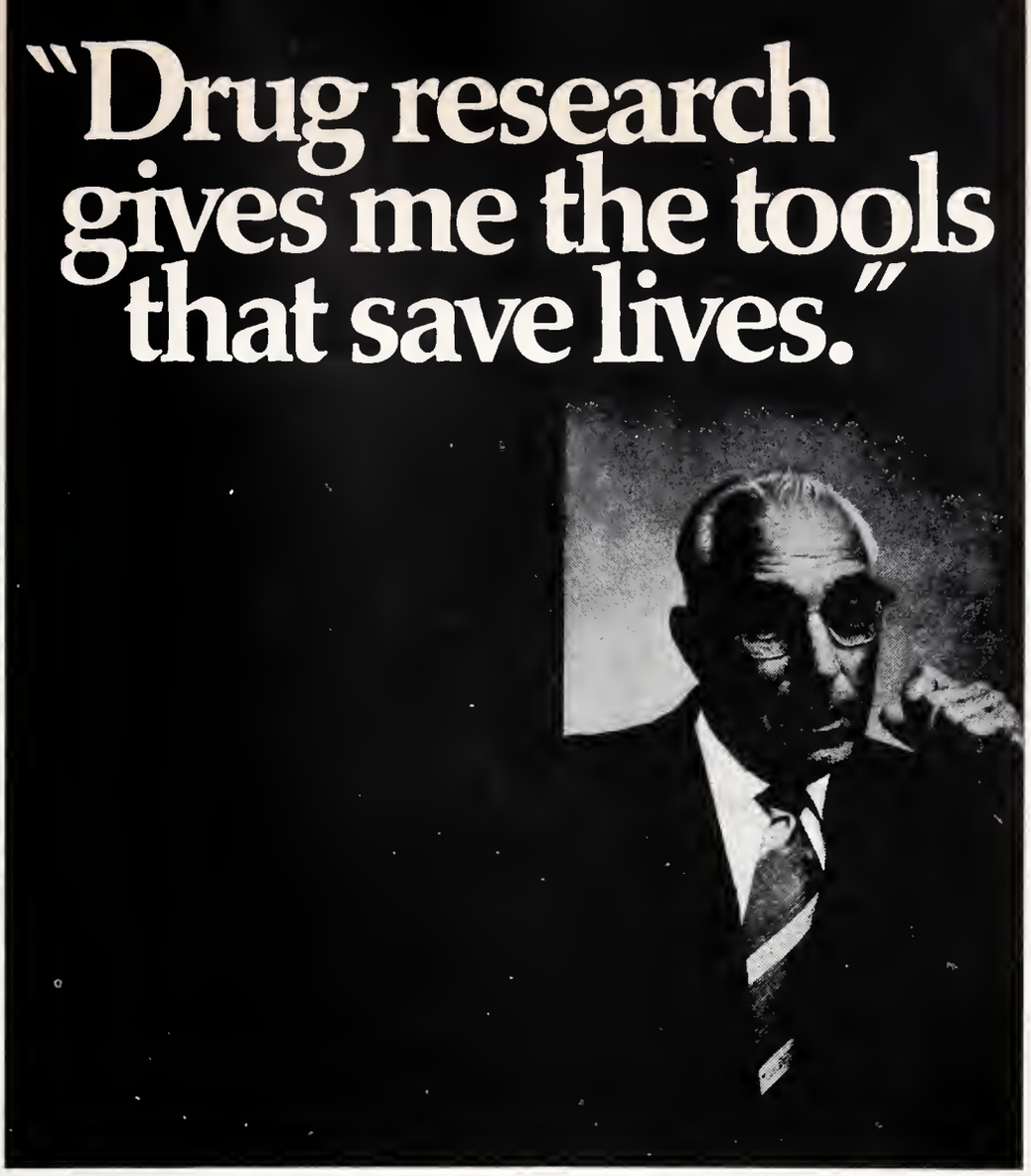
Norris Gilfillan, M.D., F.A.C.S.
Chemotherapy

Tom B. Bond, M.D., F.A.C.R.
Consultant

Jack M. Morgan, M.S., F.A.C.R.
Consultant-Physicist

1550 West Rosedale, Suite 620 Fort Worth 336-2028

"Drug research gives me the tools that save lives."



A family doctor looks at new developments in the pharmaceutical industry. And he speculates on the future.

When I look back at some of my old records, I'm constantly reminded of the changes that have come about in medicine just during the past twenty-five years. Some of the diseases I treated and prayed over in the '40's are found mostly in medical history books now.

Thanks to drug research and development, we've made substantial gains in the control of cardiovascular disease, diabetes, malaria, mental illness, strep and staph infections, meningitis and a long list of ailments. It seems like only yesterday when a diagnosis of pneumonia was almost the kiss of death. Now, with modern medical techniques and drug therapy, we can offer some real help.

My records on polio, influenza and measles show an unbelievable trend for the better. New vaccines have reduced the toll of these age-old threats dramatically. And I see patients in pain from crippling arthritis helped with new medicinals unknown just a few years ago.

I hear questions about the three billion or so dollars spent by the drug industry in research during the past ten years . . . working on new and better drug products. It does seem like quite a bit of money to spend, and I realize some of it goes into dead ends. That's the problem with research, any research . . . you often don't know where you're going until you get there. I want all the tools I can get to help my patients. I want more drugs and more effective drugs. If they mean less pain, longer lives and more productive careers for those I treat . . . well, that's what really counts.

Another point of view . . .
Pharmaceutical Manufacturers Association, 1155 Fifteenth Street, N.W., Washington, D.C. 20005.

This advertisement has been reaching consumers thru THE ATLANTIC, FAMILY HEALTH, HARPER'S MAGAZINE, NEWSWEEK, SATURDAY REVIEW, TIME and U.S. NEWS & WORLD REPORT.

Roche announces

Efudex®

(fluorouracil) cream/solution

for the treatment of solar/actinic keratoses... a topical alternative to conventional therapy

Fluorouracil—the Roche contribution

In 1962, Roche Laboratories introduced Fluorouracil Roche® (5-fluorouracil). Early clinical work with this drug suggested that it possessed a selective cytotoxic activity when applied topically to certain kinds of lesions. Based on this work and years of clinical trials, a standardized form of topical fluorouracil can now be recommended for treatment of multiple solar or actinic keratoses.

Efudex®(fluorouracil)—a new alternative to conventional therapy

Efudex presents the physician with a topical alternative to surgery in the treatment of solar or actinic keratoses. It is effective, comparatively inexpensive and especially well-suited for treatment of multiple lesions. Important, too, is the highly desirable cosmetic result. Clinical experience demonstrates that treatment with Efudex results in an extremely low incidence of scarring.*

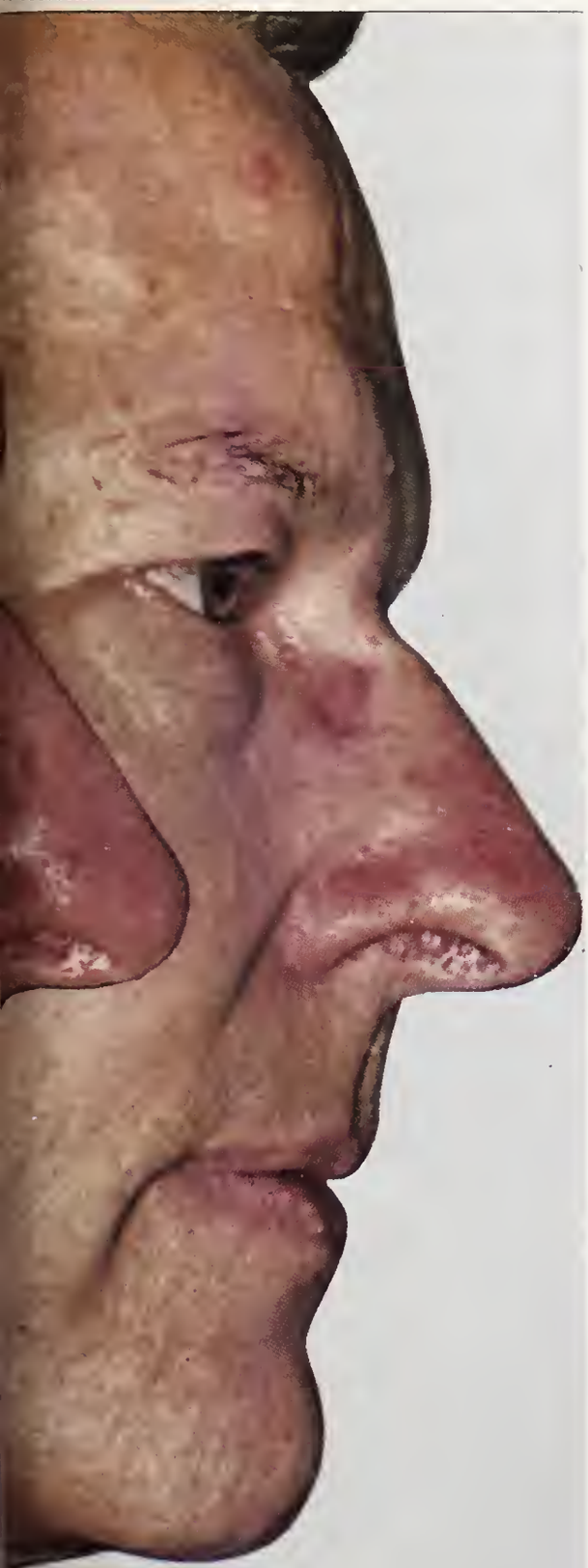
Highly effective on first and later applications

In clinical trials, depending on the dosage form and strength used, complete involution occurred in 77 to 88 per cent of lesions following treatment. The rate of recurrence was low, ranging from 1.7 to 5.6 per cent up to a year after completion of therapy. When lesions did recur or new ones appeared, repeated courses of Efudex therapy proved effective.*

1/22/68—Treatment with 5% 5-FU cream commences. Patient K.L. showing widespread but mild solar keratoses (also known as actinic keratoses).

2/68—After 11 days of treatment. ythema is seen at site of keratoses. In dition, numerous lesions not apparent or to therapy have become manifest sharply defined reactions. Intervening in, also treated, shows no response to erapy.

19/69—One year after cessation of erapy. Skin appears clear with no evi- nce of scarring. Examination reveals k of recurrence or the formation of w lesions.



Predictable sequence of therapeutic response

Two to four weeks constitutes a typical course of Efudex therapy. The response is usually characteristic and predictable. After three or four days of treatment, erythema begins to appear in the area of the keratoses. This is followed by an intense inflammatory response, scaling and occasionally moderate tenderness or pain. The height of the inflammatory reaction generally occurs two weeks after the start of therapy, and then begins to subside as treatment is stopped. Within two weeks of discontinuing medication, the inflammation is usually gone. A mild erythema may remain for two to three months before gradually receding.

Selective—with a high degree of safety

Despite the temporary unsightliness and discomfort of the inflammatory episode, Efudex is, in general, more readily tolerated than surgery. Clinical work shows the intense inflammatory response to be limited to the area of the lesion. Normal skin is not similarly affected. Another measure of Efudex safety: systemic absorption of topical fluorouracil was insignificant, indicating a low risk of systemic toxicity.*

Two strengths—two convenient dosage forms

Efudex is available as a 2% or 5% solution or as a 5% cream. It is applied twice daily by the patient with a nonmetal applicator or suitable glove.

Before prescribing Efudex, however, there are two important considerations. First, please consult the complete prescribing information for precautions, warnings and adverse reactions. Second, advise the patient that treated lesions should respond with the characteristic but transient inflammation. A positive sign that Efudex is working for them.

*Data on file, Hoffmann-La Roche Inc., Nutley, New Jersey.

2% and 5% Solutions; 5% Cream Applied twice daily—resolves solar or actinic keratoses.

new Efudex® (fluorouracil) cream/solution

For full prescribing information, please see the following page.

Roche introduces

Efudex®

(fluorouracil) cream/solution the new standardized topical for solar/actinic keratoses

Description: Efudex solutions and cream are topical preparations containing the fluorinated pyrimidine 5-fluorouracil, an antineoplastic antimetabolite.

Efudex Solution consists of 2% or 5% fluorouracil on a weight/weight basis, compounded with propylene glycol, tris-(hydroxymethyl) aminomethane, hydroxypropyl cellulose, parabens (methyl and propyl) and disodium edetate.

Efudex Cream contains 5% fluorouracil in a vanishing cream base consisting of white petrolatum, stearyl alcohol, propylene glycol, polysorbate 60 and parabens (methyl and propyl).

Actions: There is evidence that the metabolism of fluorouracil in the anabolic pathway blocks the methylation reaction of deoxyuridylic acid to thymidylic acid. In this fashion fluorouracil interferes with the synthesis of deoxyribonucleic acid (DNA) and to a lesser extent inhibits the formation of ribonucleic acid (RNA). Since DNA and RNA are essential for cell division and growth, the effect of fluorouracil may be to create a thymine deficiency which provokes unbalanced growth and death of the cell. The effects of DNA and RNA deprivation are most marked on those cells which grow more rapidly and which take up fluorouracil at a more rapid pace. The catabolic metabolism of fluorouracil results in degradative products (*e.g.*, CO_2, urea, α-fluoro-β-alanine) which are inactive.

Studies in man with topical application of ^{14}C-labeled Efudex demonstrated insignificant absorption as measured by ^{14}C content of plasma, urine and respiratory CO_2.

Indications: Efudex is recommended for the topical treatment of multiple actinic or solar keratoses.

Contraindications: Efudex is contraindicated in patients with known hypersensitivity to any of its components.

Warnings: If an occlusive dressing is used, there may be an increase in the incidence of inflammatory reactions in the adjacent normal skin.

Prolonged exposure to ultraviolet rays should be avoided while under treatment with Efudex because the intensity of the reaction may be increased.

Usage in Pregnancy: Safety for use in pregnancy has not been established.

Precautions: If Efudex is applied with the fingers, the hands should be washed immediately afterward. Efudex should be applied with care near the eyes, nose and mouth. To rule out the presence of a frank neoplasm, a biopsy should be made of those areas failing to respond to treatment or recurring after treatment.

Adverse Reactions: The most frequently encountered local reactions were pain, pruritus, hyperpigmentation and burning at the site of application. Other local reactions included dermatitis, scarring, soreness and tenderness.

Also reported were insomnia, stomatitis, suppuration, scaling, swelling, irritability, medicinal taste, photosensitivity and lacrimation.

Laboratory abnormalities reported were leukocytosis, thrombocytopenia, toxic granulation and eosinophilia.

Dosage and Administration: Efudex should be applied twice daily with a nonmetal applicator or suitable glove in an amount of the solution or cream sufficient to cover the lesion. When Efudex is applied to a lesion, a response occurs with the following sequence: erythema, usually followed by vesiculation, erosion, ulceration, necrosis and epithelization. The lower frequency and intensity of activity in adjacent normal skin indicate a selective cytotoxic property. Medication should be continued until the inflammatory reaction reaches the erosion, necrosis and ulceration stage, at which time use of the drug should be terminated. The usual duration of therapy is from 2 to 4 weeks. Complete healing of the lesion may not be evident for 1 to 2 months following cessation of Efudex therapy.

How Supplied: Efudex Solution, 10-ml drop dispensers—containing 2% or 5% fluorouracil on a weight/weight basis, compounded with propylene glycol, tris(hydroxymethyl)aminomethane, hydroxypropyl cellulose, parabens (methyl and propyl) and disodium edetate.

Efudex Cream, 25-Gm tubes—containing 5% fluorouracil in a vanishing cream base consisting of white petrolatum, stearyl alcohol, propylene glycol, polysorbate 60 and parabens (methyl and propyl).

Clinical Studies: The effectiveness of the three preparations as determined by complete involution of solar keratoses was: 2% Solution, 77% of 282 lesions; 5% Solution, 88% of 202 lesions; and 5% Cream, 85% of 189 lesions. In those lesions where complete involution followed treatment, the rate of possible recurrences observed clinically at periods up to 12 months or more was: 2% Solution, 4.6% of 218 lesions; 5% Solution, 1.7% of 177 lesions; and 5% Cream, 5.6% of 160 lesions. Because of the toxic potential of fluorouracil, some physicians preferred to use the 2% solution when large areas were to be treated. Approximately 30% of the lesions required treatment for two weeks or less; approximately 78% required four weeks or less for adequate treatment.

ROCHE Roche LABORATORIES
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

Physicians, Administrators Need Each Other

In San Antonio there are two groups of students across town from one another seeking graduate degrees in professions that parallel each other—medicine and hospital administration—at The University of Texas Medical School and the School of Hospital Administration at Trinity University. Until recently, neither group knew much of the other, yet during their entire professional lives they must work together.

When he discovered this, Dr. Jack B. Lee, past president of the Bexar County Medical Society, started what we hope will be an annual event: getting the senior medical students and the hospital administration students together for an evening of fellowship, food, and discussion in which both groups showed exceptional interest and training.

In recent years, the educational institutions offering postgraduate degrees in hospital administration, or "health care" administrative fields, have increased from 7 to 21 schools. These students receive one year of classroom and forum discussions and serve one year of an administrative residency. During these two years, they must write a thesis for their master's degree. From these graduates, we physicians expect excellent administrators for our hospitals. The administrator must work for a hospital governing board and interpret the meaning of its programs and policies, hire and fire a hospital staff, purchase supplies and equipment, and project the proper image of that hospital to the public. He must understand that the medical staff is made up of the only people who can admit patients to the hospital, write orders on charts, and dismiss patients from the hospital. He must *not* consider physicians only as "necessary evils" nor try, in any way, to invade the duties and responsibilities of that medical staff.

On the other hand, the administrator expects the medical staff to provide the finest medical care possible to the patients in the hospital, direct the hospital nursing service and other departments, and keep adequate and complete records. The administrator must also make it possible for physicians to perform their own peer review of record, tissue, surgical, medical, utilization, and any other necessary committees. Truly, a hospital administrator must perform in extremely sensitive areas.

It is my hope that from time to time, preferably on a regular annual basis, medical staffs will express their appreciation to the administrators by publicly honoring or encouraging them. I hope, too, that county medical societies will express open thanks to these administrators, inviting them to a meeting of interest to them.

After all, we all want the same thing: the finest medical and hospital care possible for the people of Texas. Together with our administrators, we can accomplish this.

Walter Walthall, M.D.

Walter Walthall, MD, President, Texas Medical Association.

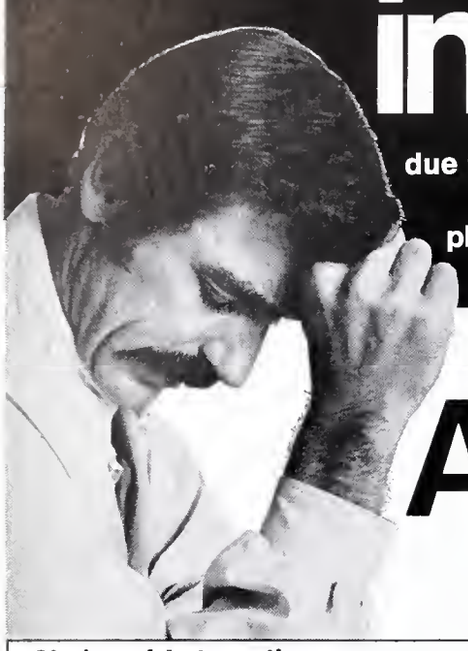
The treatment of

impotence

due to androgenic deficiency in the American male. The concept of chemotherapy plus the physician's psychological support is confirmed as effective therapy.

NEW CLINICAL STUDY

The Treatment of Impotence with Methyltestosterone Thyroid (100 patients—Double Blind Study) T. Jakobovits Fertility and Sterility, January 1970 Official Journal of the American Fertility Society



Android®

(thyroid-androgen) tablets

Double-Blind Study and Type of Patient:

100 patients suffering from impotence. Of the patients receiving the active medication (Android) a favourable response was seen in 78%. This compares with 40% on placebo. Although psychotherapy is indicated in patients suffering from functional impotence the concomitant role of chemotherapy (Android) cannot be disputed.

Choice of 4 strengths:

Android

Each yellow tablet contains:
Methyl Testosterone ..2.5 mg.
Thyroid Ext. (1/6 gr.) ..10 mg.
Glutamic Acid .....50 mg.
Thiamine HCL .....10 mg.
Dose: 1 tablet 3 times daily.
Available:
Bottles of 100, 500, 1000.

REFER TO PDR

Android-HP
HIGH POTENCY

Each red tablet contains:
Methyl Testosterone ..5.0 mg.
Thyroid Ext. (½ gr.) ...30 mg.
Glutamic Acid .....50 mg.
Thiamine HCL .....10 mg.
Dose: 1 tablet 3 times daily.
Available:
Bottles of 100, 500, 1000.

Android-X
EXTRA HIGH POTENCY

Each orange tablet contains:
Methyl Testosterone .12.5 mg.
Thyroid Ext. (1 gr.) ....64 mg.
Glutamic Acid .....50 mg.
Thiamine HCL .....10 mg.
Dose: 1 or 2 tablets daily.
Available:
Bottles of 60, 500.

Android-Plus
WITH HIGH POTENCY B-COMPLEX AND VITAMIN C

Each white tablet contains:
Methyl Testosterone ..2.5 mg.
Thyroid Ext. (¼ gr.) ...15 mg.
Ascorbic Acid (Vit. C) .250 mg.
Thiamine HCL .....25 mg.
Glutamic Acid .....100 mg.
Pyridoxine HCL .....5 mg.
Niacinamide .....75 mg.
Calcium Pantothenate .10 mg.
Vitamin B-12 .....2.5 mcg.
Riboflavin .....5 mg.
Dose: 2 tablets daily.
Available: Bottles of 60, 500.

Contraindications: Android is contraindicated in patients with prostatic carcinoma, severe cardiorenal disease and severe persistent hypercalcemia, coronary heart disease and hyperthyroidism. Occasional cases of jaundice with plugging biliary canaliculi have occurred with average doses of Methyl Testosterone. Thyroid is not to be used in heart disease and hypertension.

Warnings: Large dosages may cause anorexia, nausea, vomiting abdominal pain, diarrhea, headache, dizziness, lethargy, paresthesia, skin eruptions, loss of libido in males, dysuria, edema, congestive heart failure and mammary carcinoma in males.

Precautions: If hypothyroidism is accompanied by adrenal insufficiency the latter must be corrected prior to and during thyroid administration.

Adverse Reactions: Since Androgens, in general, tend to promote retention of sodium and water, patients receiving Methyl Testosterone, in particular elderly patients, should be observed for edema.

Hypercalcemia may occur, particularly in immobilized patients: use of Testosterone should be discontinued as soon as hypercalcemia is detected.

References: 1. **Montesano, P., and Evangelista, I.** Methyltestosterone-thyroid treatment of sexual impotence. Clin Med 12:69, 1966. 2. **Dublin, M. F.** Treatment of impotence with methyltestosterone-thyroid compound. West Med 5:67, 1964. 3. **Titeff, A. S.** Methyltestosterone-thyroid in treating impotence. Gen Prac 25:6, 1962. 4. **Hellman, L., Bradlow, H. L., Zumoff, B., Fukushima, D. K., and Gallagher, T. F.** Thyroid-androgen interrelations and the hypocholesteremic effect of androsterone. J Clin Endocr 19:936, 1959. 5. **Farris, E. J., and Colton, S. W.** Effects of L-thyroxine and liothyronine on spermatogenesis. J Urol 79:863, 1958. 6. **Osol, A., and Farrar, G. E.** United States Dispensatory (ed. 25). Lippincott, Philadelphia, 1955, p. 1432. 7. **Wershub, L. P.** Sexual Impotence in the Male. Thomas, Springfield, Ill., 1959, pp. 79-99.

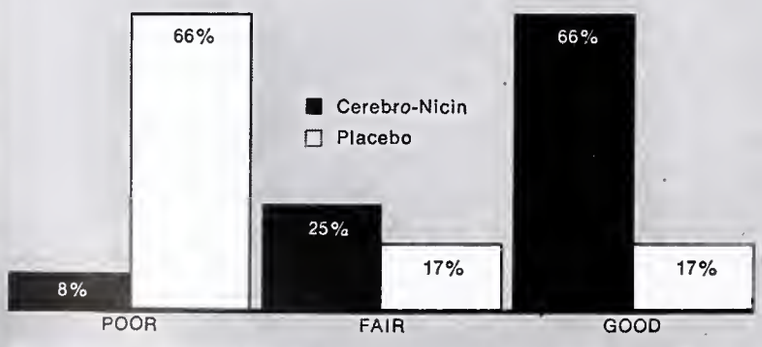
Write for literature and samples: BROWN **THE BROWN PHARMACEUTICAL CO., INC.** 2500 West 6th Street, Los Angeles, California 90057

For the treatment of the aging patient

Cerebro-Nicin®

capsules/elixir

A Gentle Cerebral Stimulant and Vasodilator



CEREBRO-NICIN® New double-blind study* shows how effectively senility can be forestalled. Four times as many aging patients showed striking improvement.

*A Double-Blind Study of Cerebro-Nicin, Therapy for the Geriatric Patient, R. Goldberg Jrnl,. of the Amer. Ger. Soc. June, 1964

Available in a tasty wine base elixir and capsules

Each Cerebro-Nicin capsule contains:

Pentylenetetrazole	100 mg.
Nicotinic Acid	100 mg.
Ascorbic Acid	100 mg.
Thiamine HCl	25 mg.
l-Glutamic Acid	50 mg.
Niacinamide	5 mg.
Riboflavin	2 mg.
Pyridoxine	3 mg.

DOSAGE: One capsule t.i.d. or as prescribed by physician.
AVAILABLE: Bottles of 100, 500, 1000 capsules.
Also elixir 8 oz. bottles.
CONTRAINDICATIONS: There are no known contraindications to Pentylenetetrazole although caution should be exercised when treating patients with a low convulsive threshold.
Most persons experience a flushing or tingling sensation after taking a higher potency niacin-containing compound. As a secondary reaction some will complain of nausea and other sensations of discomfort. This reaction is transient and is rarely a cause of discontinuance of the drug if the patient is forewarned to expect the reaction.

REFER TO PDR

Write for literature and samples...

BROWN **THE BROWN PHARMACEUTICAL CO.**
2500 W. 6th St., Los Angeles, Calif. 90057
Write for Product Catalog

What Texas doctors need, is a Malpractice Liability Carrier that won't fade when trouble comes.

This means the up-to-date carrier. The one that's replete with innovations and new developments in this clouded, sensitive area of liability protection. And the one that doesn't talk malpractice coverage just to get a foot in the door for every other kind of insurance. We don't write other kinds of insurance.

What Texas doctors need, is Casualty Indemnity Exchange, the carrier that pioneered the modern approach to malpractice coverage, and *the* carrier geared to STAY in the market.

Contact your local agent or
RUSSELL GRACE INSURANCE
2304 W. 7th St.
Ft. Worth, Texas 76107
(817) 332-9269
In Dallas, Call
(214) 264-4300

SECURITY SINCE 1912
CASUALTY INDEMNITY EXCHANGE
754 Insurance Exchange Building • Denver, Colorado 80202 • (303) 825-0161

IS YOUR ANGINA PATIENT GETTING THE PROTECTION HE NEEDS?
Now you can schedule round-the-clock protection against angina attacks
ISORDIL®
(isosorbide dinitrate)
For prescribing information, please see facing page.

ISORDIL®
(isosorbide dinitrate)

He's 55 years old. All his life his job has been protecting others. When angina struck two years ago he was a city policeman. Semi-retired, he is now a night watchman. He worries a lot... about the future, about making ends meet, and especially about his angina.

When an acute attack occurs, ISORDIL SUBLINGUAL acts almost as quickly as nitroglycerin—yet lasts for hours. The oral forms of ISORDIL taken routinely reduce the chances of an acute attack. The prolonged action of ISORDIL TEMBIDS® often provides a full night's protection.

With ISORDIL therapy, there is often a significant reduction in the number, duration, and severity of angina attacks. ISORDIL is available in the six following formulations to meet the needs of most angina patients and allow full 24-hour protection:

ISORDIL SUBLINGUAL (2.5-mg. and 5-mg. tablets) for treatment of acute attacks or prophylaxis. ISORDIL 10 mg. (scored, oral tablets) or ISORDIL TEMBIDS (40-mg. sustained action tablets) for basic prophylactic treatment of angina pectoris.

ISORDIL ORAL 5 mg. (scored, oral tablets) to facilitate small adjustments in dosage.

ISORDIL with PHENOBARBITAL (10 mg. isosorbide dinitrate and 15 mg. [¼ gr.] phenobarbital, U.S.P., [*Warning:* Phenobarbital may be habit forming]) when anxiety or emotional disturbances are important factors in the clinical picture.

ISORDIL® (isosorbide dinitrate)

Indications: *Sublingual*—for prevention and treatment of angina pectoris. *Oral*—for relief of angina pectoris (pain of coronary artery disease); the oral dosage forms are not intended to abort the acute anginal episode, but are widely regarded as useful in the prophylactic treatment of angina pectoris.

Contraindication: Idiosyncrasy to this drug.

Warning: Data supporting the use of nitrites during the early days of the acute phase of myocardial infarction (the period during which clinical and laboratory findings are unstable) are insufficient to establish safety.

Precautions: Intraocular pressure is increased; therefore, caution is required in administering to patients with glaucoma. Tolerance to this drug and cross-tolerance to other nitrites and nitrates may occur. In patients with functional or organic gastrointestinal hypermotility or malabsorption syndrome, it is suggested that either the ISORDIL ORAL 5 mg. or ISORDIL 10 mg. oral tablet or ISORDIL SUBLINGUAL be the preferred therapy. The reason for this is that a few patients have reported passing partially dissolved ISORDIL TEMBIDS in their stools. This phenomenon is believed to be on the basis of physiologic variability and to reflect rapid gastrointestinal transit of the sustained action tablet. *ISORDIL TEMBIDS should not be chewed.*

Adverse Reactions: Cutaneous vasodilation with flushing. Headache is common and may be severe and persistent. Transient episodes of dizziness and weakness as well as other signs of cerebral ischemia associated with postural hypotension may occasionally develop. This drug can act as a physiological antagonist to norepinephrine, acetylcholine, histamine, and many other agents. An occasional individual exhibits marked sensitivity to the hypotensive effects of nitrite, and severe responses (nausea, vomiting, weakness, restlessness, pallor, perspiration and collapse) can occur even with the usual therapeutic dose. Alcohol may enhance this effect. Drug rash and/or exfoliative dermatitis may occasionally occur.

Consult direction circular before prescribing.

May we send you reprints, detailed information and/or professional samples?

TEMBIDS®—TRADEMARK FOR SUSTAINED ACTION TABLETS

IVES LABORATORIES INC.
685 Third Avenue, New York, N Y 10017

MAKERS OF ISORDIL, THE ORIGINAL ISOSORBIDE DINITRATE

Ef-
fic-
iency

Dicarbosil®
ANTACID

Your ulcer patients and others will confirm it. Specify DICARBOSIL 144's—144 tablets in 12 rolls.

ARCH LABORATORIES
319 South Fourth Street, St. Louis, Missouri 63102

T. ROWE PRICE GROWTH STOCK FUND, INC.

Est. 1950

A NO-LOAD FUND

Investing in stocks selected for long term growth possibilities

Individuals & institutions are invited to request free prospectus

NO SALES CHARGE

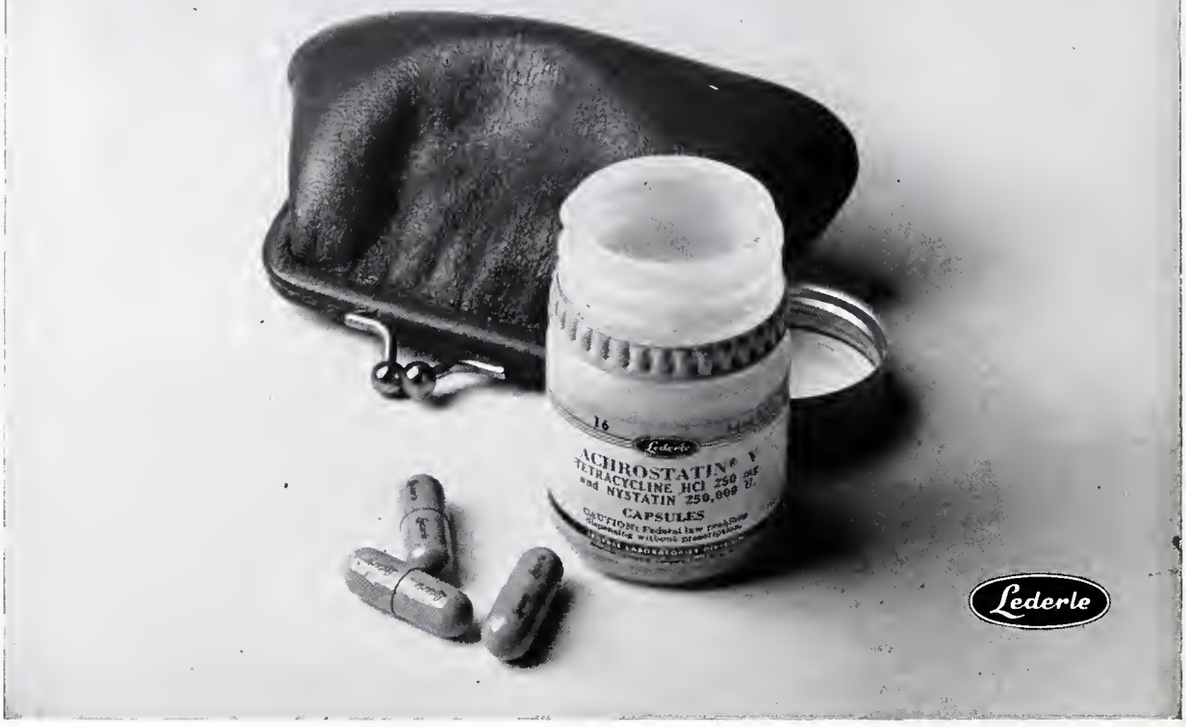
T. Rowe Price Growth Stock Fund, Inc.
One Charles Center, Dept. F-1
Baltimore, Md. 21201 Phone (301) 539-1992

Name _____

Address _____

_____ Zip _____

—The lowest priced tetracycline—nystatin combination available—



Serving Texas Physicians for Over Forty Years

Precision-engineered, functionally-built equipment

SMR keeps you and your patients' comfort and satisfaction in mind . . . a room that reflects professional good taste.

SMR has manufactured medical and Dental equipment for over forty years on a direct to user basis.

STAINLESS STEEL POLISH

SMR Stainless Steel Polish cleans, and preserves with superior results —ends fingerprints, watermerks and surfece stains. 22 oz. economy $2.75 F.O.B. Plant

Factory Direct Sales

NEW CATALOG NOW AVAILABLE

SMR

SURGICAL MECHANICAL RESEARCH, INC.

Post Office Box 1185 • (714) 646-4405

960 W. 16th St., Newport Beach, Calif. 92663

Established Over 40 Years

Please visit our TMA Booth No. 73, Houston, May 6-8, 1971.

When disease is ruled out and psychic tension is implicated

Valium® (diazepam) helps relax the patient and relieve his somatic symptoms

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Tension and anxiety states; somatic complaints which are concomitants of emotional factors; psychoneurotic states manifested by tension, anxiety, apprehension, fatigue, depressive symptoms or agitation; acute agitation, tremor, delirium tremens and hallucinosis due to acute alcohol withdrawal; adjunctively in skeletal muscle spasm due to reflex spasm to local pathology, spasticity caused by upper motor neuron disorders, athetosis, stiff-man syndrome, convulsive disorders (not for sole therapy).

Contraindicated: Known hypersensitivity to the drug. Children under 6 months of age. Acute narrow angle glaucoma.

Warnings: Not of value in psychotic patients. Caution against hazardous occupations requiring complete mental alertness. When used adjunctively in convulsive disorders, possibility of increase in frequency and/or severity of grand mal seizures may require increased dosage of standard anticonvulsant medication; abrupt withdrawal may be associated with temporary increase in frequency and/or severity of seizures. Advise against simultaneous ingestion of alcohol and other CNS depressants. Withdrawal symptoms have occurred following abrupt discontinuance. Keep addiction-prone individuals under careful surveillance because of their predisposition to habituation and dependence. In pregnancy, lactation or women of childbearing age, weigh potential benefit against possible hazard.

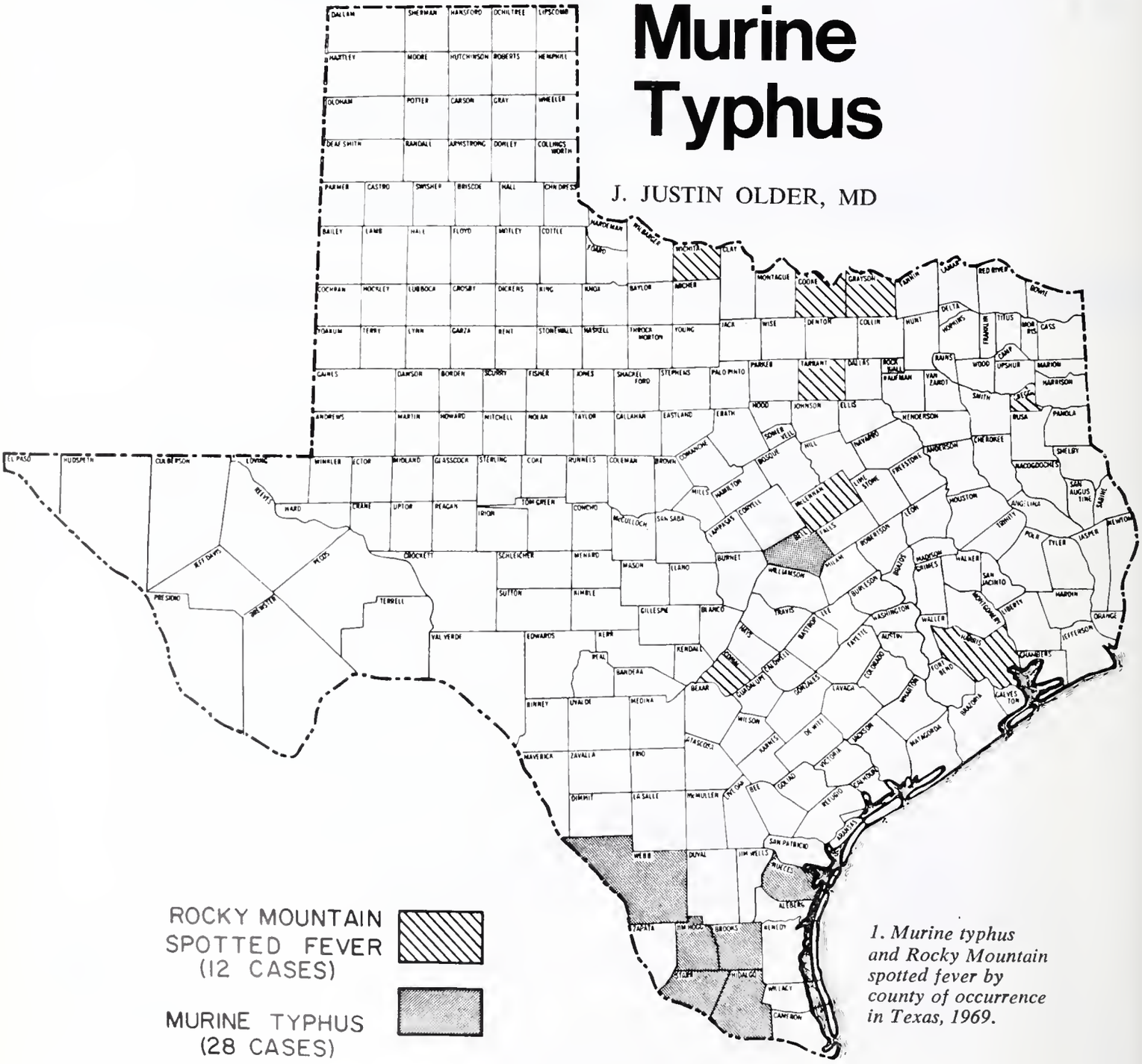
Precautions: If combined with other psychotropics or anticonvulsants, consider carefully pharmacology of agents employed. Usual precautions indicated in patients severely depressed, or with latent depression, or with suicidal tendencies. Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.

Side Effects: Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances, stimulation, have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice; periodic blood counts and liver function tests advisable during long-term therapy.

ROCHE
Roche
LABORATORIES
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

Epidemiology of Rocky Mountain Spotted Fever and Murine Typhus

J. JUSTIN OLDER, MD



1. Murine typhus and Rocky Mountain spotted fever by county of occurrence in Texas, 1969.

Rocky Mountain spotted fever and murine typhus closely resemble each other, but geographical location can assist in differentiating them. Since both may present as influenza, use of the Weil-Felix test is a good screening method, but correct laboratory confirmation must be done by the complement fixation test. The tetracyclines are excellent drugs for both diseases. Rocky Mountain spotted fever is probably transmitted to man by ticks. Murine typhus may be transmitted to man by rat fleas or cat fleas. The importance of the cat flea as a vector is that upper and middle class people, as well as those in lower socioeconomic groups, may be victims of this illness.

ROCKY MOUNTAIN spotted fever, also called spotted fever, is an infectious disease caused by the organism *Rickettsia rickettsii* which is spread by ticks to man. The illness was first recognized in the Rocky Mountain region of Montana in 1873, but has occurred in most of our states and in Mexico and Canada.

Murine typhus, a febrile illness resembling epidemic typhus and named to emphasize rats as the reservoir, results from the transmission of *R mooseri* by fleas to man. It was first recognized in the southern United States in 1926.[1] The number of reported cases of typhus increased steadily during the 1930s and until 1944, when 5,401 cases were reported for the entire United States.[2] In 1945, control of rat fleas with DDT was begun and the incidence of murine typhus in the United States showed a steady decline. Of the 49 cases of murine typhus reported to the National Communicable Disease Center in 1969,[3] more than half (28) occurred in Texas. In contrast, only 12 (2.7%) of the nation's 450 cases of Rocky Mountain spotted fever reported in 1969[3] were in Texas.

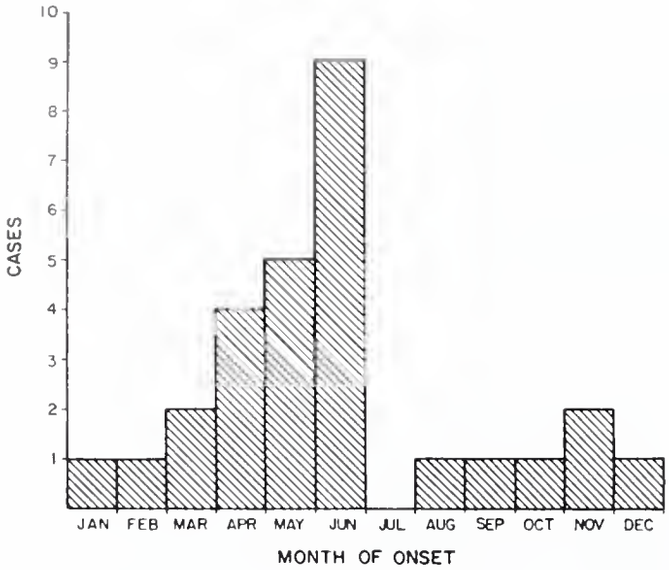
These diseases cause confusion when they appear: not only do they often resemble influenza-like illnesses, but they are difficult to distinguish from one another. Certain clinical and epidemiological data are useful in distinguishing these two diseases.

Rocky Mountain spotted fever and murine typhus appear to occur in well-defined areas in Texas. The county map in Fig 1 shows that in 1969, Rocky Mountain spotted fever occurred in the northeast part of the state, and murine typhus was found in the south. This has been the general picture for the past several years. When one of these diseases is suspected, knowing the area in which it occurs should be valuable information in arriving at a correct diagnosis.

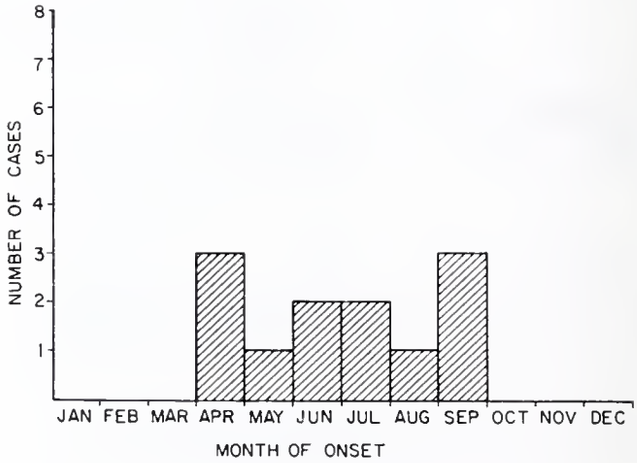
Although murine typhus has been described as a disease of late summer and fall, the recent experience in Texas shows that the peak incidence occurs in spring and early summer. The epidemic curve for 1969 (Fig 2) shows that the onset for most cases was in April, May, and June. In 1967 and 1968, the majority of cases also occurred in the spring. A seasonal increase in the flea population may be responsible for the predominance of cases at this time of year.

Rocky Mountain spotted fever is also described as a disease of late summer and fall, but the 12 Texas cases in 1969 were evenly distributed from April through September (Fig 3). This may reflect the opportunity for human contact with ticks.

The age and sex distribution for murine typhus (Fig 4) reflects a predominance of adult females. A similar graph for Rocky Mountain spotted fever (Fig 5) shows that the adults are males rather than females. This difference may be because adult women were at home where they received flea bites, whereas adult men who contracted Rocky Mountain spotted fever probably had increased opportunity for contact



2. Murine typhus cases by month of onset, Texas 1969.



3. Rocky Mountain spotted fever cases by month of onset, Texas 1969.

with ticks in the fields. Children spent time in the field, as well as at home.

A major reason for discussing murine typhus and Rocky Mountain spotted fever together is that they often present difficulties in differential diagnosis between themselves and other influenza-like illnesses. Most of the cases of murine typhus and some cases of Rocky Mountain spotted fever were initially misdiagnosed as influenza, but the appearance of a rash or a battery of laboratory tests usually suggested the correct diagnosis.

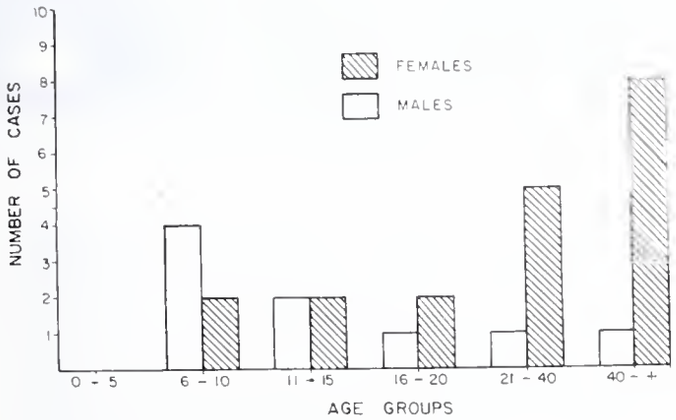
Symptoms common to both of these infections are: fever above 102 F, chills, headache, myalgia, weakness, fatigue, anorexia, nausea, and sometimes vomiting. Rash is common in Rocky Mountain spotted fever, but seen only occasionally in murine typhus. The exanthem in Rocky Mountain spotted fever begins on the extremities, spreads centripetally to the trunk, and is often prominent. In contrast, the rash in murine typhus is mild, difficult to see in people with darker skins, and spreads centrifugally from the trunk to the extremities (if it spreads at all).

Laboratory confirmation of a diagnosis of either of these diseases is best accomplished using the complement fixation test. With the Weil-Felix test, a high titer to *Proteus* OX19 antigen is obtained with either murine typhus or Rocky Mountain spotted fever. The latter test can therefore screen for these diseases, but cannot distinguish between them.

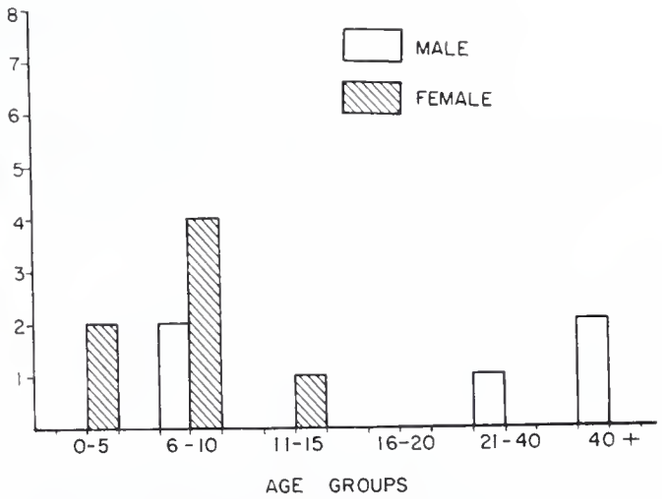
In 1969, 11 of Texas' 12 cases of Rocky Mountain spotted fever were cured with tetracycline, and one patient improved after a course of chloramphenicol. Tetracycline proved beneficial in 21 cases of murine typhus and erythromycin proved efficacious for one patient; one improved after a course of sulfamethoxazole, one with ampicillin, and three with chloramphenicol. One recovered without antibiotics.

The cases of Rocky Mountain spotted fever which occurred in 1969 verify the accepted method of transmission for this disease; ie, patients gave a history of tick bites or of having been in fields or woods at the appropriate time. It can be presumed that ticks, which are usually the reservoir for this illness, transmitted the rickettsiae to humans.

Our investigations of the murine typhus cases yielded information suggesting an unusual method of transmission of the illness. Historically, the domestic rat has been considered the reservoir for *R mooseri*. People living in rat-infested areas would contract typhus



4. Murine typhus patients by age and sex, Texas 1969.



5. Rocky Mountain spotted fever patients by age and sex, Texas 1969.

from a rat flea. In our study, cat fleas were probably the vectors in many cases which occurred among middle and upper class people.

The following case history illustrates this cycle:

An 18-year-old girl and her 13-year-old sister, living in Cameron County, became ill with fever, chills, myalgia, nausea, and dry cough on April 22, 1969. Two weeks before, these girls had received an apparently healthy kitten from a friend who lived several blocks away. While the girls were taking fleas off the kitten, fleas bit them on their arms and hands. The mother cat, which stayed outdoors at the friend's house, was said to be flea-ridden and mangy-looking. Field rats had been known to frequent this area, but none had been seen since several months before the birth of the kitten. According to the family who owned the mother cat, grass fleas had been abundant for several weeks before the kitten was born. About five months after the birth of the kitten, a flea recovered from the mother cat was identified as *Ctenocephalides felis,* but was insufficient for injection into a guinea pig for diagnosis of the presence of rickettsiae. At the time of the investigation, there were no fleas on the kitten. Blood from the mother cat was negative in the complement fixation test for typhus. No blood was taken from the kitten.

Only two case histories suggested transmission from rat fleas to man, but six suggested transmission from cat fleas to man.

REFERENCES

1. Maxcy KF: An epidemiological study of endemic typhus (Brill's disease) with special reference to its mode of transmission in the Southeastern United States. Public Health Rep 41:2967-2995, 1926.

2. Pratt HD: The changing picture of murine typhus in the United States. Ann NY Acad Sci 70:516-527, 1958.

3. National Communicable Disease Center, Morbidity and Mortality Weekly Report 18:457 (Jan 3) 1970.

4. Irons JV, Bohls SW, Thurman DC Jr, et al: Probable role of the cat flea, *Ctenocephalides felis,* in transmission of murine typhus. Amer J Trop Med 24:359-362, 1944.

5. Randolph RM, Ogden LJ, Eads RB: Entomological studies on typhus in Lavaca County, Texas. Tex Rep Biol Med 6:444-452, 1948.

Dr. Older, Stanford University School of Medicine, Stanford, Calif 94305.

WILLIAM D. DAVIS, JR, MD

The problem of Chronic

It is helpful to have a classification for hepatitis, but one still encounters individual cases which present elements of each group, or may change from one category to another. While we do not fully understand the etiology and perpetuation of chronic active hepatitis and while our therapeutic tools are as yet blunt and unsure, still a universally pessimistic attitude is not warranted. In many instances, clinical arrest or remission, if not cure, of the disease is possible.

CHRONIC HEPATITIS is a name which has been applied to a wide variety of clinical liver diseases.[1,2] Whatever name they have given this condition, all investigators have shared Mackay's[3] opinion of its uniformly grim prospect. Some attempt at cataloging is helpful in appreciating the nature of the various conditions discussed, and a useful classification based on biopsy changes has been proposed by a study committee of the European Association for the Study of the Liver.[4] This includes the following:

1. Chronic persistent hepatitis is characterized by chronic inflammatory infiltration, limited mostly to the portal spaces, preservation of the lobular architecture with little or no fibrosis, and little piecemeal necrosis. This group follows a usually benign course and carries a good prognosis.

2. Chronic aggressive hepatitis presents a chronic inflammatory infiltrate involving the portal tracts also, but it extends into the lobules and is associated with increased piecemeal necrosis and stroma collapse. There is formation of intralobular septa with disturbance of the lobular architecture, but no nodular regeneration. Activity, as reflected by necrosis and inflammation, varies from moderate to severe. Progression to cirrhosis occurs and prognosis is not necessarily good. Features of active hepatitis may be superimposed upon either of these first two groups.

3. Active chronic hepatitis, or lupoid hepatitis, is a term restricted to a clinical syndrome often associated with florid, active, chronic, aggressive hepatitis, exhibiting frequent disruption of the lobular architecture, numerous plasma cells in the cellular infiltrates, and swelling of the liver parenchymal cells with arrangement in gland-like formation or rosettes, surrounded by condensing or collapsing stroma. None of these changes, however, are specific for active chronic hepatitis. Clinical manifestations of skin rash, pleural, pulmonary, cardiac, colon, joint, and thyroid inflammatory processes with hemolytic anemia, positive LE preparations, and positive antinuclear factor preparations are common. Whether this represents fundamentally a different process than chronic aggressive hepatitis or simply reflects increased severity of the disease is uncertain. Incidence of these conditions is unknown because of varying criteria for the diagnosis used in different reports, but certainly they are not infrequent.

Viral hepatitis is the suggested etiology in approximately 25% of cases,[5] but other toxins, including aflatoxin and a number of drugs, have been mentioned. The possibility exists that a wide variety of agents capable of producing hepatic damage can, under the proper circumstances, induce a chronic, active disease process.

Perpetuating factors supporting continuing activity are uncertain. Persisting viral presence is suggested by instances of apparent chronic

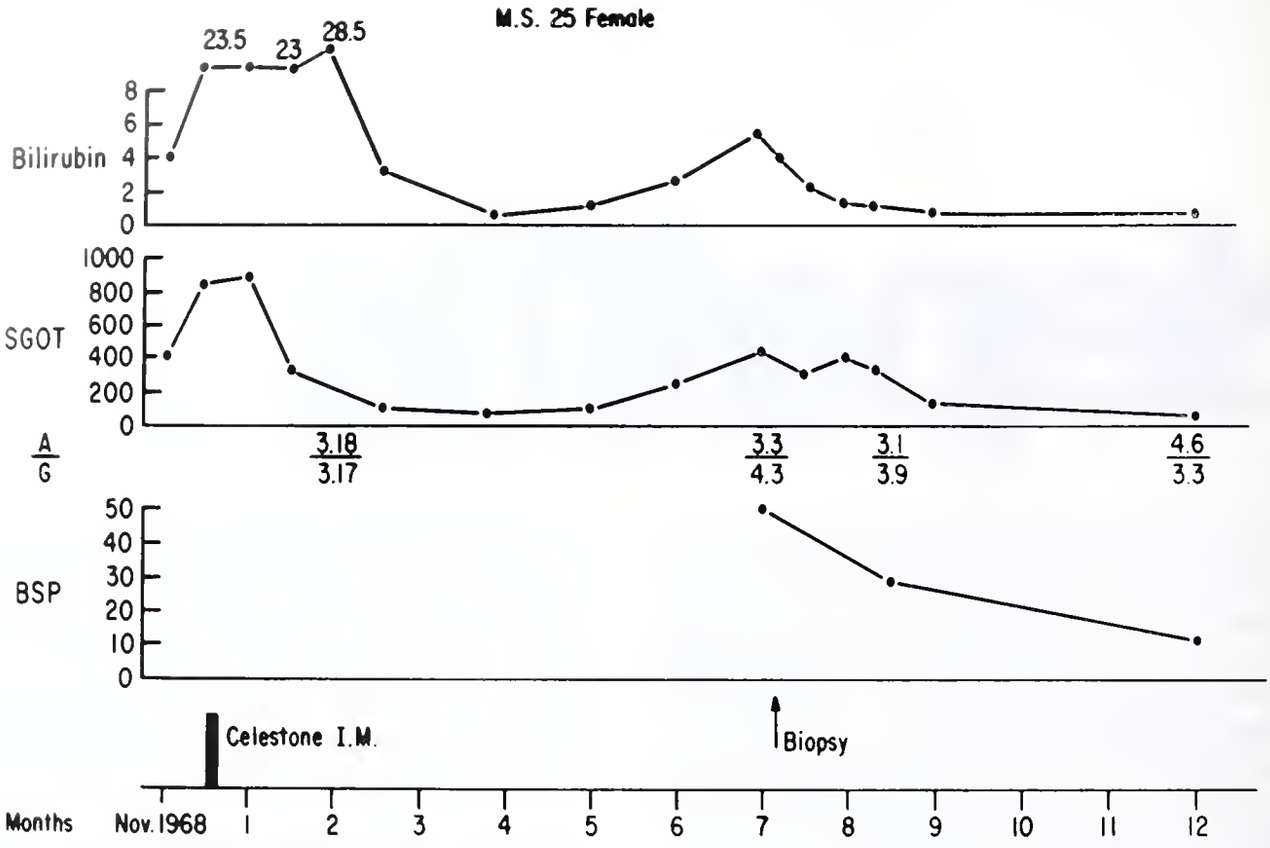
Hepatitis

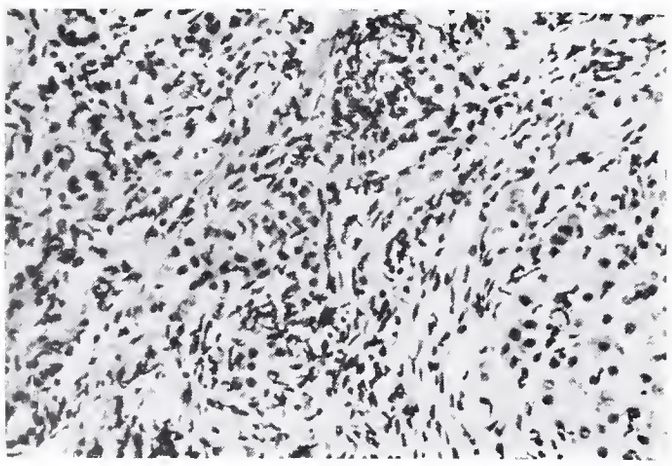
viremia in blood donors who have been responsible for repeated transmission of jaundice over long periods. Activation of the hepatic mesenchyma as a result of the initial toxic insult with continuing liver cell damage resulting from the active mesenchyma is also possible.[6] Immunologic factors with circulating antibodies active against hepatic antigens have been suggested, but no direct evidence supporting this thesis is available. The cytotoxic action of antigen-antibody combinations originating elsewhere but deposited in the liver, resulting in hepatic damage, is also possible and is suggested by some lines of evidence. However, as yet, there is no direct evidence that any of these mechanisms is responsible for continuing liver injury in chronic active hepatitis. Malnutrition is thought to be a contributing factor in some instances; certainly alterations in both the macro- and micro-circulation may be significant in producing continuing hepatocyte damage. Alcohol or other liver toxins may also be important in certain cases.

Clinical Findings: The clinical manifestations vary greatly with the kind and severity of the process. In the mild and benign cases there may be no clinical reflections or abnormal physical findings, or perhaps at most, a slightly to moderately enlarged, slightly firm, tender or nontender liver. Laboratory studies reveal mild to modest elevation of transaminase values ranging from 50 to 200 Karmen units, and slight elevations of alkaline phosphatase values and bromsulphalein retention. Hyperbilirubinemia and jaundice usually are not present and serum protein levels are normal. In more severe instances of chronic aggressive hepatitis, early stigmata of liver disease such as small spider angiomata or liver palms may be found. The liver usually is easily palpable and may come down 6 to 8 cm below the right costal margin. It is usually firm and frequently nontender. A palpable spleen may be present. Recurrent mild jaundice is the rule and transaminase elevations may occur varying upwards of 500 Karmen units. Equivalent elevations of alkaline phosphatase and bromsulphalein retention values ranging upwards to 25 or 30% may be found. Systemic reflections of mild fatigue, lassitude, and occasional skin rash may be noted. In the severe, chronic, aggressive, or chronic active type, pronounced systemic symptoms of fatigue, anorexia, lassitude, and weight loss are frequent. Skin rashes are noted and occasionally the typical butterfly lesion of lupus erythematosus may be seen. Stigmata of cirrhosis, including liver palms and prominent spiders, ascites, and edema are not infrequent. The liver is usually moderately enlarged and may be quite large. However, as the disease progresses, the liver may become successively smaller until it is no longer palpable and difficult to demonstrate by percussion. Serum bilirubin levels of 5 to 15 mg/100 ml are common and transaminase levels may range as high as 2,500-3,000 Karmen units. Bromsulphalein retention may rise above 50%. Elevation of gamma globulin is characteristic. Positive LE and antinuclear factor preparations occur in about 15% of cases. As progression to cirrhosis occurs, portal hypertension with bleeding varices and hepatic coma supervene.

Therapy: Treatment is nonspecific and of less than certain benefit. In the milder cases, good diet and the avoidance of undue fatigue seem to be all that is necessary, and a favorable outlook is usual. For the advancing and severe cases, both anti-inflammatory and immunosup-

1a. (Case 1) Chart of laboratory course over period of one year. No corticoids or immunosuppressives were used. Bilirubin in mg/100 ml. SGOT in Karmen units. A/G values in gm/100 ml. BSP, no retention at 45 minutes.

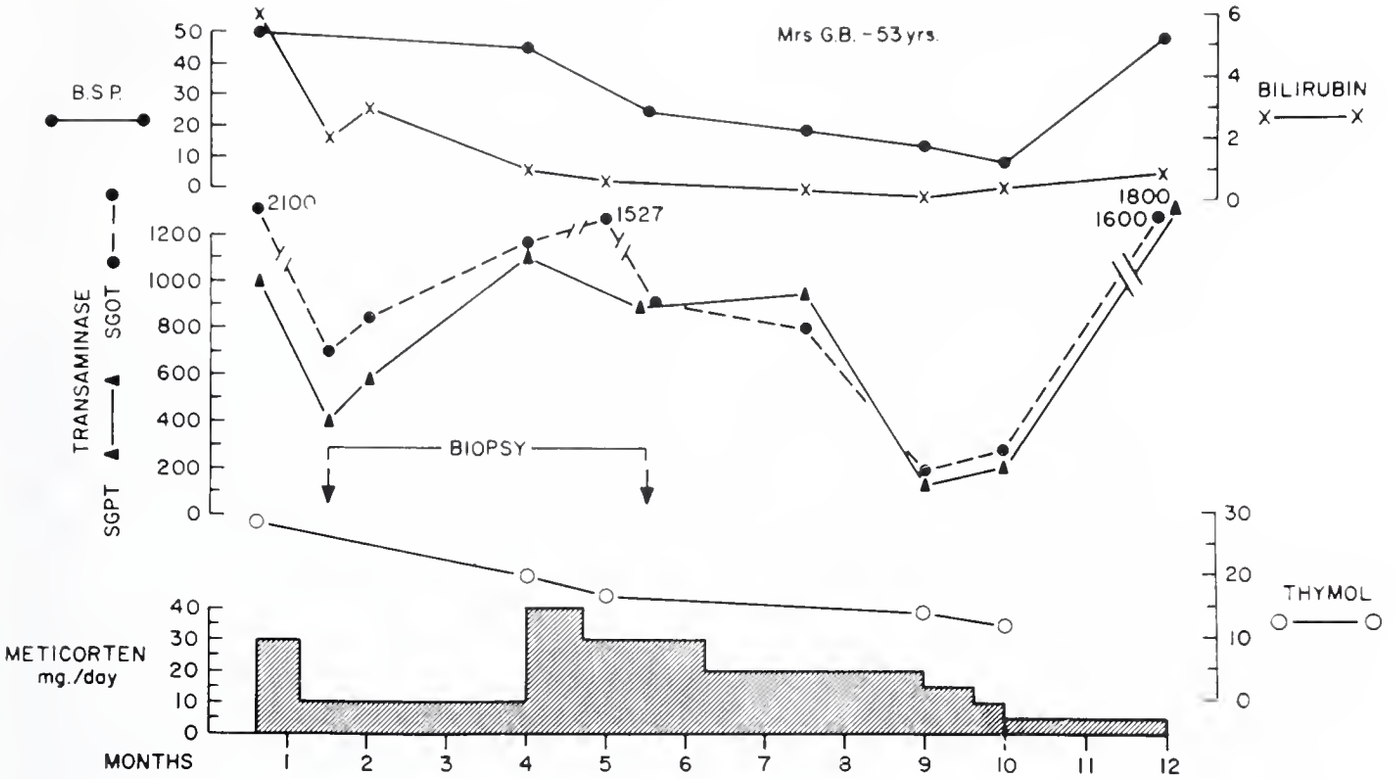




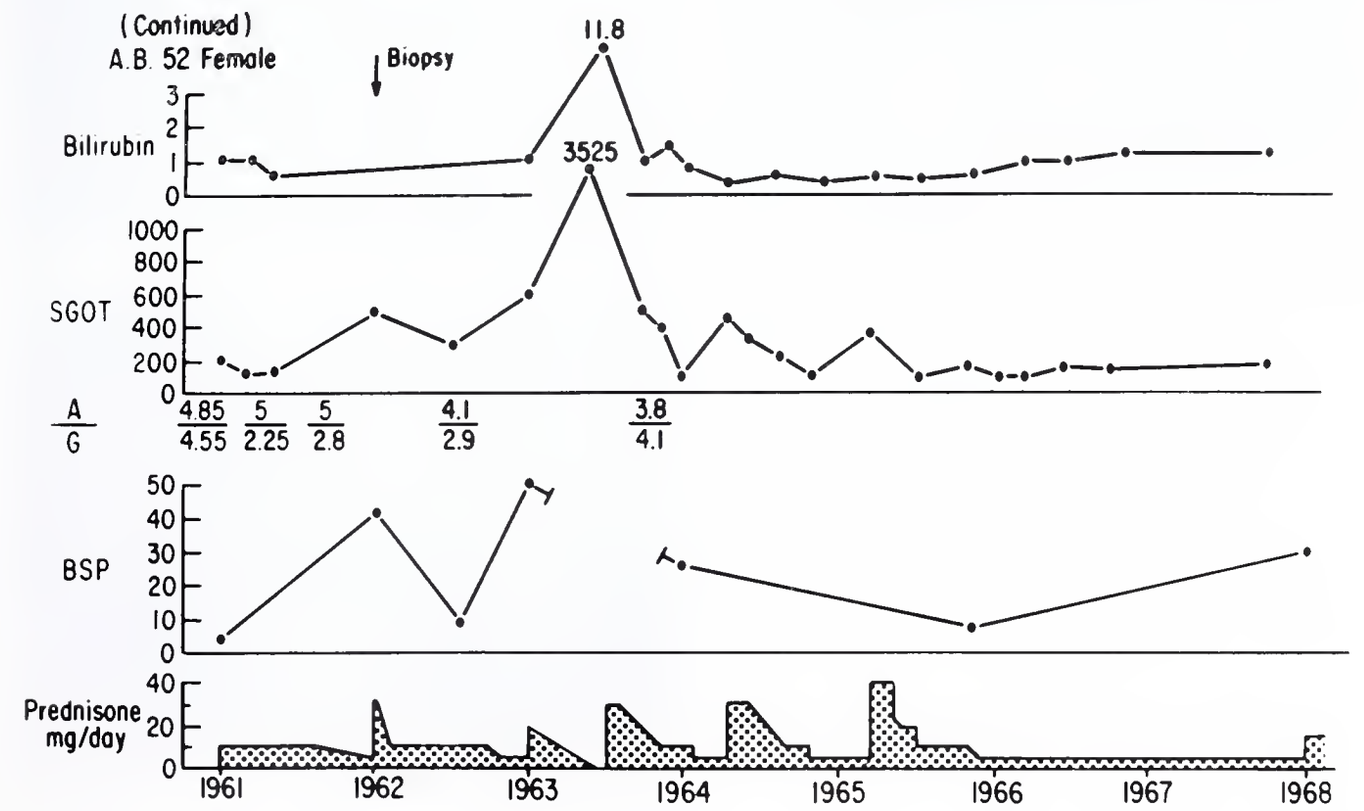
1b. Photomicrograph of liver biopsy specimen (X 180). Note intense inflammatory reaction and disorganization of liver parenchyma, lower right.

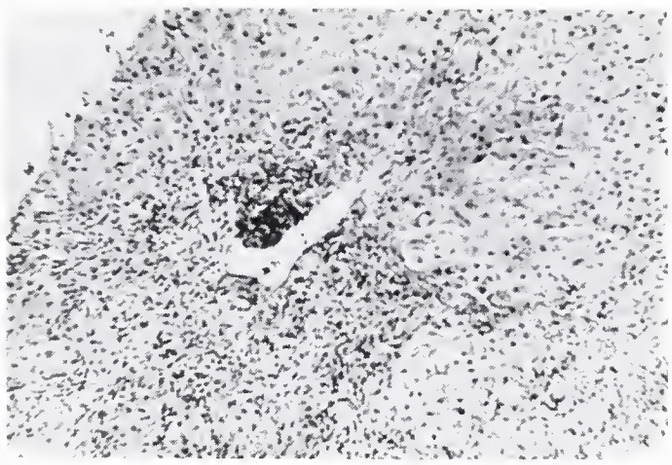
pressive agents have been widely employed but with varying result. Careful, double-blind studies are remarkable for their absence among the published reports. Mackay has felt so strongly about the efficacy of these drugs that he has stated that the performance of a good, controlled, double-blind study would amount to criminal negligence and would deprive the controls of possible benefits of therapy. On the other hand, it has been our experience (as well as that of everyone who has attempted any mode of treatment) that not infrequently, improvement may occur without either of the agents. Likewise, despite use of one or both, an inexorable downhill course may occur. On the other hand, all who have used the drugs have been impressed, on occasion, by relatively dramatic responses in improvement of well-being, appetite, and clinical condition of patients, together with dramatic changes toward normal in the results of liver function tests. At the same time, serial microscopic studies of the liver frequently have revealed no change. Most recent information confirms a definite advantage for the treated groups, at least during the first five to seven years after initiation of treatment.[7,8] A study just concluded,[9] which was a carefully controlled double blind study, re-

2a. (Case 2) Laboratory course of case the first year. Note relapse with each decrease in corticoid dose.



2b. The next eight years with constant prednisone necessary to maintain reasonable test results. Note, however, the tendency for BSP to rise in 1968 despite maintenance medication.



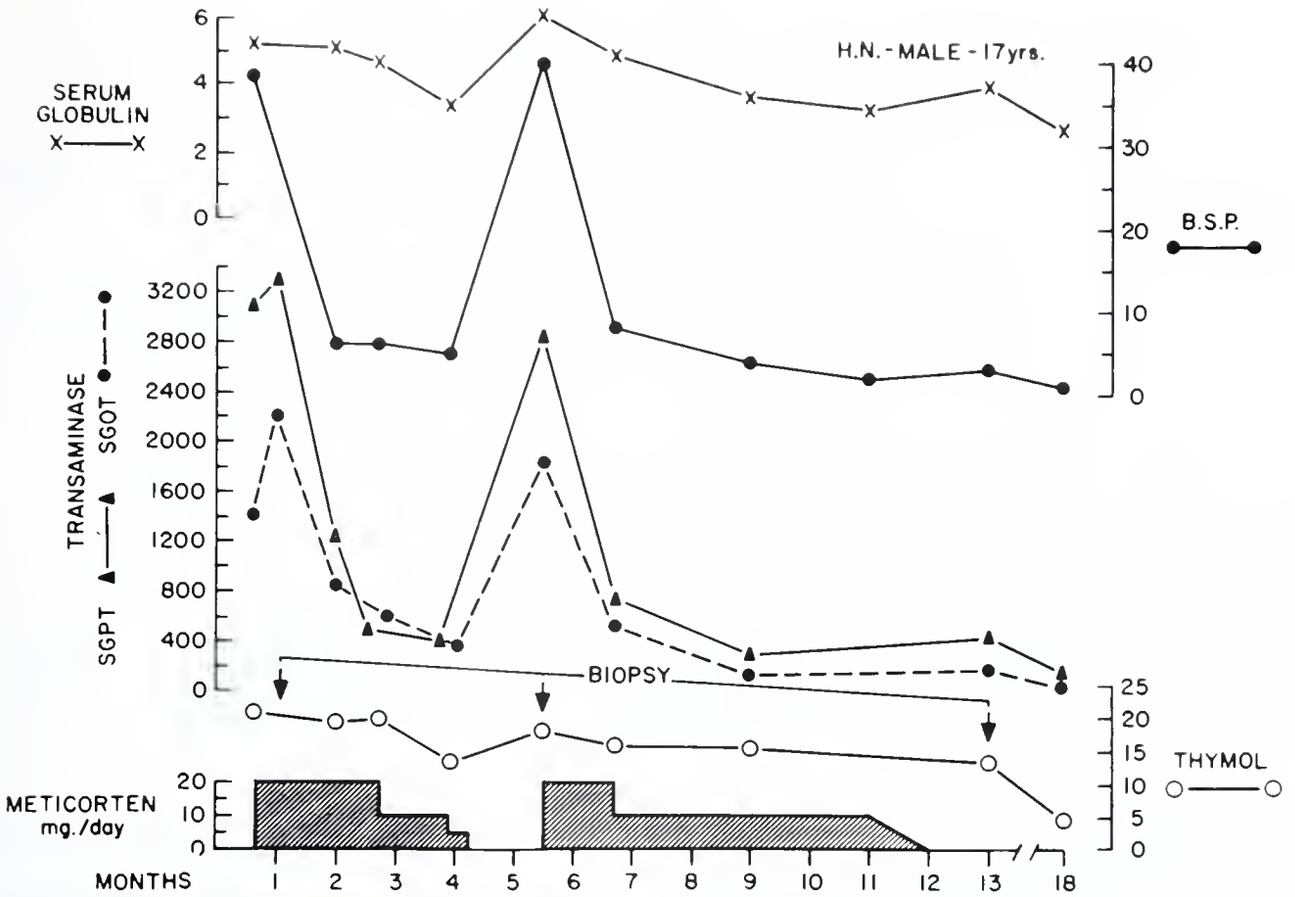


2c. Second liver biopsy one year after onset of symptoms. Note active inflammatory process with invasion of lobule but no scarring.

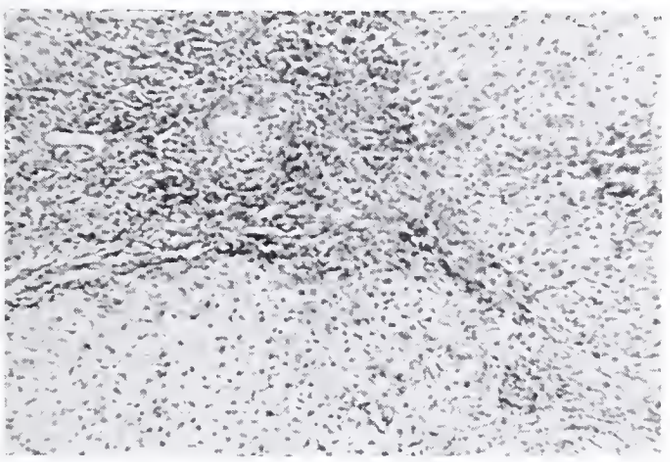
vealed a definite advantage in favor of the corticoid-treated group, in which only 3 of 22 patients died during the observation period, whereas, 17 of 27 in the control group died in the same period. Serum albumin levels were also much better in the treated group. Of importance in the use of corticosteroids for treatment is the recognition of the danger of side effects from prolonged administration, such as a tragic death from osteoporosis-induced broken neck in a New Orleans hospital. Also, it may be difficult to get some patients off the drug after many years. It is as adjuvant in these instances, perhaps, that the cytotoxic drugs, 6-mercaptopurine, azathioprine, or cyclophosphamide are of benefit.[7] However, these drugs are potent poisons and acute hepatic necrosis has followed their use.

The patients most likely to have a good response to either program seem to be those who have had an onset of disease resembling an attack of acute infectious hepatitis, those with symptoms of the disease in other organs, with highest serum gamma globulin levels, and borderline or positive LE cell preparations. Florid lymphoid and plasma cell infiltration of the liver have also been thought to indicate a favorable response to treatment.[5] The variety of our own experience is exemplified by the following examples.

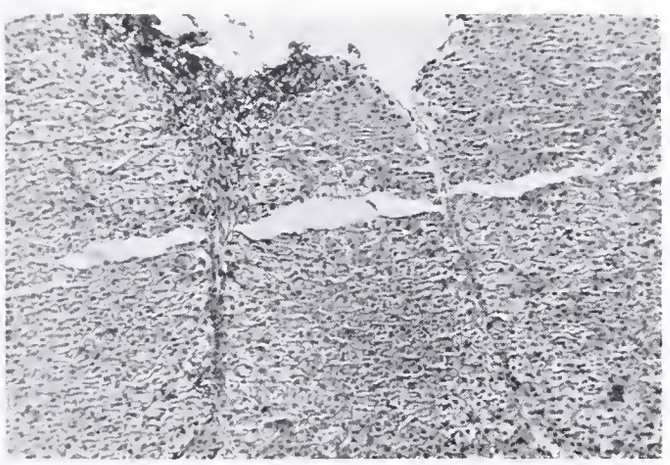
Case Reports: *Case 1:* A 25-year-old Latin girl who experienced acute onset of malaise, anorexia, and jaundice in November 1968, and had a typical laboratory result spectrum of acute hepatitis was treated with rest, diet, and one injection of long-acting betamethasone (Celestone) (Fig 1 a). She improved during approximately four to six weeks and felt well until the spring of 1969 when she again developed anorexia, malaise, and recurrent jaundice. Results of laboratory studies at this time included a high serum globulin level. Needle biopsy of the liver (Fig 1b) revealed extensive inflammatory



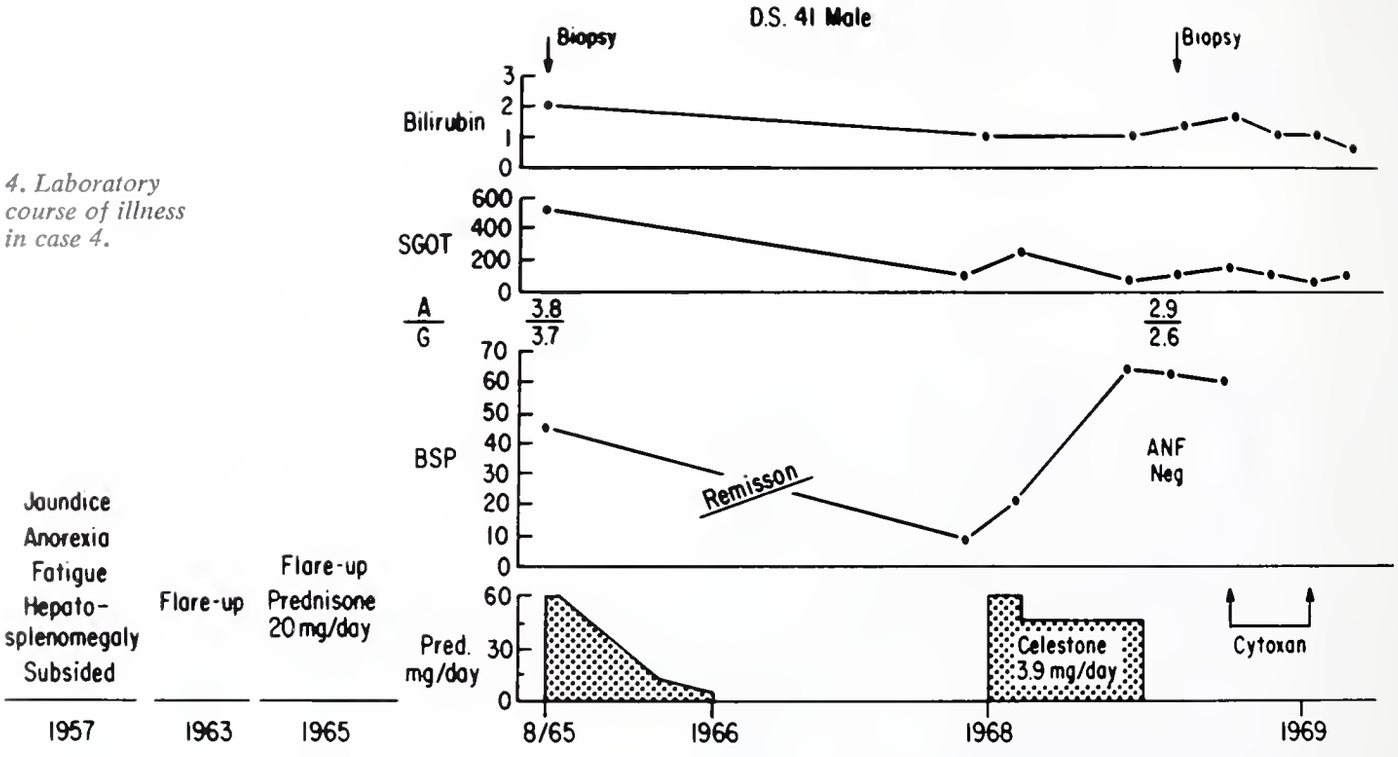
3a. Laboratory course of case 3. Flare-up on withdrawal of prednisone at four months but stabilization after six additional months of treatment.



3b. Photomicrograph of first liver biopsy a few weeks after onset of symptoms. Note similarity to 2c.



3c. Liver biopsy one year after withdrawal of corticoids. Note residual stringy fibrosis with slight inflammation only.



4. Laboratory course of illness in case 4.

reaction involving all portions of the liver, massive stromal collapse, but intact reticulum and no collagen replacement. On supportive therapy of rest and nutritious diet, she steadily improved and, over a period of five months, became asymptomatic. Most recent laboratory results at the end of one year were almost within normal limits. This case illustrates the possibility of remission in a patient with severe, chronic, active disease without the use of either immunosuppressive or corticosteroid drugs.

Case 2: A 51-year-old woman was first seen with approximately a seven-month history of fatigue, anorexia, and jaundice (Fig 2a). Tests reflected moderately severe, active parenchymal disease but an initial biopsy showed a microscopic picture really more consistent with chronic, persistent hepatitis than one of the more severe lesions. She did not, however, respond symptomatically or testwise to rest and diet, and prednisone was started. Her test results and sense of well-being promptly improved, but relapsed as promptly when the dosage was reduced below 10 mg of prednisone daily. Increase in drug dosage was again followed by improvement, and for several months the maintenance of dosage at a fairly high level resulted in essentially normal physical findings and liver profile. Once again, however, shortly after the dosage was lowered, all parameters revealed activity. This has continued until the present—a total of nine years—and many attempts have been made to withdraw prednisone therapy (Fig 2b). However, it appears that the patient's absolute minimum tolerable dose level is between 5 and 10 mg of prednisone daily. Serial biopsy studies revealed initial worsening of the disease process, and then little change (Fig 2c). This case illustrates the not infrequent difficulty of withdrawing corticoids in chronic active hepatitis.

Case 3: A 17-year-old boy was seen shortly after the onset of anorexia, right upper quadrant discomfort, and jaundice. Liver tests revealed significant parenchymal damage (Fig 3a); biopsy showed a rather florid type of chronic aggressive hepatitis (Fig 3b). Prednisone therapy was followed promptly by subsiding manifestations. As dosage was reduced, clinical symptoms and laboratory studies showed evidence of flare-up. However, in this instance, after an additional eight-month period of therapy, slow reduction of dosage after test results had become perfectly normal led to no further flare-up. The patient has been clinically well since that time, a total of seven years, and his last liver profile was normal. Serial biopsy studies revealed little change until one year after treatment, at which time the picture was that of a burned-out scar of post-hepatitic cirrhosis (Fig 3c), without evidence of activity.

This case illustrates successful maintenance of remission after withdrawal of corticoids.

Case 4: This patient had recurrent flare-up of disease activity that responded favorably to corticosteroid therapy in 1955, 1958, and 1960 but failed to respond in 1968. Immunosuppressive agents were used to attain remission (Fig 4). After a large dose of betamethasone (Celestone) over a period of several months had failed to induce remission in 1968, cyclophosphamide (Cytoxan) in doses gradually increasing to 150 mg daily was followed by modest improvement in well-being and liver test results. After the drug was discontinued, the clinical process continued to be quiescent. This case illustrates the adjuvant use of immunosuppressive drugs in maintaining clinical remission when corticoids are no longer successful.

A reasonable philosophy of treatment would be to follow a program of supportive treatment for perhaps two to four months, and continue this program as long as improvement occurs. If there is no improvement, or if there is gradual deterioration, the use of corticoids, probably prednisone, in doses of 40 to 60 mg each morning with gradual reduction in dosage is suggested, but careful watch for recrudescence of signs of activity is important. A shift to medication every other day for maintenance seems to continue therapeutic effect with fewer side effects. In the event that side effects are too severe, or that inordinately large doses of corticoids are necessary to maintain remission, or in instances when they may not be withdrawn, then use of 6-mercaptopurine, azathioprine, or cyclophosphamide is probably worthwhile. Of course, in instances of rapidly progressive disease with a steep downhill course, the use of these drugs is indicated earlier. It must be remembered, however, that acute toxic necrosis of the liver may result from the use of these drugs.

REFERENCES

1. Barker MH, Capps RB, Allen FW: Chronic hepatitis In the Mediterranean theater, a new clinical syndrome. JAMA 129:653-659, 1945.

2. Mistilis SP, Skyring AP, and Blackburn CR: Natural history of active chronic hepatitis. I Clinical features, course, diagnostic criteria, morbidity, mortality and survival. Aust Ann Med 17:214-223, 1968. Also, Part 2, 17:277, 1968.

3. Mackay IR, Weiden S, Hasker J: Autoimmune hepatitis. Ann NY Acad Sci 124:767-780, 1965.

4. deGroote J, Gedigk P, Popper H: A classification of chronic hepatitis. Lancet 2:626-628, 1968.

5. Schaffner F, Klion FM: Chronic hepatitis. Ann Rev Med 19:25-28, 1968.

6. Popper H, Paronetto F, Schaffner F: Immune processes in the pathogenesis of liver disease. Ann NY Acad Scl 124:781-799, 1965.

7. Mistilis SP, Blackburn CRB: The treatment of active chronic hepatitis with 6-mercaptopurine and azathioprine. Aust Ann Med 16:305-311, 1967.

8. Page AR, Good RA, Pollara B: Long-term results of therapy in patients with chronic liver disease associated with hypergammaglobulinemia. Amer J Med 47:765-774, 1969.

9. Sherlock S: Personal communication.

10. Krawitt EL, Stein JH, Kirkendall WM, et al: Mercaptopurine hepatotoxicity in a patient with chronic active hepatitis. Arch Intern Med 120:729-734, 1967.

Dr. Davis, 2129 Palmer Ave, New Orleans, La 70118.

Coagulation Testing in the Surgical Patient

N. O. HILL, MD; H. J. RIDGWAY, PhD; R. J. SPEER, PhD

A single inexpensive test, the activated recalcification time (ART) is recommended for the preoperative evaluation of the hemostatic mechanism. Data from 274 simultaneous determinations of the ART as well as the partial thromboplastin time (PTT), Quick's prothrombin time, and platelet count are presented. The ART is shown to be more effective in preoperative screening than the other three standard tests combined.

PREOPERATIVE EVALUATION of the surgical patient should routinely include test procedures which have a high likelihood of revealing defects in the coagulation mechanism. A single inexpensive test, the activated recalcification time (ART), which was described by Hunter and Allensworth in 1967, is suitable for this purpose.[1]

The present study first reviews one of the coagulation schemes most useful in the understanding of the clotting mechanism. Second, the principles of the basic tests are outlined briefly. Then, data to compare the ART and other tests are presented to demonstrate the usefulness of the ART.

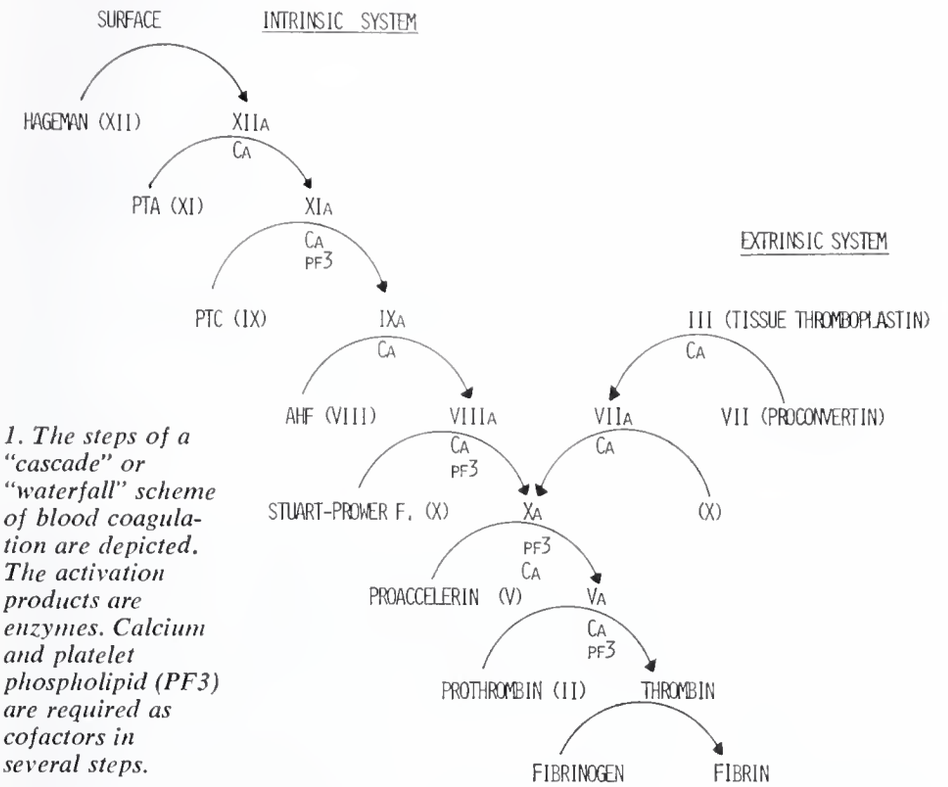
Discussion: Following a cut, several basic tasks are carried out by the hemostatic mechanism: (1) Platelets adhere to exposed collagen, release vasoconstrictive substances and adenosine diphosphate (ADP), aggregate, and plug small blood vessels. (2) Almost immediately thereafter, the coagulation mechanism, the purpose of which is to form a fibrin clot, also is activated by contact with collagen. (3) Clot retraction of the fibrin mesh occurs due to platelet thrombosthenin activity.

Fig 1 presents a coagulation sequence essentially the same as the waterfall scheme of Davie and Ratnoff or the cascade hypothesis of MacFarlane.[2,3] The activated products are enzymes. Thus the coagulation mechanism is a poised sequential enzymatic process until it is initiated. Plasma factor XII is first activated by contact with collagen or "activating" surfaces provided in the laboratory. Then, in the presence of calcium (factor IV) and/or platelet factor 3 (PF3), each succeeding factor in the sequence is activated until fibrinogen has been converted to fibrin. The intrinsic system refers to the basic mechanism which utilizes circulating factors. In contrast, the extrinsic system can be activated when tissue thromboplastin comes in contact with circulating proconvertin (factor VII).

Therefore, separate tests of the intrinsic pathway on the one hand, and the extrinsic pathway on the other, can indicate the stage in which an abnormality exists. For instance, a test of the extrinsic pathway which is normal and a prolonged intrinsic test might indicate an abnormality of factor XII, XI, IX, or VIII.

Fig 2 is included to point out that fibrin formation involves further chemical reactions to stabilize and cross-link fibrin molecules for a stronger clot. Thrombin converts fibrinogen to fibrin monomer (M). Spontaneous hydrogen bonding then results in the formation of soluble fibrin (S). The action of thrombin-activated fibrin stabilizing factor (XIII) causes cross-linking of soluble fibrin molecules by amide bonds, thus leading to the formation of insoluble fibrin (I).

Coagulation Screening Tests: The most useful tests have been the activated partial thromboplastin time (PTT),[4] Quick's prothrombin time,[5] and platelet count. Fig 3 indicates the principles of these common screening tests, including the ART, and what they can and cannot be expected to detect.

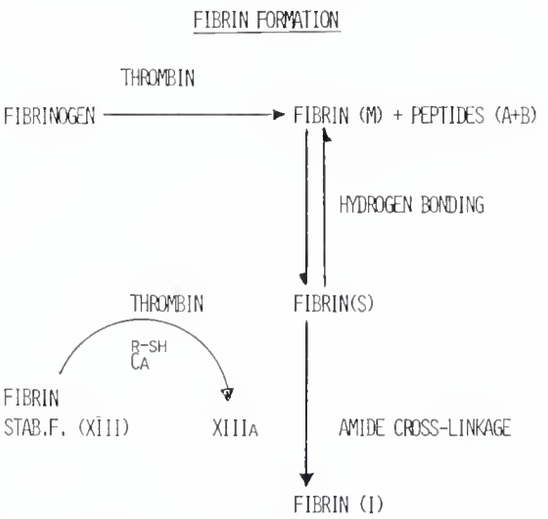


1. The steps of a "cascade" or "waterfall" scheme of blood coagulation are depicted. The activation products are enzymes. Calcium and platelet phospholipid (PF3) are required as cofactors in several steps.

In the PTT, plasma is incubated with an activator of factor XII (kaolin), an external source of platelet factor 3, and calcium, which is added last to the system. Thus, the PTT can be expected to detect defects in the intrinsic pathway. But the PTT cannot be expected to detect low platelet values, abnormal release or absence of platelet factor 3, or factor VII deficiency.

This is somewhat in contrast to the ART, which utilizes patient platelets to provide platelet factor 3 and Celite as a factor XII activator. The Celite is suspended in distilled water. When added to platelet-rich plasma, the resultant hypotonicity helps to release platelet factor 3 making it available for participation in the coagulation sequence. Incubation of the mixture for six minutes, followed by recalcification and recording of the time to form a clot, completes the test.

Thus, the ART can reveal defective platelet activity due to inadequate release or absence of platelet factor 3 as well as low platelet number. Hunter and Allensworth have demonstrated that the ART was sensitive to levels of first stage factors (XII, XI, IX, VIII) below 60%, and



2. The steps in the formation of an insoluble fibrin polymer are shown. The activation of fibrin stabilizing factor (factor XIII) requires action by thrombin and calcium as well as the presence of undesignated sources of sulfhydryl groups.

Procedure	Principle	Tests	Does Not Test For
Activated recalcification time	Surface activator; patient supplies the rest	Entire intrinsic system	XIII, III (extrinsic)
Partial thromboplastin time	Surface substitute platelets; patient supplies the rest	Intrinsic system except platelets	Platelets, III, VII (extrinsic), XIII
Quick prothrombin time	Thromboplastin*; patient plasma	Extrinsic system	XII, XI, IX, VIII (intrinsic), platelets
Platelet count		Platelet number	Platelet competence

*Rabbit brain thromboplastin.

3. The principles of four common coagulation tests and what they can demonstrate are presented.

of the second stage factors (X, V, II, fibrinogen) below 40%. They have reported that the ART detects factor VII deficiency, although one would not expect it to do so.

Materials and Methods: All coagulation tests performed in the J. K. and Susie L. Wadley Research Institute and Blood Bank and the Granville C. Morton Cancer and Research Hospital from March 6, 1968, to April 2, 1970 were card coded for analysis. There were 274 instances in which the ART, as well as the PTT, Quick's prothrombin time, and platelet count had been done simultaneously. A time of 50 seconds or less was considered "normal" range for the ART and PTT. The normal range for the prothrombin time and other first stage factors was 75% or greater. The normal range for platelets was 200,000 to 400,000/cu mm.

Normal and abnormal ART results were compared with simultaneous results obtained separately with the PTT, Quick's prothrombin time, and platelet count by the use of a series of simple two-by-two tables. In addition, a comparison of the ART sensitivity to the combined effectiveness of the PTT, Quick's prothrombin time, and platelet count was performed by another two-by-two analysis table.

Twenty-seven bleeding times, also performed in this group of 274 studies, were evaluated.

Finally, 124 low platelet counts in which the ART was done were analyzed. The reliability of the ART in detecting abnormalities for which these and other tests which were incidentally performed is demonstrated.

Results: Fig 4 shows the results of 274 simultaneous determinations of the ART, PTT, Quick's prothrombin time, and platelet count. The ART demonstrated greater sensitivity when compared to the abnormal PTT results alone, the abnormal prothrombin times alone, or abnormal platelet counts alone. In all instances, a high degree of normal-normal and abnormal-abnormal correlation existed. Of the 132 abnormal ART results, when compared to normal PTT results in Fig 4, further card analysis revealed 82 definite abnormalities: 22 low prothrombin; 1 low proconvertin (VII); 4 low fibrinogen; 49 low platelet levels; 4 poor clot retraction; and 2 positive fibrinolysis. Abnormal results were not explained in 50 cases.

Of the 14 instances (Fig 4) in which the PTT was abnormal and the ART was normal, definite abnormalities were detected in 6 cases; in 8 instances, no explanation was obtained.

It should be pointed out that these unexplained ART and PTT abnormalities may not represent false-positive results, since more complete coagulation factor assays were not done simultaneously in most of these instances. Early in our use of the ART, we often repeated the test when positive results were unexplained, and in most instances the results were normal. Apparently, removal of platelets by excessive centrifugation caused the abnormal results initially.

Fig 5 compares the results of the ART as opposed to those of the PTT, Quick's prothrombin time, and platelet count combined. Only 28 abnormal results were obtained by this combination. In contrast, the ART detected a total of 219 abnormals, 60 of which were not detected by the combined tests. Among the 60 exclu-

274 Tests	ART Normal	ART Abnormal
PTT normal	41	132
PTT abnormal	14	87
Prothrombin time normal	49	167
Prothrombin time abnormal	6	52
Platelet count normal	44	114
Platelet count abnormal	11	105

4. Separate normal-abnormal (two-by-two) comparisons between the ART on the one hand, and the PTT, Quick prothrombin time, or the platelet count on the other, are presented.

274 Tests	ART Normal	ART Abnormal
PTT, prothrombin time, and platelets normal	27	60
PTT, prothrombin time, or platelets abnormal	28	159
Total		219

5. Normal-abnormal (two-by-two) comparison of the ART against the combined sensitivity of the PTT, Quick prothrombin time, and platelet count are shown.

sively abnormal ARTs, ten other abnormalities were detected on further analysis.

Of 124 low platelet counts in which an ART also was done, the latter test showed abnormal results in 112 cases. Of the 12 not detected, 7 had platelet counts over 75,000, and 4 were under 50,000/cu mm.

Bleeding times are no longer done routinely as a primary screening procedure in our institution. However, 27 tests in this group revealed only one abnormal result of the bleeding time alone.

Comment: The sensitivity of the ART compared with other standard coagulation screening tests shows that it can replace the PTT, Quick's prothrombin time, and platelet count. The ART detected 112 out of 124 low platelet counts as well. The coagulation laboratory in our institution evaluates the status of referred patients with hematologic and bleeding problems. Therefore, a much larger number of abnormal results are encountered than would be expected in a general patient population.

For some time, we have not included the clotting time or bleeding time in our primary evaluation of patients because they are relatively unproductive. Thus these tests were not sufficiently available for evaluation in this study. The single abnormality of the bleeding time alone, when compared with the ART in this set of data, is illustrative of this point.

Hunter and Allensworth pointed out that almost all ART false-positive results are due to artifactually diminished platelets from faulty collection of blood or from excessive centrifugation. Our experience in the reevaluation of unexplained positive results supports this. Thus, false-positives can be minimized by careful centrifugation of the oxalated blood specimen and by aspiration of the test sample from just above the buffy coat.

Although it is not reflected in the overall statistics, our experience in recent months has involved few false-positive findings.

The ART should, therefore, be substituted for the groups of coagulation tests now commonly used. This single test alone has a high likelihood of detecting abnormalities which may be encountered in the surgical patient. Thus it represents an ideal screening test both from the standpoint of improved information about the patient's hemostatic mechanism as well as from the standpoint of delivering this service to him at lower cost.

REFERENCES

1. Hunter DT, Allensworth JL: Improved coagulation screening by an activated recalcification test. J Clin Path 20:244-248, 1967.

2. MacFarlane RG: The basis of the cascade hypothesis of blood clotting. Thromb Diath Haemorrh 15:591-602, 1966.

3. Davie EW, Ratnoff OD: Waterfall sequence for intrinsic blood clotting. Science 145:1310-1311, 1964.

4. Proctor RR, Rapaport SI: The partial thromboplastin time with kaolin; a simple screening test for first stage plasma clotting factor deficiencies. Amer J Clin Path 36:212-219, 1961.

5. Quick AJ: Hemorrhagic Diseases. Philadelphia, Lea and Febiger, 1967, p 40.

The authors, Wadley Institutes of Molecular Medicine, 900 Harry Hines Blvd, Dallas, Tex 75235.

Treatment with Lithium Carbonate

Results in 35 cases

WADE H. LEWIS, MD; ORLANDO R. SURIS, MD

"LITHIUM" IS DERIVED from the Greek word "lithos" meaning "stone," and was so named by Arfvedson who discovered the element in 1817 while analyzing the mineral petalite. Pure lithium is a soft, silver-white and is the lightest of all metals. Chemically it resembles the other elements in group IA of the periodic table which are sodium, potassium, rubidium, and cesium. Its atomic weight of 6.94 makes it the third lightest element after hydrogen and helium in that order.

Since the activity of this chemical group seems to be related to the distance from the nucleus to the most distant electronic shell of the atom, Fig 1 shows that lithium should and does behave more like sodium than potassium.

The pioneer investigator who noted the psychopharmacological action of lithium salts was Cade (1949). He thought that the action of this compound was related to a specific deficiency of it in the blood. He also described a peculiar response in one of his patients. This patient definitely showed some decrease in psychomotor activity; however, after this response was obtained, the hallucinatory manifestation and the delusional thought were still present.[1]

Physiological Effects of Lithium: Trautner and associates demonstrated peak values of lithium in the urine and plasma approximately 90 minutes after ingestion. The peak value in plasma reached levels of 6-7% of the retained lithium per liter. This concentration continued to fall from 2-5% of the aforementioned levels over six to eight hours at which time the plasma level remained relatively constant. The amount of lithium retained could thus be calculated with some accuracy from a plasma determination, assuming the distribution of the substance in the tissue and plasma to be the same. Ingested lithium has not been reported in the human milk. Radomsky and others (1950) claimed that practically all lithium administered to dogs and not retained in the animal was demonstrated in the urinary excretion.[2]

Lithium can replace sodium in many tissues of the body. Although this usually is not a persistent condition, the peripheral nerves apparently undergo an irreversible exchange after prolonged exposure to this element.[3,4] Muscle cells are capable of recovery despite their greater affinity for lithium than sodium. Prolonged lithium exposure of cells will eventually result in the displacement of intracellular potassium.[5] Lithium, according to available investigation, is the only ion that stimulates brain cortex respiration in a sodium-free medium.[6,7]

Clinical Literature: Schou and associates, reviewing the literature, were able to follow 18 patients showing a good response when diagnosed as having manic illnesses. This group investigated the relationship of the use of lithium salts and the development of goiter in their patients.[8]

The investigations of White and others indicated improvement in 58% of manic patients as compared with other psychiatric disorders.[9]

Lithium carbonate recently has been released by the Food and Drug Administration, and this article will be of interest to physicians who are not acquainted with the drug. It summarizes treatment procedures and precautions, and lists results in 35 cases.

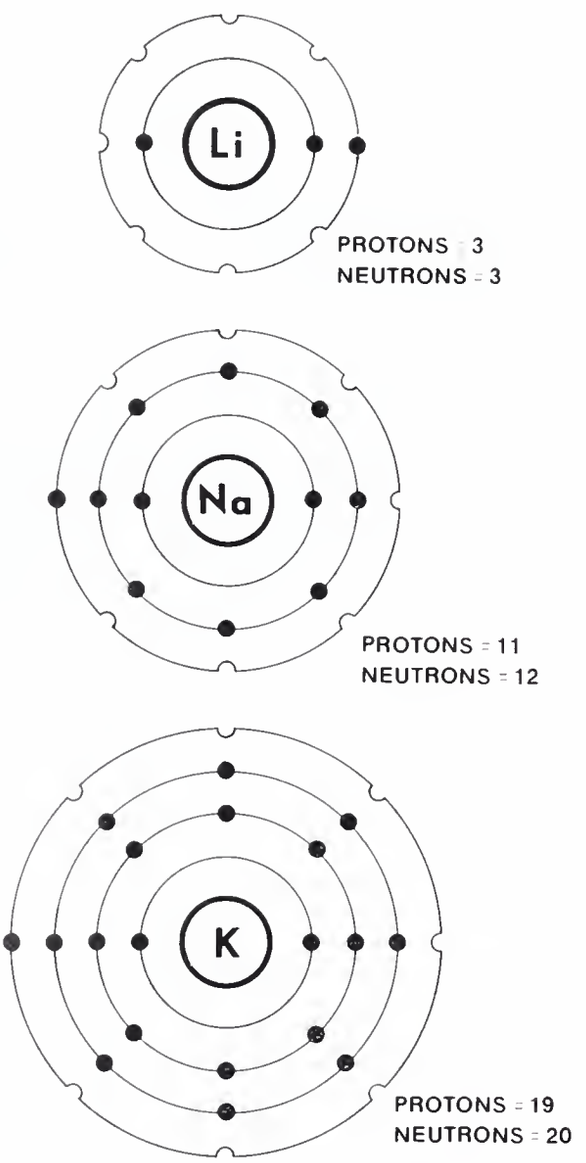
Gershon and Yuwiler, reviewing the literature, stated that great benefit was obtained in the treatment of 446 cases of mania. They pointed out that in the majority of schizophrenics, a decrease in psychomotor activity was the most remarkable finding.[10]

Investigational Institution: The Santa Rosa Medical Center in San Antonio is an 830-bed short-term medical complex owned and operated by the Congregation of the Sisters of Charity of the Incarnate Word. The Center consists of four major medical facilities: The Santa Rosa General Hospital, The Children's Hospital, the Otto Koehler Radiation Therapy and Research Unit, and the John F. Kennedy Memorial Pavilion which is a 130-bed psychiatric unit operating under the Texas Mental Health Code for involuntary commitment purposes when required.

A full-time chairman of the Department of Psychiatry supervises an approved psychiatric residency program. He is the legal physician-in-charge of the mental hospital who, under the terms of the Code, is charged with the administrative welfare of all patients admitted and attended by private physicians. Forty-five psychiatrists comprise the attending staff.

Protocol Resume: 1. The investigative reagent, lithium carbonate, was furnished by Chas. Pfizer & Company, Inc. The drug was supplied in scored tablets, 300 mg each, and liquid suspension, 300 mg/5 cc.

2. Appropriate personnel data on all the investigators were forwarded to Chas. Pfizer &



1. Chemically, lithium behaves more like sodium than potassium.

Company, Inc., for screening. All were certified, or were eligible for certification, by the American Board of Psychiatry and Neurology.

The investigators agreed to follow the protocol and participate in patient control and clinical reporting, as specified, under the supervision of the chairman of the Department of Psychiatry, who forwarded clinical reports to Chas. Pfizer & Company, Inc.

3. Individuals treated were adult, nonpregnant, psychiatric patients. All were hospitalized initially in the psychiatric unit of the Santa Rosa Medical Center under the direct supervision of the chairman of the department and the attending coinvestigators. These patients' cases were historically and medically known and well documented; each individual had proved to be resistant to other conventional drug and somatic therapies. To further establish an accurate diagnosis, evaluation included psychological testing and a clinical interview by at least two of the coinvestigators. Only patients with a diagnosis of manic-depressive reaction, manic type, were included in this study initially. Patients with schizoaffective reactions were added later. Target symptomatology was hyperactivity, insomnia, increased pressure of speech, flight of ideas, hallucinations, and delusions.

Signs of the following clinical side effects were carefully noted: nausea, vomiting, tremulousness, anorexia, diarrhea, thirst, dryness of the mouth, and weight loss. In addition, symptoms associated with the neuromuscular system are general muscular weakness, ataxia, tremor, muscular hyperirritability, choreo-athetoid movement, and hyperactive deep tendon reflexes. Central nervous system effects include anesthesia of the skin, incontinence of urine and feces, slurred speech, blurring vision, dizziness, vertigo, epileptiform seizures, mental retardation, somnolence, confusion, restlessness, stupor, and coma. Cardiovascular side effects included pulse irregularity, hypotension, electrocardiogram (ECG) changes, peripheral circulatory failures, and circulatory collapse. Other side effects to be observed were polyuria, general fatigue, lethargy, and sleeplessness. Discontinuation or dosage adjustment was immediately accomplished if any of those occurred.

Patients with significant physical disorder were excluded, and routinely each patient was evaluated for evidence of neurological, hepatic, cardiovascular, renal, or hematological disease. The screening included complete blood count, urinalysis, transaminase, alkaline, phosphatase, blood urea nitrogen (BUN), serum glutamic oxalacetic transaminase (SGOT), and bilirubin determinations, and pregnancy tests where indicated. A roentgenogram of the chest and an ECG were required. Later, a thyroxine determination was added. A physical and neurological examination, including an electroencephalogram, was done prior to the initiation of therapy. These patients were evaluated regularly for evidence of physical abnormalities throughout their treatment period, with repeated laboratory studies and frequent physical examination. Administration of the drug was discontinued immediately when any irregularity occurred.

Blood lithium levels were monitored on days 4, 7, 14, and 21, and monthly throughout their treatment. Dosage was begun at 300 mg four times daily and was increased to a maximum

of 600 mg three times daily until there was clinical improvement. The patient was then treated with a reduced maintenance dose and followed with regular clinical evaluation together with blood lithium determinations. According to the literature, serious, permanent, or life-endangering side effects occur at blood levels in excess of 2.5 mEq/liter. Most cases of serious toxicity associated with lithium ingestion have been in conjunction with sodium depletion. In the beginning, patients were given at least 3 gm of sodium chloride daily to supplement their usual intake; however, this was discontinued early when patients became nauseated on the sodium chloride rather than lithium. Blood levels were monitored by the Department of Pathology of the Santa Rosa Medical Center. The assay method was simple and utilized a flame spectrophotometer.

The prescription duration of this investigational drug was for 6 to 12 months. Use of lithium carbonate longer than 12 months required assessment of the patient by at least two of the coinvestigators as well as the chairman of the Department of Psychiatry.

A blood count, urinalysis, transaminase, alkaline phosphatase, BUN, SGOT, and bilirubin determinations were obtained for four consecutive months, and every other month thereafter, until the drug was discontinued.

4. Patients considered suitable for the use of lithium were selected by the participating psychiatrists, who then admitted them for lithium carbonate treatment as outlined in the protocol.

Dosage and Side Effects: The dosage of lithium employed in both manic and schizoaffective patients ranged between 900 and 1,200 mg

Level (mEq/liter)	No. Patients
0.5	1
0.6	2
0.7	1
0.8	5
0.9	5
1.0	4
1.1	6
1.15	1
1.2	5
1.3	3
1.4	1
2.4	1

2. Levels of lithium in the blood, monitored on approximately the fourth day after medication was started. Levels above 2.0 mEq/liter were considered toxic. The starting dose was 300 mg four times a day.

Result	No. Patients
Excellent	17
Good	10
Bad	5
Undecided (further observation needed)	3

3. Therapeutic results of lithium carbonate treatment, 35 patients, Santa Rosa Medical Center.

daily. Maximum blood levels varied from 0.2 to 2.4 mEq/liter during the first blood levels obtained on the fourth day (Fig 2). The mean duration of hospitalization was four to six weeks. The mean duration for initial remission in manic states was one week, with extremes of from 3 to 14 days. Once initial improvement occurred, remission usually was rapid. Following remission, most patients were maintained on 600 to 1,200 mg daily.

Unfortunately, nausea was a side effect which forced discontinuation of the drug in three patients. Frequent nausea early in the study was due to the additional oral sodium chloride provided according to the protocol. This was quickly found to be unnecessary, as the salt content of the institutional food was adequate to maintain proper electrolyte levels.

We found that intolerance or side effects, which were minimal, occurred early in therapy, and maintenance was easily accomplished once a proper blood level of lithium carbonate was established.

The ability to maintain a therapeutic level of the drug is certainly variable on an individual basis. In rare instances, extremely high blood levels were reached on routine doses, which probably indicated undetected renal problems; conversely, a few individuals seem incapable of retaining the drug despite large doses.

Thyroid enlargement developed in three patients after several months of treatment. Surprisingly, most of the available tests showed normal thyroid function. Two patients were started on exogenous thyroid products because the attending physicians thought that the clinical manifestations of myxedema outweighed the laboratory findings.

Some side effects were seen with blood levels of 1.25 mEq/liter, but severe toxic reac-

tions appeared only with levels above 2.0 mEq/liter. Most side effects were easily corrected by stopping medication for 24 to 48 hours and resuming therapy at a lower dose. The usual complaint was nausea.

In one patient, toxic effects developed when the lithium level in the blood reached 2.4 mEq/liter on the fourth day, which was the initial determination. Symptoms were tremor, vertigo, confusion, diminished cutaneous sensation, impairment of proprioception, poor motor coordination, and loss of visual accommodation. Temporary discontinuation of the drug produced a therapeutic level of 1.0 mEq/liter in 48 hours.

A 31-year-old patient became pregnant after discharge from the hospital. Lithium carbonate was discontinued as soon as the pregnancy was discovered, which was approximately eight weeks after conception. Subsequently, a full-term infant was delivered with coarctation of the aorta. This patient later became extremely "manicky," and was started on lithium carbonate therapy again with excellent results. We were unable to find any publication relating congenital malformation to the therapeutic use of lithium carbonate. Further investigation is needed to determine if a causal factor exists.

Results: Our study began in June 1968 and continues to the present; 58 patients have been followed. We are including the first 35 consecutive cases; therapeutic results are shown in Fig 3. The results of our investigation reveal that lithium carbonate, if tolerated, is unequivocally the best therapeutic drug available for the treatment of the manic phase of manic-depressive psychosis. In fact, 100% of the patients whose conditions were accurately diagnosed responded with almost immediate remission of symptoms when therapeutic blood levels were obtained. Some schizoaffective schizophrenics also showed improvement when lithium carbonate was augmented with a phenothiazine.

Conclusion: It is the unanimous decision of those involved in the project that hospitalization is essential for the establishment of a tailored dose. There is no question that lithium is potentially an extremely toxic substance, but it is paradoxically quite safe if proper supervisory laboratory facilities and staff observations are available. Other than the need to urge the patient and family to continue the medication, no major problems were encountered in the outpatient management.

REFERENCES

1. Johnson G, Gershon S, Hekimian L: Controlled evaluation of lithium and chlorpromazine in the treatment of manic states: an interim report. Compr Psychiat 9:563-573, 1968.

2. Trautner EM, Morris R, Noack CH, et al: The excretion and retention of ingested lithium and its effect on the ionic balance of man. Med J Aust 42:280-291, 1955.

3. Gallego A, Lorente de No R: On effect of several monovalent ions upon frog nerve. J Cell & Comp Physiol 29:189-206, 1947.

4. Condouris GA: Conduction block by cocaine in sodium-depleted nerves with activity maintained by lithium, hydrazinium or guanidinium ions. J Pharmacol Exp Ther 41:253-259, 1963.

5. Keynes RD, Swan RC: The permeability of frog muscle fibres to lithium ions. J Physiol (London) 147:626-638, 1959.

6. Cazanelli A, Rogers G, Rapport D: Effects of inorganic ions on the respiration of brain cortex. Amer J Physiol 135: 309-315, 1942.

7. Krall AR: Potassium and sodium-like effects of lithium on brain mitochondrial phosphorylation. Life Sci 6:1339-1344, 1967.

8. Schou M, Amdisen A, Jensen SE, et al: Occurrence of goitre during lithium treatment. Brit Med J 3:710-713, 1968.

9. White RB, Schlagenhauf G, Tupin JP: The treatment of manic depressive states with lithium carbonate. Curr Psychiat Ther 6:230-242, 1966.

10. Gershon S, Yuwiler A: Lithium ion: a specific psychopharmacological approach to the treatment of mania. J Neuropsychiat 1:229-241, 1960.

The authors, Department of Psychiatry, Santa Rosa Medical Center, P O Box 7330, Station A, San Antonio, Tex 78207.

Quinidine Intoxication from Alkali Ingestion

The amount of quinidine excreted by the kidney varies with urine pH. With alkaline pH, renal excretion of the drug drops sharply. That this may have important clinical significance is illustrated by a case of quinidine intoxication which likely was caused by ingestion of antacids and an alkaline ash diet during long-term maintenance quinidine therapy. Patients who receive quinidine probably should be cautioned against taking drugs or foods which render the urine alkaline.

MYRON B. ZINN, MD

CASE REPORT: The patient, a 69-year-old retired sailor, was hospitalized by another physician in January 1967 for severe dyspnea. At that time he was told of "hypertension and heart failure." Therapy was begun with digoxin, 0.25 mg each morning and procainamide, 250 mg every six hours.

In May 1967 he first came under my care; he had continued to have exertional dyspnea. There was no chest pain, palpitation, edema, or recent orthopnea. On physical examination his blood pressure was 150/80 mm Hg, and pulse rate was 84/minute. Neck veins were flat at 60°. The lungs had a few fine rales at the right base. The point of maximum impulse was not felt. No thrill, murmur, rub, or gallop was noted. No liver or spleen was felt. No edema was evident. The chest roentgenogram showed heart enlargement with a cardiothoracic ratio of 16.5:30.5, and the cardiac contour suggested an enlarged left ventricle. Electrocardiogram (ECG) showed the pattern of left bundle branch block with regular sinus rhythm, first degree block, frequent atrial premature contractions with aberrent conduction, and frequent ventricular premature contractions.

On June 14, because of continued frequent premature contractions, quinidine sulfate 0.2 gm four times a day was substituted for procainamide. Digoxin, 0.25 mg each morning, was continued. The quinidine dose was raised to 0.3 gm four times a day June 21, and to 0.4 gm on July 25. At routine follow-up examination Aug 14, he presented with atrial flutter with varying atrioventricular block and a ven-

tricular rate of about 60/minute. He was hospitalized that day and his quinidine blood level was 3.6 mg/liter. Cardioversion was effected with a direct-current synchronized shock of 140 watt seconds. He was discharged on a regimen of quinidine, 0.4 gm four times a day.

On Oct 13, 1967, he was again seen for routine follow-up; again, atrial flutter with frequent ventricular premature contractions was present. We elected merely to observe at that time, since his rate was well controlled with digoxin, 0.25 mg each morning. On Nov 6 he had a sudden episode of syncope while on the commode. ECG showed persistence of atrial flutter with varying atrioventricular block and a ventricular rate of 56/minute. He had some nausea and diarrhea during the preceding week. He was rehospitalized that day, at which time his quinidine blood level was 9 mg/liter. His dosage was reduced to 0.3 gm four times a day. A heavy infestation of *Strongyloides stercoralis* was found in the stool. He was given a course of pyrvinium pamoate therapy; the diarrhea cleared and the patient was discharged Nov 16, 1967. A few days later (Nov 22), his pulse rate was 76/minute and regular, with premature contractions. ECG showed that he had spontaneously reverted to regular sinus rhythm with first degree block and ventricular premature contractions. Thereafter, from November 1967 until December 1969, he was maintained on digoxin, 0.25 mg each morning, and quinidine, 0.3 gm four times a day. On numerous occasions regular sinus rhythm with first degree block was observed, and occasionally he would show a few ventricular premature contractions.

On Dec 13, 1969, he came to the hospital emergency room with a three-day history of a swollen, painful right testicle and fever. His pulse rate appeared regular at 64/minute. His urine contained many pus cells and grew out *Escherichia coli,* sensitive to ampicillin. On admission the urine pH was 5. Blood urea nitrogen (BUN) level was 22 mg/100 ml; a recheck three days later gave a value of 21 mg/100 ml. Creatinine level three days after admission was 1.6 mg/100 ml. On admission ampicillin was begun and the acute orchitis improved rapidly. A routine ECG was obtained Dec 15, 1969, but the rhythm was not clear from the mounted tracing. A rhythm strip obtained the next morning showed no P waves with a probable nodal rhythm. A quinidine blood level was then obtained, and reported to be 25 mg/liter (usual therapeutic level is $<$ 10 mg/liter). Quinidine and digoxin were stopped immediately. A follow-up quinidine level 18 hours after the last dose was 10 mg/liter, and the rhythm had reverted to regular sinus rhythm with first degree block and frequent atrial premature contractions, with occasional ventricular premature contractions. At that time the patient was questioned carefully about self-medication and diet. He said that about one week before hospitalization a friend had given him a box of Mylanta tablets for "gas on the stomach." The box originally contained 100 tablets; subsequent count showed that he took a total of 62 at the rate of about 8 daily. In addition, oranges and grapefruit had become plentiful and cheap in our city, and for the two weeks prior to hospitalization he went on a fruit juice binge, drinking about 1 qt of fresh orange-grapefruit juice mixture daily.

Quinidine was withheld for 42 hours, and then started again with dosage of 0.3 gm every eight hours. After four doses, his quinidine blood level was 5 mg/liter. ECG still showed first degree block with frequent atrial premature contractions. On Dec 21 the dose was raised to 0.3 gm every six hours, and on Dec 22, one hour after his first morning dose, his quinidine blood level was 8 mg/liter. Three hours after the second dose that day, the level was 6 mg/liter. He was then discharged on a regimen of quinidine, 0.3 gm four times a day, and digoxin, 0.25 mg each morning. His rhythm was at that time regular sinus with

first degree block. The quinidine blood level obtained one week later (Dec 29) three hours after his morning dose was 7 mg/liter. Rhythm was regular sinus rhythm with first degree block without premature contractions. On Jan 27, 1970, his quinidine blood level was 8 mg/liter. Rhythm was unchanged.

Discussion: The antacid Mylanta contains 200 mg of magnesium hydroxide, 200 mg of dried aluminum hydroxide gel, and 20 mg of simethicone in each tablet. Both aluminum hydroxide and magnesium hydroxide are classified as nonsystemic antacids, and do not produce systemic alkalosis. However, it is known that magnesium hydroxide administration may cause alkaline urine[2] and aluminum hydroxide is reported to decrease urine acidity.[3] One quart of orange-grapefruit juice a day would be equal to ingestion of about 50 mEq of bicarbonate ion daily.[4] Since the average normal adult excretes about 48-80 mEq of acid daily via the kidneys,[5] it seemed quite likely that this patient's antacid ingestion and high fruit juice intake caused his urine to be alkaline. In order to assess the effects of this quantity of antacid and fruit juice on urine pH, six normal subjects were asked to test their urine pH using Hydrion paper three times daily (on awakening, at 2 pm, and at bedtime) while (1) on their usual diet; (2) for three days during which they took two Mylanta tablets four times daily; (3) for three days during which they drank 1 qt of 1:1 orange-grapefruit juice mixture daily, 8 oz four times daily; and (4) for three days during which they followed both the Mylanta and the fruit juice regimens. Control periods of three to five days were obtained between trials. The following results were noted: Mylanta alone produced a persistently alkaline urine pH (between 7 and 8) during the trial period in four out of six subjects. One quart of grapefruit-orange juice daily alkalinized the urine in only one out of the six subjects. Mylanta plus 1 qt of fruit juice daily produced a persistently alkaline urine during the test period in five out of six subjects. The sixth subject had a pH of 7 on four cut of nine determinations, and a pH of 6 in the other five determinations during the trial period.

From these data it may be concluded that the dosage of alkali and type of diet which this patient ingested probably alkalinized his urine. As previously mentioned, alkaluria has been shown to cause a decrease in quinidine excretion. This would explain the subsequent finding of a toxic level of quinidine in the blood, associated with the appearance of a new abnormal rhythm while on a maintenance dose which previously had been well tolerated for two years. The original maintenance dose of 0.3 mg four times a day was resumed, and on a normal diet, blood levels obtained one week and four weeks later were in the usual therapeutic range.

This case suggests that a patient taking usual maintenance doses of quinidine may develop toxic levels of the drug with the ingestion of alkali as antacids and/or an alkaline ash diet. All patients placed on a regimen of quinidine probably should be cautioned against taking drugs or foods which render the urine alkaline.

REFERENCES

1. Gerhardt RE, Knouss RF, Thyrun RT, et al: Quinidine excretion in aciduria and alkaluria. Ann Intern Med 71:927-934, 1969.

2. Goodman LS, Gilman A: The Pharmacological Basis of Therapeutics. New York, Macmillan Company, 1965, p 996.

3. Brody M, Bacrach WH: Antacids—comparative biochemical and economic considerations. Amer J Digest Dis 4:435-460, 1959.

4. Mayo Clinic Diet Manual, ed 3. Philadelphia, WB Saunders Company, 1961, p 183.

5. Pitts RF: Physiology of the Kidney and Body Fluids. Chicago, Year Book Medical Publishers Inc, 1963, p 173.

Dr. Zinn, Suite 2E, Medical Professional Building, San Antonio, Tex 78212.

Campbell's Soups... wide variety...for limited appetites

Many people lose interest in food as they grow older. Some of them are fussy eaters—with only a few favorite foods. Others become indifferent to foods—because planning and preparing meals becomes a chore. Here Campbell's Soups can help —for these four very good reasons:

Appeal With a variety of tastes, textures, aromas, and colors, Campbell's Soups can add interest and appetite appeal. And they're easy to eat—ingredients are tender, bite-size. Even patients on special diets will find soups they can enjoy among the more than 50 different varieties available.

Nourishment Campbell's Soups contain selected meats and sea foods, best garden vegetables—carefully processed to help retain their natural flavors and nutritive values.

Convenience Within 4 minutes a bowl of delicious soup is heated and ready to eat.

Economy Campbell's Soups are inexpensive—an important consideration to those whose budgets are limited.

Recommend Campbell's Soups . . . and, of course, enjoy them yourself. Remember, *there's a soup for almost every patient and diet . . . and for every meal.*

THE STOPPER

LOMOTIL®

tablets/liquid

Each tablet and each 5 cc. of liquid contain:
diphenoxylate hydrochloride .....2.5 mg.
(Warning: May be habit forming)
atropine sulfate .....0.025 mg.

first aid in diarrhea of acute gastroenteritis

PROMPT ANTIDIARRHEAL ACTION
Roentgenographic studies demonstrate that the motility-lowering activity of Lomotil is concentrated in the first three hours and continues for at least six hours.

Clinical investigators have found ample confirmation of these determinations. Lomotil has reduced diarrheal urgency in many patients within one hour.

OPTIMAL ANTIDIARRHEAL CONTROL
Numerous investigators have remarked on the high degree of effectiveness of Lomotil in a variety of diarrheal disorders. Lomotil has given good to excellent relief of symptoms in many patients who had failed to respond to other measures.

UNSURPASSED ANTIDIARRHEAL ACCEPTANCE
Patients prefer Lomotil for its convenience, its prompt control of diarrhea and its relief of cramping and urgency. Physicians specify Lomotil for its dependable action and its relative freedom from side effects when taken as directed.

Warnings: Lomotil should be used with caution in patients taking barbiturates and, if not contraindicated, in patients with cirrhosis, advanced liver disease or impaired liver function.

Precautions: Lomotil is a federally exempt narcotic with theoretically possible addictive potential at high dosage; this is not ordinarily a clinical problem. Use Lomotil with considerable caution in patients receiving addicting drugs. Recommended dosages should not be exceeded, and medication should be kept out of reach of children. Signs of accidental overdosage may include severe respiratory depression, flushing, lethargy or coma, hypotonic reflexes, nystagmus, pinpoint pupils, tachycardia; continuous observation is necessary. The subtherapeutic amount of atropine sulfate is added to discourage deliberate overdosage.

Adverse Reactions: Side effects reported with Lomotil therapy include nausea, sedation, dizziness, vomiting, pruritus, restlessness, abdominal discomfort, headache, angioneurotic edema, giant urticaria, lethargy, anorexia, numbness of the extremities, atropine effects, swelling of the gums, euphoria, depression and malaise.

Overdosage: The medication should be kept out of reach of children since accidental overdosage may cause severe, even fatal, respiratory depression.

Dosage: The recommended initial daily dosages, given in divided doses until diarrhea is controlled, are as follows:

Children:
3-6 mo. .. ½ tsp.* t.i.d. (3 mg.)
6-12 mo. .. ½ tsp. q.i.d. (4 mg.)
1-2 yr. ... ½ tsp. 5 times daily (5 mg.)
2-5 yr. ... 1 tsp. t.i.d. (6 mg.)
5-8 yr. ... 1 tsp. q.i.d. (8 mg.)
8-12 yr. .. 1 tsp. 5 times daily (10 mg.)
Adults: ... 2 tsp. 5 times daily (20 mg.) or 2 tablets q.i.d.
*Based on 4 cc. per teaspoonful.

Use of Lomotil is not recommended in infants less than 3 months of age.

Maintenance dosage may be as low as one-fourth the initial daily dosage.

953

in cardiac edema

Dyazide®

Trademark

Each capsule contains 50 mg. of Dyrenium® (brand of triamterene) and 25 mg. of hydrochlorothiazide.

gets the water out

spares the potassium

Before prescribing, see complete prescribing information in SK&F literature or *PDR*.

Indications: Edema associated with congestive heart failure, cirrhosis of the liver, the nephrotic syndrome, late pregnancy; also steroid-induced and idiopathic edema, and edema resistant to other diuretic therapy. 'Dyazide' is also indicated in the treatment of mild to moderate hypertension.

Contraindications: Pre-existing elevated serum potassium. Hypersensitivity to either component. Continued use in progressive renal or hepatic dysfunction or developing hyperkalemia.

Warnings: **Do not use dietary potassium supplements or potassium salts unless hypokalemia develops or dietary potassium intake is markedly impaired.** Enteric-coated potassium salts may cause small bowel stenosis with or without ulceration. Hyperkalemia (>5.4 mEq/L) has been reported in 4% of patients under 60 years, in 12% of patients over 60 years, and in less than 8% of patients overall. Rarely, cases have been associated with cardiac irregularities. Accordingly, **check serum potassium during therapy, particularly in patients with suspected or confirmed renal insufficiency (e.g., certain elderly or diabetics). If hyperkalemia develops, substitute a thiazide alone. If spironolactone is used concomitantly with 'Dyazide', check serum potassium frequently**—they can both cause potassium retention and sometimes hyperkalemia. Two deaths have been reported in patients on such combined therapy (in one, recommended dosage was exceeded; in the other, serum electrolytes were not properly monitored). Observe regularly for possible blood dyscrasias, liver damage or other idiosyncratic reactions. Blood dyscrasias have been reported in patients receiving Dyrenium (triamterene, SK&F). Rarely, leukopenia, thrombocytopenia, agranulocytosis, and aplastic anemia have been reported with the thiazides. Watch for signs of impending coma in acutely ill cirrhotics. Thiazides are reported to cross the placental barrier and appear in breast milk. This may result in fetal or neonatal hyperbilirubinemia, thrombocytopenia, altered carbohydrate metabolism and possibly other adverse reactions that have occurred in the adult. When used during pregnancy or in women who might bear children, weigh potential benefits against possible hazards to fetus.

Precautions: Do periodic serum electrolyte and BUN determinations. Do periodic hematologic studies in cirrhotics with splenomegaly. Antihypertensive effects may be enhanced in postsympathectomy patients. The following may occur: hyperuricemia and gout, reversible nitrogen retention, decreasing alkali reserve with possible metabolic acidosis, hyperglycemia and glycosuria (diabetic insulin requirements may be altered), digitalis intoxication (in hypokalemia). Use cautiously in surgical patients. Concomitant use with antihypertensive agents may result in an additive hypotensive effect.

Adverse Reactions: Muscle cramps, weakness, dizziness, headache, dry mouth; anaphylaxis; rash, urticaria, photosensitivity, purpura, other dermatological conditions; nausea and vomiting (may indicate electrolyte imbalance), diarrhea, constipation, other gastrointestinal disturbances. Rarely, necrotizing vasculitis, paresthesias, icterus, pancreatitis, and xanthopsia have occurred with thiazides alone.

Supplied: Bottles of 100 capsules.

SK&F

Smith Kline & French Laboratories

YOUR TMA MEMBERSHIP SUPPORTS

THE MEMORIAL LIBRARY

The Texas Medical Association Memorial Library is one of the leading medical libraries in the country and is maintained for the use of TMA members. Built upon a collection of 45,000 bound medical volumes, the library also maintains an extensive reprint collection, receives over 1100 medical journals monthly, and owns over 400 professional and lay films. Tape recordings, including some Cassettes, from the current Audio-Digest Foundation editions are available on the subjects of general practice, surgery, internal medicine, pediatrics, obstetrics-gynecology, ophthalmology, anesthesiology, cardiology, and otolaryngology, as well as the AMA News Journal.

Complete informational service of all kinds is available—including scientific, socio-economic, and legislative subjects—from the library and other departments of your TMA. You may come by, write, telephone, or wire your requests, and materials will be mailed the same day, if possible. There is, of course, no charge.

TEXAS MEDICAL ASSOCIATION

1801 North Lamar Boulevard, Austin, Texas 78701
Phone 512 477-6704

Building a

ANN H. HUGHES, MD; JUNE SMITH OLIVER, MSSW; HAROLD K. DUDLEY, JR, MS

This article outlines the basic needs and long-term plans for development of a strong institutional program to treat emotionally disturbed children in this state.

AMERICA IS A CULTURE of youth. Not only do population statistics tell us this; a large proportion of our national economy is devoted to the manufacture of products marketed to young people, and our advertising is clearly directed at the young in years as well as in spirit. Almost daily we read of population statistics projected for the year 2000 and of the fantastically complex problems that will accompany them. It is no accident that spin-off from this explosion of young people is a growing concern about their impact on our society.

We have not always had public concern for our children. Legal rights, protection, and special services for them are products of this century. Just as we adults were priding ourselves on our children and what we hoped to do for them in the 1950s, we realized that they had outnumbered us in the 1960s. The result has been a frantic scramble out of fear and desperation to complete our plans, to scrap them for new ones, and even to blame the young people for creating all the chaos that seems to abound in our world today.

This problem is going to get much worse before it gets much better. We are trying to find solutions to it on national and state levels in all areas of concern. The area of mental health services is no exception. The National Institute of Mental Health has estimated that there are 10 million people under age 25 who require some form of mental health service. Approximately 1,400,000 young people under age 18 needed psychiatric care in 1966, but nearly 1 million of them never received it. During that year, more than 27,000 children under age 18 were in state or county mental hospitals, and by 1970 the number is predicted to double. Is it any wonder that our reaction is one of despair? As stated by the Joint Commission on Mental Health of Children, Inc., "We proclaim that we are a nation devoted to its young. We believe that we have made great strides toward recognizing the needs of children and youth. Yet, we find ourselves dismayed by the violence, frustration and discontent among our youth, and by the sheer number of emotionally, mentally, physically and socially handicapped youngsters in our midst."*

The Texas Picture: Texas shares a proportionate bulk of this problem with the accompanying feelings of fear and frustration. The Texas legislature attempted to meet the challenge by creating the Division of Child and Adolescent Services within the Department of Mental Health and Mental Retardation in 1969. This response speaks to the 500,000 or so children in the state under age 18 who are in need of some type of psychiatric service.

The Department of Mental Health and Mental Retardation has, since 1966, been charged with the responsibility of providing mental health care for all citizens of the state regardless of age. Children and adolescents now in

**Report of the Joint Commission on Mental Health of Children, Inc., New York City, Harper & Row Publishers, Inc., 1969.*

Foundation

state care range in age from 5 to 21 and come from all ethnic, cultural, and socioeconomic groups. Every diagnostic category of illness or disturbance is represented in one form or another. These children have been housed largely in geographic units of the eight state hospitals, along with adult patients, with some exceptions. The creation of the Division of Child and Adolescent Services has promoted hope that this will not always be so. This move was a recognition of the inadequate care children were receiving in Texas. This does not diminish the important contribution of the many individuals who have worked to provide adequate services for our young people. Conditions would be deplorable if it were not for the dedicated efforts of those who, handicapped by lack of money, shortage of personnel, and inadequate physical facilities, have been providing the best possible care in our institutions.

Figs 1-3 give a clear picture of the trend of patient movement during the past three years.

Young people are moving into Texas hospitals at a faster pace than ever before and are being readmitted at an ever greater rate. In 1966, 1 out of every 35 patients admitted to our state hospitals was under 20 years of age, and by 1969 this figure had increased to 1 out of every 11. We predict that by 1975, 1 out of every 5 patients admitted will be in this age group. These numbers may be frightening, but they reflect the population pattern developing in the United States. The baby boom of the 1950s will bring about a 23% increase in our parent population by 1980. At that time, three out of every five families will have at least one child living at home, according to the National Industrial Conference Board.

Admission Factors: Generally, young people are admitted to our facilities because they have failed to adjust to their environment. A hospital setting, we hope, will help them learn to cope effectively with life upon their release. There are multiple factors that contribute to poor adjustment and consequently to increased admissions to state hospitals during the past few years:

1. Sheer population growth of all ages and specifically of those under age 25 is the major contributor to increased admissions. By 1975 more than 50% of our population will be within this age range. We can expect proportionate increases in all facilities that serve children.

2. A lowered level of tolerance for deviance creates pressures for removal of deviant ones from their normal environment. High-density living in this exploding population increases the impact and frequency of deviant behavior. The family touched by this problem 50 years ago usually was able to contain it within a rather limited space, while now the same problem is likely to affect many people more often. The resulting suppression of deviance today probably contributes to the quantity and quality of each succeeding outburst.

3. The use and abuse of drugs and narcotics has spiraled in this decade. While this behavior is legally a matter for the courts, they have not dealt effectively with it. Drug use symptomatizes and creates disturbed behavior and frequently is the precipitating incident that brings a young person to the hospital. Our chemically oriented society now is faced with

the specter of its own "wonder drug syndrome." Instant relief from headache, nervous tension, and other disorders has been carried a step further by the younger generation and the result is instant relief from the pressures of life itself.

4. Medical science and its diagnostic prowess is bringing more patients into our hospitals. We detect more handicapped people more easily these days. The treatment facilities have not kept pace with this trend in spite of the awakened public awareness of, and demand for, early treatment.

5. The complexity of society and quality of life places pressures on families that often center in children's behavior. Parents and young people alike have difficulty coping with this rapidly changing environment, and the family structure no longer offers strong support. Increasingly, parents resort to divorce or other family separations, including hospitalization, as a means of solving conflicts. The instability surrounding young people calls up inadequate defense mechanisms with subsequent erratic and deviant behavior.

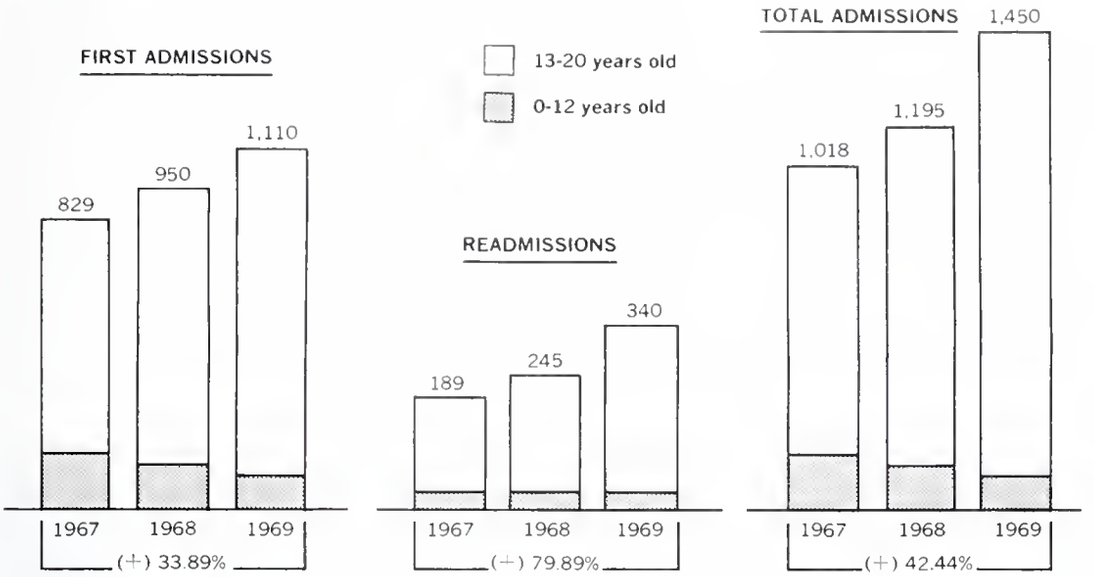
6. Many young people are victims of our consumer oriented society that pressures them to seek instant gratification of all their desires. Conflict is bound to arise when adult society (though mass media) tells young people to consume and gratify wants immediately while telling them through parent roles to bide their time quietly and achieve gratification through work and patience.

The list could go on and on. Faced with these facts and issues, we in the public mental health field must somehow resolve our own frustrations and fears and face the problem of providing treatment. Mere custodial care is no longer acceptable. This era demands a new look at treatment practices and facilities based on current knowledge about behavior disorders and practicing creative and innovative techniques.

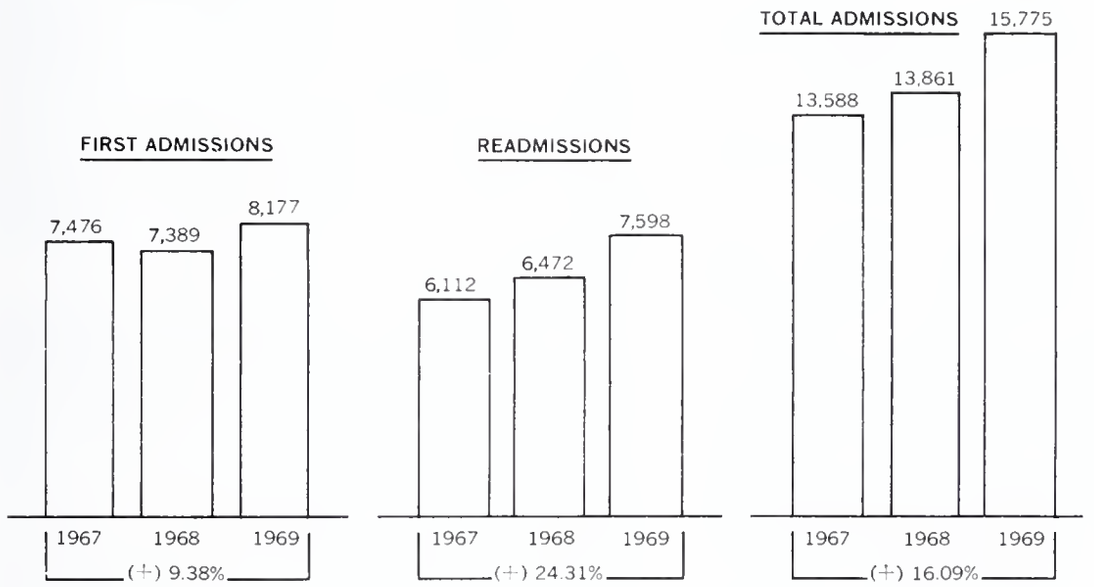
A child's environment plays a vital part in the growing up process. It is here that he either learns or does not learn to cope with life's confrontations. He must either learn to control his surroundings or be controlled by them. His early state of total dependency must yield gradually to one of mastery. This maturation process occurs in a sequence of steps, each of which is dependent upon the completion of the previous one. In addition, it is dependent upon coordinated development in four major areas: physical, emotional, intellectual, and psychological. Therefore, when a child is deprived in any one of these areas of development, serious consequences may result in all of the others. To ignore any of these areas and to deprive a child of the opportunity to develop fully in all of them is negligence.

When a child is in a state hospital, his environment there is affecting his total development. It can direct the course of his entire life. Unless we accept the responsibility for all of his needs while in our care, we may be therapeutic in one area but destructive in another.

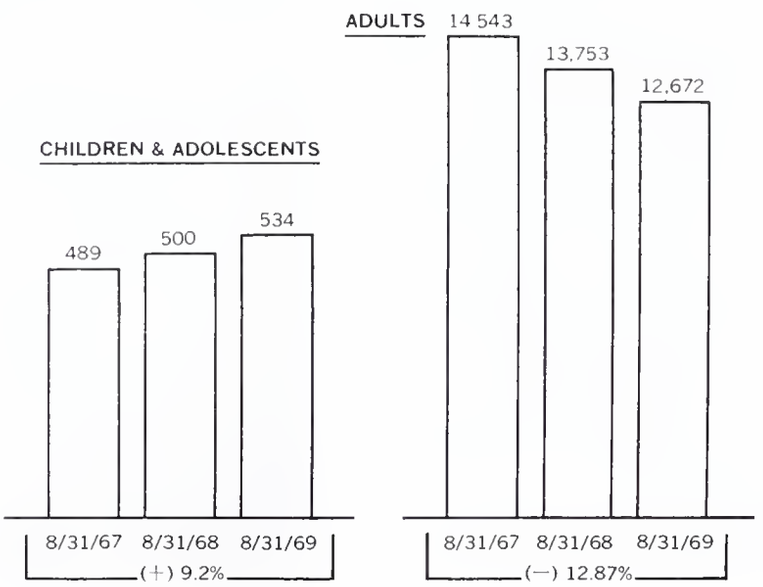
To place a child in an institution and provide for his physical needs is superficial care. Unless he is also given the opportunity and encouragement to develop intellectually, emotionally, and psychologically, he is not receiving effective treatment.



1. First admissions, readmissions, and total admissions for children and adolescents to all state hospitals during state fiscal years 1967, 1968, and 1969.



2. First admissions, readmissions, and total admissions for adults (age 21 and over) to all state hospitals during state fiscal years 1967, 1968, and 1969.



3. Comparison of resident population of children/adolescents and adults in state mental hospitals as of Aug 31, 1967, 1968, and 1969.

Program Goals: The Texas Department of Mental Health and Mental Retardation is attempting, in its Division of Child and Adolescent Services, to design a program that will give its young patients the opportunity to develop stable personalities and become productive citizens within the limits of their potential. This design is based on the four areas of developmental growth, and requires the following changes and additions to the present hospital care:

1. Separate buildings or wards must be available for all young people's programs. Patients scattered on geographic units would make development of any program impossible.

2. Child and adolescent units must have a higher staffing ratio than any units now within our system. This staff must also be carefully selected and highly trained. Basic to this requirement is that the employees genuinely like youngsters and have a high tolerance for their behavior. They must be stable, yet flexible. Good staff is the key to good program.

3. Education must be available to all children. Our society is geared to education, which forms an important part of every child's life. To remove a child from his home and educational setting and fail to provide a therapeutic substitute can only be damaging to him. Since most patients have histories of difficulty in school, special educational programs are required with vocational education included.

4. Gyms, playgrounds, and recreation facilities must be available. Young people have a high level of energy and need room and healthful outlets for its release.

In addition to these basic goals there are other program needs which must be implemented.

5. A statewide standardized data collection system, used by all affiliated agencies, should be developed. Lack of useful data on patients, former patients, and potential patients handicaps those in the hospital system who are involved in long-range program planning. Possibly the data collection system being put into operation by the Texas Department of Mental Health and Mental Retardation could be used for this.

This data collection must include epidemiological information which will be needed for treatment and prevention. We need a better understanding of how patients become ill if we are to have any success in stopping the flood of admissions.

Evaluation procedures must be included in the data collection system. There is a real lack of program evaluation in our country and, therefore, little knowledge of the effectiveness of present programs.

6. Shortage of funds for school programs dictates the need for the establishment of an independent school district within the hospital system. This proposal is to be presented to the Texas legislature at the next session. Such a plan would allow for fairly complete program financing by the Texas Education Agency.

7. Specialized programs to meet diverse problems should be developed in different hospitals. Drug problems, behavior disorders, and psychoses all demand different treatment procedures. It would be impractical to set up broad programs in all facilities, so specialized units must be considered. A therapeutic camp-

ing program on a year-round basis should be used for children who cannot succeed in educational programs.

8. Admission procedures must be adopted that require adequate patient information and establish personal or agency responsibility for the patient after his discharge. Contact with this person or agency must be maintained during the course of treatment, and the responsible party must be involved in discharge plans and follow-up care.

These procedures require close coordination with the patient's home community. Coordination of hospital and local agency services must be developed to establish a network of patient care that prevents punting of patients from door to door or losing them in holes between services. This will require outreach from the hospitals to the local MH/MR centers, to the local courts, and to other public service agencies. It will require a more basic understanding of our patients and the factors in their lives that bring them into our care. This involves expanding the focus of the medical model, which fosters hospitalization, to include the social model that deals with family problems in the home communities. It demands seeing the patient as a whole person whose state of mental health is a reflection of his general state of physical and social well-being, shaped by economic, educational, and community forces as well as physical and familial ones. To plan for adequate hospital care without consideration of the quality of the environment to which the patient must return is sheer waste of tax money and gives only Band-Aid service to a chronic ailment.

Total interdisciplinary community planning must become the goal of the Department of Mental Health and Mental Retardation if its hospital services are to be truly effective.

Summary: This comprehensive plan for child and adolescent services will not be completed quickly. Most of this is merely on paper at this time and totally dependent upon legislative budget action. A separate budget for children and adolescent services has been submitted for the first time in history, and will give the legislature the opportunity to establish some sort of priority on this plan.

Legislators do not act within a vacuum, however. Their actions are responsive to public demands and pressures. Therefore, it is the public who must set the priorities and who must alert the legislature to its wants and needs. We must have public awareness about mental health problems and services. Our society must discard the traditional concept of custodial care for the mentally ill and accept the challenge of community responsibility for mental health care. We in the professions must work actively in the arena of public education. While this is not a task that we generally enjoy, its potential results make our efforts worthwhile.

Dr. Hughes, 4107 Holland Ave, #206, Dallas, Tex 75219.

Mrs. Oliver, 1803 West Ridge Drive, Austin, Tex 78704.

Mr. Dudley, 4909 W Frances Place, Austin, Tex 78731.

Lateral Unilobular Thyroid

EUGENE A. ELLINGSON, MD

1. Note complete absence of left lobe, pyramidal lobe, and isthmus. Adenomata are responsible for the irregular surface of the gland.

UNILOBULAR THYROIDS in any location are rare, but the lateral placement is the least common (Fig 1).

Gow,[1] in 1833, was the first to report in the English literature concerning this condition. Dubs,[2] in 1918, found only brief mention of such a case reported in 1866. Luschka[3] discovered the absence of the left lobe of the thyroid during the course of a necropsy on a newborn in 1876. Marshall[4] reported a case in 1895. In 1926 Wegelin recorded instances of half sided thyroid glands cited by various practitioners.[5-10] In 1917 Stierlin circulated a questionnaire among the goiter surgeons of Switzerland, and five additional cases (from 7,000 goiter operations) were added to the list. From 1931 through 1945, there have been 14 reported cases;[11-16] during the past 22 years there have been no additional cases reported.

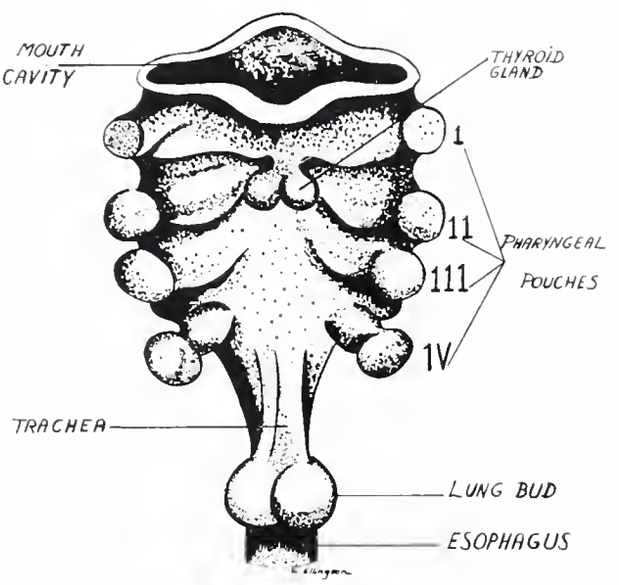
Embryology: The median thyroid anlage appears in the midline of the pharynx just anterior to the tracheal invagination when the embryo is approximately 2 mm in length (Fig 2). During the 7 mm stage, or toward the end of the fifth week, the anlage becomes solid and loses its connection with the base of the tongue. It appears to descend caudally to the level of the second, third, and fourth tracheal rings. Actually the pharynx elongates in a cranial direction leaving the thyroid behind. The site of the original opening into the pharynx persists as the foramen cecum. After reaching its lower position, the anlage grows laterally and upward on both sides of the trachea to form the lobes connected in the midline by the isthmus (Fig 3). Many authors admit the existence of lateral

One case of right lateral unilobular thyroid is described, and the importance of a gammagram is indicated. When noted clinically, these glands usually are the site of adenomata, and quite frequently they are toxic. The embryology and literature are reviewed. There is no uniformity of opinion regarding the origin of the thyroid, but in explaining this anomaly, the author prefers the theory of a single central primordium.

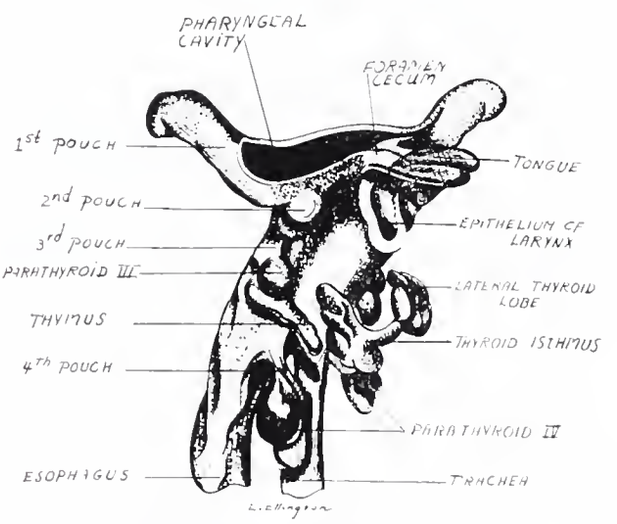
thyroid primordia arising bilaterally from the fourth pharyngeal pouches, but most of them attach little significance to these structures (Fig 4). These outpouchings of the fourth pharyngeal pouches are usually referred to as either the postbranchial bodies, the rudimentary fifth pouch, or the ultimobranchial bodies. Many investigators believe that these lateral anlagen descend laterally into the neck and join with the median anlage, thus contributing to the formation of the lateral lobes of the thyroid.

Case Report: A 39-year-old Negro woman was first examined on March 13, 1969. She had felt pains over the right side of her throat for 18 months. Four to five months prior to examination she had noted a "knot in her neck." She had had several "spells of strangling." The patient had been taking thyroid extract, 2 grains daily, for one year. On Jan 31, 1968 there was a 31.8% uptake of ^{131}I over a 24-hour period (Fig 5). The gammagram revealed complete absence of functioning thyroid tissue to the left of the midline. To the right of the midline a large, pear-shaped density measuring 6.5 cm by 4 cm was delineated. The mass extended into the upper mediastinum and projected 1 cm to the left of the midline. A repeat gammagram on May 7, 1968 showed the mass to be the same. There was a 10% drop in the 24-hour ^{131}I uptake. There was no history of weight loss or voice changes.

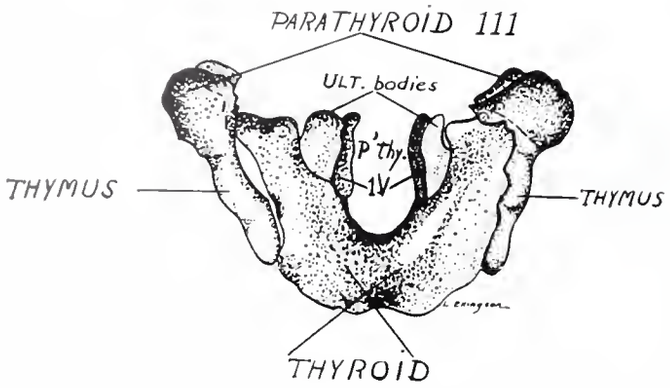
The patient was obese and appeared older than her stated age. Her neck was stiffened due to osteoarthritis and could not be fully hyperextended. The right lobe of the thyroid gland



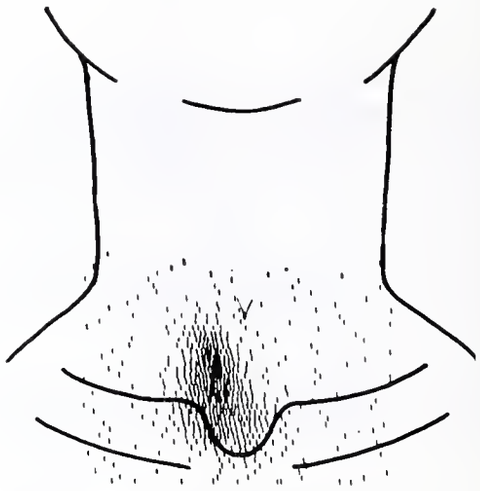
2. Ventral view of the pharynx during the fourth week of embryonic development.



3. Embryonic pharynx and derivatives at the 45th day. Note the isthmus connecting the lateral lobes at the level of the developing trachea.



4. Ventral view of the pharynx at the 14 mm stage. The various glandular derivatives are depicted.



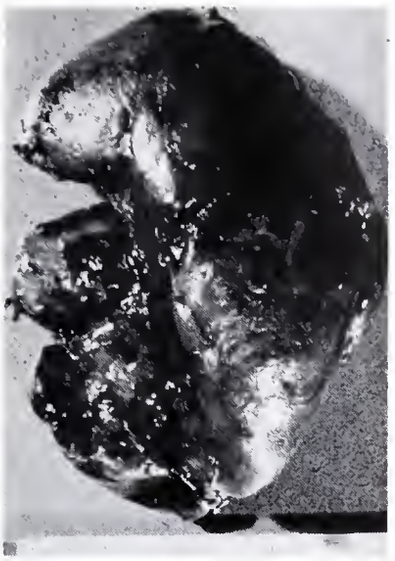
5. Gammagram showing the only functioning thyroid tissue to be in the usual area of the right lateral lobe.

CONDITION OF EXISTING LOBE	
Normal, 5 cases (necropsy)	
Adenomata with infantile myxedema, 1 case (necropsy)	
Diffuse hyperplasia with toxicity, 1 case	
Nontoxic adenomata, 4 cases	
Large calcified cyst adenomata, 1 case	
CONDITION OF VESSELS, SIDE OF DEFECT	
Both vessels rudimentary, 2 cases (necropsy)	
Inferior thyroid only, supplying lobe on opposite side, 1 case	
Inferior only, 2 cases	
Both arteries missing, 5 cases	
PARATHYROIDS, SIDE OF DEFECT	
Two normal glands, 5 cases	
Left upper gland only, 1 case	
Left lower gland only, 1 case	

7. Data on existing lobe, vessels, and parathyroids.

was enlarged and firm. No glandular tissue could be palpated on the left side. There was no tremor, exophthalmus, or other signs of toxicity. The thyroid extract was discontinued and she was placed on a regimen of 10 drops of Lugol's solution to be taken three times a day.

Surgery was performed on March 25, 1969. A standard incision was made. On separating the strap muscles, the trachea was found to be deviating to the left side approximately 1.5 cm. The right lobe was enlarged and nodular throughout. The strap muscles were retracted widely on the left side, and no thyroid tissue could be found. The dissection along the carotid artery was extended down into the superior mediastinum inferiorly, and above the thyroid notch superiorly. Two flat parathyroid glands about 1 cm in diameter were noted on the left side. There was neither a superior nor inferior thyroid artery on the left side. The arterial supply on the right was anatomical with normal appearing superior and inferior thyroid arteries. The right lateral thyroid vein gave off an anomalous branch which went posteriorly and superiorly to anastomose with the superior thyroid vein. The superior parathyroid gland was attached to this vein and was embedded in a fissure in the upper half of the posterior aspect of the thyroid lobe. It was gently disengaged and left intact in the bed of the thyroid. This was the only parathyroid gland on the right side. Both recurrent laryngeal nerves were present and anatomical as to size and position. The entire right lobe of the thyroid was removed (Fig 6). Healing was uneventful and the



6. Photograph of posterior aspect of surgical specimen. Note nodularity of surface.

patient has been maintained on 2 grains of thyroid extract per day.

Conclusions: The absence of one of the thyroid lobes does not, of itself, produce symptoms. For this reason the anomaly is either discovered when the existing lobe becomes symptomatic or at necropsy. Radioisotope studies have made it easier to make a preoperative diagnosis. This type of unilobular thyroid differs from the midline anomalies in that hypothyroidism is seldom seen. Dieterle's case, in which the existing right lateral lobe contained an adenoma, was the only one exhibiting myxedema. The patients' ages ranged from newborn to 85 years. The sex ratio was 7 to 16 in favor of the females. The right lobe was missing in 4 cases, while the left lobe was missing in 26. In 5 cases there was no record of the side. Von Maresch first described cystic bodies along the side of the trachea on the side of the defect. This occurred in only 6 cases. Hirschfeld described these bodies in great detail. Fig 7 summarizes the available data on the existing lobe, parathyroids, and vessels. Adenomata was the single most common clinical condition exhibited, and toxicity was a close second. In the few cases where the parathyroids were mentioned, the anatomy was similar to that associated with a normal thyroid. The blood vessels usually were missing on the side of the defect. As the right lobe is usually removed first, the existence of a left lobe should be ascertained prior to removal of the diseased lobe. The left lobe was the one which was usually missing in this series.

REFERENCES

1. Gow WJ: Total absence of the left lobe of the thyroid body. J Anat Physiol 18:118, 1883.

2. Dubs J: Uber hemiaplasie der schilddrüse. Zentralbl f Chir 45:744-748, 1918.

3. Von Luschka H: Die Anatomie des Menschen in Rücksicht auf die Bedürfnisse der praktischen Heilkunde. 3 v, Tübingen, H Laupp, 1863-1869. (1, Abt 1, 295.)

4. Marshall CF: Variations in the form of the thyroid gland in man. J Anat Physiol (London) 29:234-239, 1895.

5. Ehlers P: Beitrage zur Morphologie der Schilddruse. Diss Kiel, 1886. Schmidt & Klaunig, 13 pp.

6. Weibgen K: Zur Morphologie der Schilddrüse des Menschen. 1891. JF Lehmann. 15 pp. Forms Hft 14, München med Abhandl.

7. Dieterle T: Zur Pathologie des infantilen Myxödems. Verhandlungen der Versamml. d Gesellschaft für Kinderheilkunde deutsch Naturf u Aerzte 1911, Wiesb 1912, 28:276-298.

8. Wenglowski R: Ueber die Halsfisteln unid Cysten. II Arch f klin Chir Berl 789-892, 1912.

9. Zuckermann H: Ueber einen Hypophysenbefund bei Schilddrusen aplasie. Frankfurt Ztschr Path Wiesb 14:143-150, 1913.

10. Erdheim J: Beitrag zur Kenntniss der branchiogenen Organe des Menschen. Wiener Klinische Wochenschrift, 14: 974-979, 1901.

11. Hirschfeld, S: Zur Kenntnis des halbseitigen Schilddrusenmangels. Centralb f allg Path u path Anat 52:289-295, 1931.

12. Pemberton J deJ, McCaughan JM: Hemi-aplasia of thyroid gland; review of literature and report of 5 cases. Tr Am A Study Goiter, pp 34-47, 1933.

13. Poate HRG, Wyndham N: Hemiaplasia of thyroid gland. M J Australia, 2:514-515, 1938.

14. Torroella E: Anomaliá poco frecuente del cuerpo tiroides (bocio). Rev Med Cubana 53:972-974, 1942.

15. Poate HGR, Spencer SL: Hemiaplasia of thyroid gland. M J Australia 1:223 , 1945.

16. Lazarus JA: Anomalies of the thyroid gland with special reference to the unilobular thyroid. Med Times 76:391-393, 1958.

Dr. Ellingson, 1619 Medical Towers Bldg, Houston, Tex 77025.

This review of treatment modalities, both old and new, emphasizes that children with cerebral palsy suffer diverse, multiple, and complex disabilities that affect every aspect of their lives. The physician needs to know about various methods of treatment in several fields so that he can select the right therapeutic measures for the right child at the right time.

Trends in Cerebral Palsy Treatment

SINCE THE DESCRIPTION of cerebral palsy by Little in 1843, much has changed in the various modes of treatment but little has been added to his description of the clinical course. For many years these patients were offered little specific treatment other than an occasional operative procedure. The literature from about 1890-1924 discusses only multiple surgical procedures with little, if any, discussion of conservative management. The little conservative therapy was largely a hit-and-miss proposition until Crothers of Boston and Phelps of Baltimore developed the idea that the proper therapeutic approach should encompass all necesary medial and ancillary fields.

History: Some historical background is helpful in order to understand the present trends in treatment of cerebral palsy. Little described sectioning the heel cord as the best form of treatment for equinus deformities of the feet in 1862. Since then, treatment of the cerebral palsied child has gone through a series of revolutions in which surgery initially was thought to be one of the few methods. The enthusiasm for exclusively surgical treatment soon brought it into disrepute. Retrospectively, this can be attributed to improper understanding and inadequate integration of the surgical, orthopedic, and neurological aspects of the child. For many years the conservative approach remained a treatment of choice, and only in severe cases was surgery used. In the past 25 years a more rational approach to cerebral palsy has been adopted in relation to the treatment of the whole child. Surgery has become an integral part of the total care—as opposed to being the sole method of treatment—of these children. Steindler pointed out that surgery is merely an incident in the treatment plan for cerebral palsy.[1] The results of total treatment are becoming more apparent. Careful ob-

HYMAN R. SOBOLOFF, MD

servation and proper evaluation of affected children conservatively treated for periods of several months to several years, plus a practical interpretation of existing circumstances, are basic requirements before surgery can be contemplated. The physician who outlines a program of treatment for the child without a thorough knowledge and a proper evaluation of the total child is doomed to failure.

This article will include trends in four areas: drug therapy, physical therapy, neurosurgery, and orthopedic surgery.

Trends in Drug Therapy: A modern definition of cerebral palsy implies a spectrum of neurological dysfunction in which the neuromotor component is outstanding. However, in many cases there are additional problems such as convulsions (30-60% of the children), behavior difficulties (50-75%), and perceptual distortions (30-35%).[2] The nature of the behavioral component may be organic, attributable to impaired diencephalic function. That 50% of the children are classified as intellectually subnormal suggests a lack of integrational efficiency of the central nervous system (CNS). Emotional disturbances due to environmental pressure, lack of familial acceptance, and school learning disabilities are frequent sequelae. Drugs represent but one of many aids in a comprehensive program of effective rehabilitation. Practical use of drugs is an adjunct to physical therapy and other modes of treatment.

Drugs may be helpful to (1) control convulsions when present; (2) overcome organically based behavior symptoms that may interfere with the child's ability to accept therapy; and (3) beneficially influence skeletal muscle, hypertonia, or other abnormal neuromuscular conditions that retard development. Medication alone is insufficient to treat the various combinations of physical, psychological, social, educational, and vocational problems of cerebral palsy. Yet, drug therapy has an early and important role in the rehabilitation program.

The ideal drug for cerebral palsy should have anticonvulsant qualities, beneficially affect hyperkinetic behavior, decrease skeletal muscle hypertonia, or control dyskinesia while not adversely influencing weak or normal muscle tone. It should help to relieve body anxiety, manifest most often as excessive fear of change of body position. Its toxity must be low; it must be palatable and easy to administer. Such a drug, obviously, has not been developed. Certain drugs which may be quite effective in one area have adverse effects on other components of disability. For example, phenobarbital has excellent anticonvulsant qualities, but when used over a long period, it often creates paradoxically an irritable and hyperactive child. Thus, its adverse qualities negate its benefit and it is not recommended.

The phenothiazines are useful to allay fears and anxiety in new situations, but may activate an underlying convulsive tendency; therefore, they must be used preferably in the child who is seizure-free and whose electroencephalogram (EEG) is essentially normal. The currently available drugs for relief of skeletal muscle hypertonia often are disappointing because they do not have a direct effect on peripheral neuromuscular function. Rather, these drugs act as barbiturates or phenothiazines having a depressant action on the CNS, an action that indirectly affects muscle tonus.

Initially, pediatricians and pediatric neurologists utilized the anticonvulsant drugs such as Dilantin and Mysoline to control the convulsive disorders, and this was about the only type of medication given to the child except for phenobarbital in the hyperirritable states. However, newer approaches to treatment with, and utili-

zation of, drugs have been developed.[3-6]

Obviously, for the child with convulsions, Dilantin or Mysoline is still the drug of choice and has to be balanced with any drug used for other problems. In the area of behavioral problems, the use of Dexedrine or Thorazine has been of help in maintaining behavioral balance. As to the use of muscle relaxants, meprobamate has been of some help in athetosis, with Valium showing the greatest control of the child with athetosis and even, in some instances, spasticity. We have used everything from curare to Tolserol and even Soma with very little effect on the neuromuscular control. Valium seems to be the best drug for neuromuscular control in the spastic to some extent, but predominantly in the athetoid patient. Valium has been useful in the control of anxiety and tension states and to relieve muscle spasm in cerebral palsy and especially in athetoid patients. There remain many unanswered questions concerning the most effective way to use pharmacologic agents in cerebral palsy. It seems most important to clarify the value of anticonvulsant medication when the EEG is abnormal, but overt seizures are absent. The question of synergistic effects between amphetamine and anticonvulsants, and phenothiazines and anticonvulsants, in the presence of EEG abnormalities also must be studied further. The search must continue for pharmacologic agents that have overall beneficial action for patients with cerebral palsy. The indications are that Valium comes closer than any drug so far in theoretically fulfilling the requirements. However, many more cases must be studied for a longer time before the true effectiveness of this drug can be evaluated.

Trends in Physical Therapy: The process called maturation is credited by many to account for all increase in function, just as in the child with an intact CNS. Others claim that the child's progress can be influenced by disturbing the peripheral nervous system through alteration of the abnormal movement patterns. At present, there is no method of determining what effect, if any, various exercises or devices have upon neuromuscular function. New fashions in therapy rise to peak popularity, and then wane to take their deserved places in a broad armamentarium of the therapist. Today's therapies are in a transitional phase. Methods which were developed for treatment of musculoskeletal disorders such as poliomyelitis, in which single muscle isolation is possible, are being supplemented by techniques which are directed toward neuromuscular disabilities where movement by muscle groups predominate.

In treatment of children with cerebral palsy, the schools of physical and occupational therapy tend to develop along the lines that three stages of growth and development must be mastered by the child. First, the child must be taught to hold his head up because, without head control, he cannot learn to sit up, and that is the next step. Once sit control is developed, then the potentials for developing stand control and, eventually, gait would be next in the sequence in a normal maturational development in a child. All of the methods of therapy have this as the cornerstone.

Conventional methods of therapy presented by Phelps and Deaver are based upon exercise in anatomic planes of motion, in control of movements by mechanical means, and in attainment of normal skeletal alignment. These methods have been employed in the treatment of many children who learned to walk and care for themselves and became employed. There are two major principles employed in the Phelps method.[7] The first is the use of conditioning exercises based on Pavlov's principle and Sher-

rington's law of reciprocal innervation in order to establish reciprocal motions. The second is the use of Jacobsen's principle in order to develop purposeful movement in the relaxed position. The adjuncts to the therapy are braces and mobilization types of bracing equipment. The modalities of therapy used by Phelps range from massage and the different types of motion principles to the principle of relaxation as set forth in Jacobsen's book on progressive relaxation. The principle of progressive relaxation is used in treating athetoids and occasionally some of the mixed-type patients with spasticity. The child is taught by a direct method of sensation of relaxation.

The Deaver method[8] is similar in that the therapy is directed toward preventing or correcting deformities and controlling involuntary movements. To develop the skills necessary to meet these objectives, the patient must be trained to perform basic patterns of movement. Thus, bracing is used to a large extent so that it limits the pattern of motion to one joint at a time and eliminates all other unnecessary movements, giving the child a chance to develop the utilization of the control of his body by developing the motion at one level only.

Development of the techniques of neuromuscular facilitation has paralleled the increased interest in the problems of the child with a neuromuscular disability. Observations of the neurophysiologist of the previous generation are being reexamined, and the principles so well described by them are being used as the basis of the system of therapy. Righting reflexes, tonic neck reflexes, synergistic patterns, ontogenetic and phylogenic developmental sequences provide the basis for treatment systems. Each system emphasizes one or more means of facilitation of reflex patterns of movement, but all methods encompass a broad spectrum of facilitation techniques. Simply stated, it merely means that sensory stimuli given to the child in the various modalities of therapy as outlined by the various proponents of these systems allow the patient to respond or to react to the stimuli and, therefore, develop a program of physical activity that will allow him to utilize his extremities at command.

For instance, Bobath[9] of England states that to understand her method's neurophysiological approach, it is necessary to understand the rationale based on the concept developed by Walsh. He propounded the idea that the sensory systems, by means of external receptors and proprioceptors, can initiate and continually direct willed movement. In other words, spasticity will distort the function of the proprioceptive system. Thus by reducing the spasticity, the proprioceptive system will be restored so that it can function normally. Thus, with the damage occurring in the brain, there is a loss of inhibition over the postural reflexes and these postural reflexes, by regulating tone throughout the body, help to maintain posture and equilibrium in the body. They are stimulated by the sensory end organs in the joints and muscles and also by the labyrinths. Thus, an alteration of these postural reflexes results in decreasing the tone or spasticity of the muscles. The righting reflexes play an important role here, and are stimulated by tactile stimulation on the surface of the body and by optical righting reflexes.

Proprioceptive neuromuscular facilitation as developed by Kabot[10] is one of the basic concepts in this type of treatment. His hypothesis is that by stimulating the proprioceptive system by using reversal of antagonist, it is possible to stimulate the function of the motor cortex. He states, "In order to restore power in

paralyzed muscles, one must strive for maximal activation of the motor units of the affected muscle with effort."

The Fay-Doman-Delacato method is based on the phylogenetic plan. With this method the patient goes through motions of the fish, then progresses through amphibian, reptilian, quadruped, and finally, the biped states. Doman and Delacato[11] have gone further than Fay and point out that the human patterns of locomotion are impressed on the brain by a patterning team at the various developmental levels at which the brain functions, beginning with truncal or homolateral pattern in accordance with functional level involved as indicated on a developmental profile that they have developed. With the patient prone or on a suitable table, the upper extremities, lower extremities, and head are simultaneously manipulated in movement of locomotion characteristic of man. Ultimately, the pattern of the highest level of human locomotion—the crossed pattern of movement—is impressed on the brain. The kinesthetic and proprioceptive stimuli provided by this means are repeated many times a day. The warmth and pressure of the hands, the patterning teams, and the sounds of voices in conversation, the visual sense of movement as the head turns from side to side, provide numerous and various additional stimuli. By means of such patterning the brain, the most remarkable computer the world has ever known, is patterned through sensory pathways.

Gillette[12] believes in control of spasticity by maintaining ranges of motion, facilitating reflex responses, balancing synergistic reactions, and establishing voluntary movements in pattern responses. The repression of synergistic movements and encouraging isolated movements can be accomplished in the spastic with the understanding, and then the utilization of, the multiple reflexes that remain primitive in these children with spasticity. In the dyskinesias, the facilitation of righting reflexes and employing postural adjustment mechanism while suppressing pattern movements is the technique suggested. While recovery of motion following cerebral insult is rarely without some vestige of incomplete control, the final result is enhanced if presenting neurophysiological mechanisms are recognized and employed.

Thus, Phelps and Deaver use exercise and anatomic and physiologic planes of motion; they control movement by mechanical means such as braces and attempt to obtain normal skeletal alignment. Kabot, Bobath, Doman, and Gillette used reflex movements by application of various sensory stimuli as the basis for their modalities of therapy. Gillette goes further and takes into consideration the value of maturation. Doman gives little or no consideration to maturation and stresses predominantly a programming method, as he puts it, for the brain. Bobath gives no consideration to maturation and uses more developmental forms of treatment to depress the overactive muscles and allow the underactive muscles to bring back their capacity to function.

Will more cerebral palsied children walk if they have been treated by facilitation techniques rather than by conventional methods? It is too soon to know. In managing the many-faceted syndrome of cerebral palsy, all approaches of physical therapy must be fully utilized in helping the child perform to the fullest extent of the capacity afforded by maturation. It has been demonstrated effectively that no one so-called method of treatment is superior to any other. The complexities of each patient require a close analysis of all of his facets and a custom-made form tailored to his own requirements.

Trends in Neurosurgery: Sixty years ago, Horsley excised the motor cortex of a boy with athetosis. Since then, neurosurgeons have attempted to relieve a variety of involuntary movements such as parkinsonism, dystonia, choreoathetosis, and intention tremors, as well as intractable epileptic seizures associated with infantile hemiplegia. The earliest efforts to relieve these motor disorders were concentrated on surgical interruption of motor control by resection of motor cortex of the pyramidal tract. The consequence was weakness of the contralateral tracts and a reduction of the movement disorder. A degree of gross motor control was preserved in the limb, but as a rule the patient lost fine, skilled hand motions. These surgical ablations or tractotomies were technically difficult to perform. The open cranial operation on the subcortical structures initiated by Myer was soon abandoned due to mortality and morbidity. Clark and Horsley, in 1906, seeking a method of producing localized lesions in the cerebellar nuclei of animals with minimal damage to the cerebral cortex, devised the first animal stereotactic instrument. This stereotactic technique has been used extensively in the neurophysiologic and neuroanatomical laboratories, and much of our knowledge of brain function has been based on data gathered by these methods. The stereotactic method's greatest advantage has been the use of small probes introduced into the thalamus, midbrain, and cerebellum for exploration by electrical stimulation for the production of localized lesions.

In 1947, Speigel and Wycis applied the stereotactic techniques to man and so began the exploration of the deeper regions of the brain in patients suffering from epilepsy, involuntary movement disorders, and psychiatric disturbances. A breakthrough in Parkinson's disease was relief of tremor and rigidity following lesions of the globus pallidus and later, thalamic lesions. Cooper has carried out extensive thalamic surgery for the therapeutic relief of Parkinson's tremor, intention tremor, and other involuntary movements with low mortality and good clinical results. The overall mortality of the stereotactic operation is less than 2% and the morbidity averages 2%. The serious complications include hemiplegia, aphasia, hyperkinesia, ocular dysfunction, convulsive seizures, altered mentation, and hyperthalamic dysfunction. Stereotactic surgery is presently done by three methods. The therapeutic lesion can be made by a mechanical leukotome, thermal, or freeze coagulation. Each of these techniques has several advantages which must be considered by the stereotactic surgeon. Coagulation by heat and by cold are the most popular methods, and the clinical results from their use seem equal. The current era of brain exploration and mapping compares with the earliest efforts of Horsley, Forest, and Penfield who began the exploration of the cortical mantle in man. Thus, our present knowledge of neurosurgery indicates that attempts to relieve athetosis, chorea, dystonia, spasmodic torticollis, ballismus, and spasticity by stereotactic operations have not been completely successful. The involuntary motor disorders which occur early in life are often accompanied by visual, auditory, sensory, and mental disability. The motor disorder is, as a rule, not progressive; so, when improvements occur after surgery, they may be maintained and even augmented by physical therapy. Chorea, ballism, and congenital tremors also can be significantly reduced by lesions in the ventral lateral thalamus. The tremor is often superimposed on the relatively normal movements, but after surgery, normal movements may be restored.

In athetosis, the limbs assume abnormal postures involving the acral musculature. Localized thalamic, globus pallidus, or Forel's field lesions have been less effective in improving marked improvement in the abnormal tone and postures following stereotactic lesions in the cerebellar dentate nucleus. The cerebral operations are still in the state of experimental development, but certainly, the cerebellar lesions do reduce hypertonia and postural defects, but the duration of their effectiveness is not fully known. The cerebellar operation has the added advantage in that it does not predispose the patient to complications such as hemiplegia, aphasia, or mental changes as may be the case in thalamic or pallidal lesions.

Trends in Orthopedic Surgery: This field has come a long way from the initial recommendations in 1862 for cutting heel cords. It has been able to struggle up through the many operative procedures designed and devised for poliomyelitis and is coming into its own as to procedures that are specifically designed for the cerebral palsied child. The manifestations of peripheral malfunction are myriad, and improved function is a compromise at best since irreversible brain damage obviates normality. Doing the best with what is left requires the application of an integrated knowledge of anatomy, neurophysiology, biomechanics, developmental medicine, and orthopedic surgery. Realistic planning based on detailed serial evaluations is the key to successful management of the limbs in cerebral palsy.

Only a small percentage of children who have cerebral palsy benefit from surgical procedures to the upper extremities; nevertheless, they should not be disregarded. There are three classifications of patients: (1) Those mildly affected, with no contractures of the upper extremities and reasonably good grasp and release with adequate voluntary control; (2) those moderately affected, with moderate to severe flexion deformities of the hand and wrist but with voluntary control of the fingers and wrist flexors maintained, restriction of the shoulder to a fairly severe extent, and pronation problems; and (3) those severely affected, with severe flexion deformities involving the shoulder, elbow, and wrist; very slight voluntary control; and very little active muscle strength in either flexion or extension. Before surgery can be considered, the total child must be evaluated; his intelligence and his age must be considered since a young child with a low IQ would not be expected to cooperate as adequately in the postoperative and rehabilitation phases as would an older child, or a younger child with a higher intelligence. The response to the occupational therapy carried out for weeks to months before consideration of surgery is an important factor. The tactile sensation and the perceptual sensory component patterns of the hand must be considered and evaluated. Unless these are adequate, a technically excellent but a functionally poor result may be anticipated, even if all other factors are proper for a surgical procedure. The reason is that the child will not use the hand unless he has tactile or perceptual sensation. The degree of hand function at the time of initial examination, plus any existing deformity, must be taken into consideration. Only after appropriate periods of conservative therapy, in an attempt to gain as much function as possible, should surgery be considered. One must always select a procedure that can be expected to help the child establish better function than already exists. If the anticipated movement is slight, surgery is not indicated; however, if a plateau of training has been reached and the surgeon believes that the proposed surgery

would enable the child to reach a higher level, then it should be undertaken. The diagnosis must be established since surgery offers greater improvement for spastic than for athetoid patients. The attitudes of the child and his parents must be considered since the parents may feel that surgery is the end result of all therapy, or the child may think that it will solve all of his difficulties. The parents should be made to understand that the contemplated procedure is merely one step in the total treatment. Usually, adolescents and older children are more concerned with the cosmetic appearance of the hand than with its function. It is therefore important that if surgery is considered in the light of function alone without any change in the cosmetic appearance, this fact must be made clear to the child; otherwise, he may become discouraged and fail to use the hand even if surgery improves its function.

In considering surgery of the lower extremities, one must recognize that the gait in a spastic or athetoid child is an extremely complicated mechanism not localized to a knee or hip flexion deformity, or to a deformity of the feet alone. Adequate understanding of the fundamental neuroanatomy, neurophysiology, and pathologic mechanics of the gait of these children is of primary importance. Any attempt to correct deformities in a lower extremity without considering these fundamentals leads to error and results in unnecessary surgery. Steindler[13] pointed out that knee flexion deformities are not isolated, but are part of the total altered mechanics of the lower extremity. The cerebral palsied child who walks on his toes with a spastic talipes equinus deformity tends to develop talipes varus deformity and internal torsion of the knee, which results in a genu valgum type of gait with the knees fairly well extended. There may be slight flexion of the knees, but usually they can be extended passively. The problem is primarily with the contracture above the ankle. However, in a child with talipes calcaneovalgus, there usually is a flexion deformity of both hips and knees and the child walks in a crouched or semicrouched position. This position is produced primarily by increased tone of spasm in the hamstring muscles with or without increased tone in the gastrocnemius. This combination of imbalances increases the knee flexion deformity with overpulling and lengthening of the quadriceps mechanism about the knee. If this is allowed to persist, a primary flexion deformity will develop in the knees, or possibly a secondary deformity will develop in the hips. Increased lordosis occurs and sometimes is the cause of low back pain. No matter what method of correction is considered for the hip, knee, foot, or ankle, one must remember that (1) muscle spasticity persists regardless of whether the procedure is surgical or not; (2) growth continues; and (3) correction alters the peripheral deformity without disturbing or changing the primary disorder in the CNS. Only recently have lower extremity deformities in athetoids been corrected successfully. The problem must be approached with a great deal of caution in view of the danger of an athetoid shift. Although this does not occur frequently, it must be considered in the overall management of the child. It is no more right to assume that multiple operative procedures will benefit the child than it is to assume that no operative procedure will help him. Surgery is but one modality of therapy. It is possible that a comparatively minor operation may effect a large gain for a child, making other surgery or conservative measures unnecessary. Thus, it is preferable to do operative procedures in stages with intervening conservative management by physical or occupational therapy.

Before considering surgery, certain criteria must be established and met. In 1957 Phelps[14] conducted a study to evaluate the efficacy of surgery involving 242 patients. In evaluating the end results (not less than 5 years after operation, and 10 to 15 years in most cases), he pointed out that the weakness of many other studies was that evaluations were made too soon. Also, in many cases there have been insufficient preoperative or postoperative evaluation of patients, and inadequate therapy to offer the greatest possible benefit from surgery. He did demonstrate that without some basic criteria for its need, surgery is doomed to failure even before it is done; conversely, with the proper indications, preparation, and postoperative care, chances for success are good. Certain basic requirements must be met before the patient is considered for surgery. First, there must be a definite evaluation of the patient; second, the patient must have sufficient conservative therapy to indicate failure; third, deformities must persist in spite of conservative measures; and fourth, it must be shown that function cannot be expected to improve without surgical methods.

By far, the most successful surgical results in cerebral palsy are in the spastic children. Arthrodesis is the most satisfying form of surgery in these cases, since it not only corrects a deformity but also improves function. Tendon transfer also benefits the spastic child whether or not an arthrodesis has been performed, since it facilitates the basic function. Neurectomies are of some benefit, but not to the extent that they are in other types of cerebral palsy.

Surgery accomplishes much less in athetoid children; nevertheless, in properly selected cases, the proper procedure can be of benefit.

No surgical procedures have been of definite benefit in ataxic patients. While one or another simple procedure might be indicated occasionally, from an orthopedic standpoint, there is nothing to be gained from surgery.

Conclusion: Although we have come a long way in the management and treatment of cerebral palsied children, multiple approaches are needed to deal with the complex disabilities. Neurological dysfunction, behavioral difficulties, perceptual distortion, and emotional disturbances, as well as learning disabilities are a large part of the picture. Drugs are but one of many aids in a comprehensive program of effective rehabilitation. The ideal drug for cerebral palsy does not exist, but some of the available drugs to control convulsions as indicated, as well as to control both organic and environmental behavior problems and—to some extent—to control neuromotor dysfunction, can be used properly and will benefit the child.

From the standpoint of physical therapy, many techniques and many schools of therapy have been devised. We must learn to use those modalities of physical and occupational therapy that are best suited to each child individually, rather than attempting to adapt the child to a system that exists in a given center.

In the neurosurgical field, the newer reports indicate that abnormal tone and postures following stereotactic lesions in the cerebellar dentate nucleus, and operations designed in that area, may be of advantage to these children in the future.

Finally, orthopedic surgery does hold promise for these children in their recovery phase, but it is to be considered as one modality of treatment; its benefit hinges on performing the right operation on the right child at the right time. The newer techniques offer hope that our cere-

bral palsied children will gain better function and control, and represent a positive approach to the total problem of rehabilitating these children.

REFERENCES

1. Steindler A: Postgraduate Lectures on Orthopedic Diagnosis and Indications, vol 2. Springfield, Ill, Charles C Thomas, 1959, p 66.

2. Denhoff E, Holden RH: Relaxant drugs in cerebal palsy: 1949-1960. New Eng J Med 264:475-480, 1961.

3. Denhoff E, Bradley C: Curare treatment of spastic children: preliminary report. New Eng J Med 226-411-416, 1942.

4. Gastaut H: Combined photic and metrazol activation of brain. Electroencephalog & Clin Neurophysiol 2:249-261, 1950.

5. McCabe WS, Habovick JA: Thorazine as an epileptogenic agent. Amer J Psychiat 120:595-597, 1963.

6. Phelps WM: Observations of a new drug in cerebral palsy athetoids. Western Med 4 (Supp 1): 5-10, 1963.

7. Phelps WM: Cerebral Palsies. Springfield, Ill, Charles C Thomas, 1965.

8. Deaver G: Systems of Therapy in Cerebral Palsy. Springfield, Ill, Charles C Thomas, 1969.

9. Bobath K: The neuropathology of cerebral palsy and its importance in treatment and diagnosis. Cerebral Palsy Bull 1:13-33 (Winter) 1959.

10. Kabot H: Proprioceptive facilitation in therapeutic exercise, in Lichts E: Therapeutic Exercise. Baltimore, Elizabeth Licht, 1958.

11. Doman CJ, Delacato CH: A summary of concepts, procedures and organization. Philadelphia, Institute for the Achievement of Human Potential, 1963.

12. Gillette HE: Recovery of motion following cerebral insult: an appraisal of current methods of management. Arch Phys Med 45:167-176, 1964.

13. Steindler A: Pathokinetics of cerebral palsy. AAOS Institute Lectures, St. Louis, C V Mosby, 9:118, 1952.

14. Phelps WM: Long-term results of orthopaedic surgery in cerebral palsy. J Bone Joint Surg 39 A:53-59, 1957.

Dr. Soboloff, 3439 Prytania St, New Orleans, La 70115.

A PICTORIAL REVIEW

RADIOLOGICAL FINDINGS IN NONSPECIFIC ULCERATIVE COLITIS

ACUTE ULCERATIVE COLITIS

1

1. Splenic flexure in a patient with severe ulcerative colitis. Typical minute ulcerations are recognized as serrations along the contour of the filled bowel (arrow). There is a loss of normal haustral markings and narrowing of the lumen of the colon. Narrowing in the distal transverse colon represents spasm.

2

2. Acute ulcerative colitis involving the transverse and descending colon. Typical "collar-button ulcers" are seen in the descending colon as large broad-based ulcerations (arrow).

3

3. Acute ulcerative colitis involving the entire colon. Numerous small filling defects represent pseudopolyps or islands of intact mucosa surrounded by deep ulcerations. Extensive undermining of the mucosa of the transverse colon is seen as a linear streak of barium which appears to lie outside the lumen of the bowel (arrow). Distension of proximal colon by barium suggests early involvement of this portion.

4

4. Generalized acute ulcerative colitis. Irregularity of the entire bowel wall with numerous polypoid filling defects is characteristic of acute ulcerative colitis with pseudopolypoid mucosal degeneration.

PRESTON COPELAND, MD
MELVYN H. SCHREIBER, MD

From The University of Texas Medical Branch, Galveston, Texas

CHRONIC ULCERATIVE COLITIS

5

6

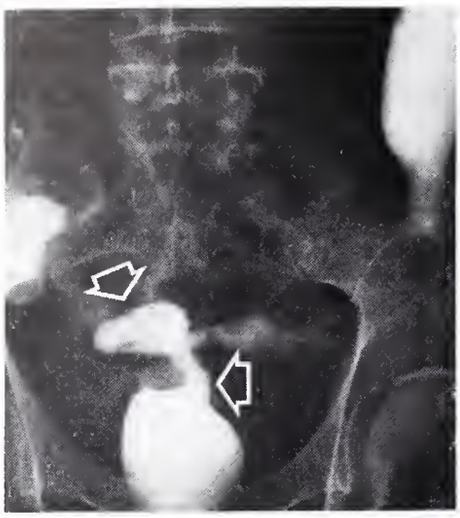
7

5. Chronic ulcerative colitis involving the rectum, sigmoid and descending colon. There is narrowing and lack of distensibility along with loss of normal haustral markings characteristic of the "lead pipe" colon of burned-out ulcerative colitis. The proximal colon has been spared.

6. Chronic ulcerative colitis involving the entire colon and terminal ileum. Narrowing and shortening of the entire colon with loss of normal haustral markings.

7. Chronic ulcerative colitis involving the entire colon and distal ileum. Narrowing and marked shortening of the entire colon without obvious ulceration is typical of the "lead pipe" colon of chronic burned-out ulcerative colitis. Involvement of the terminal ileum or "backwash ileitis" is manifested by dilatation and loss of normal mucosal pattern in the involved portion of the small bowel (T.I. is the terminal ileum).

COMPLICATIONS OF ULCERATIVE COLITIS



8. Chronic ulcerative colitis of the rectosigmoid and descending colon. The irregularly narrowed area of sigmoid colon is typical of an early benign stricture (arrows).

9. Generalized ulcerative colitis with fistula formation. A fistulous tract (arrow) extends from the sigmoid colon to the vagina which is opacified with barium. Fistulas occur secondary to perforation of ulcers and may involve the bladder or other portions of the colon and small bowel. Cutaneous fistulas may also occur, but are much rarer than in regional enteritis.

10. Acute ulcerative colitis with toxic megacolon and perforation. There is dilatation of the entire colon with nodular projections into the lumen characteristic of pseudopolyps. Free intraperitoneal air is seen beneath the liver (arrow).

11. Adenocarcinoma of the rectum in a patient with long-standing chronic ulcerative colitis (anteroposterior view on the left, lateral on the right). Differentiation of carcinoma from benign strictures of the large bowel in patients with chronic ulcerative colitis is very difficult.

NONSPECIFIC ULCERATIVE COLITIS ● SUMMARY

PRESENTING COMPLAINTS

1. Rectal bleeding
2. Diarrhea with or without blood
3. Cramping abdominal pain
4. Urgency to defecate (? tenesmus)
5. Anorexia, nausea, weight loss
6. Malaise

PHYSICAL EXAMINATION

1. Abdominal tenderness
2. Distension
3. Fever
4. Iritis
5. Skin and mucosal lesions
6. Arthritis
7. Liver disease
8. Anemia

DIFFERENTIAL DIAGNOSIS

1. Specific colonic infections
   Amebiasis, bacillary dysentery, tuberculosis, lymphogranuloma venereum
2. Crohn's disease of the colon or "granulomatous colitis"
3. Diverticulitis
4. Carcinoma
5. Uremia

COMPLICATIONS

1. Perianal abscess
2. Fistula
3. Toxic megacolon
4. Perforation
5. Peritonitis
6. Stricture
7. Carcinoma

TREATMENT

1. Psychotherapy
2. Diet
3. Bed rest
4. Sedatives, tranquilizers, and antidepressants
5. Anticholinergics
6. Replacement therapy
7. Antibiotics
8. Corticosteroids
9. Surgery

SWAMPED WITH MAIL ABOUT INSURANCE?

MANY DOCTORS HAVE INSURANCE THROUGH SEVERAL ASSOCIATIONS.

The Problem: LOTS OF MAIL, AND FRUSTRATION

The Solution: CONSOLIDATE YOUR INSURANCE THROUGH THE **TEXAS MEDICAL ASSOCIATION'S GROUP PLAN**

WHY? . . . . . THE **T.M.A. GROUP PLAN OFFERS YOU**

1. A COMPREHENSIVE PACKAGE OF BENEFITS, INCLUDING GROUP LIFE, DISABILITY, OFFICE OVERHEAD, PERSONAL ACCIDENT AND MAJOR MEDICAL INSURANCE.
2. HIGH AMOUNTS OF COVERAGE.
3. EXCEPTIONAL SERVICE AND TIGHT CONTROL OF THE PROGRAM BY YOUR OWN STATE ASSOCIATION.

For Details and Enrollment Material, Contact

TEXAS MEDICAL ASSOCIATION
INSURANCE SERVICE OFFICE
1801 NORTH LAMAR BLVD.
AUSTIN, TEXAS 78701

Underwritten By

Prudential

NEWS

1968 Sourcebook Indicates 384 Added to State Physician Population

Texas added 384 individuals to its non-federal physician population in one year, according to a comparison of figures for 1967 and 1968.

The recently published sourcebook *Distribution of Physicians, Hospitals, and Hospital Beds in the US, 1968* indicates that Texas had 12,144 non-federal physicians in 1968; the 1967 figure from the previous edition of the sourcebook was 11,760.

Tables in the new book show statistical breakdowns of data related to the 296,312 non-federal and federal physicians with known addresses who are professionally active in the United States and its possessions and related to hospital facilities across the nation. The 296,312 figure does not include 18,631 physicians classified as "inactive" and 2,089 with "address unknown."

After providing a breakdown into the two categories, non-federal and federal physicians, the tables continue the statistical analysis, listing physicians by state, their major professional activity, and general practice or specialty.

In Texas in 1968, 10,545 non-federal doctors were grouped under "patient care"; of this group, those in office-based practice made up the greatest number, 8,694. Similar statistics for 1967 indicated that 10,644 physicians were classified in the patient-care group, and 8,860 were under solo, partnership, group, or other practice (now considered the office-based practice heading).

Comparison of those physicians in the patient-care group under the hospital-based type of practice for 1967 and 1968 revealed that in 1968 there were 343 interns compared to 304 in 1967, and 445 on the full-time physician staff in 1968, with 412 listed for the same heading in 1967. There were 1,063 residents in Texas in 1968, but the comparative figure in the 1967 book did not differentiate between residents and fellows.

Notable differences were observed in tallies for other professional activity listings, perhaps due to a slight change of wording in the subheadings. In 1967, 468 were classified under medical school faculty, while in 1968 only 155 were listed under the slightly changed classification, "medical teaching." The reverse was true in two other instances. In 1967, only 65 were listed under administration; in 1968, 266 were listed in this group. Also, a total of 102 was listed under the research heading in 1967, and in 1968, 433 were found in this classification. The "other" professional activity heading evoked 64 responses in 1968, while there was no comparable listing in the 1967 study.

The surveys also gave tallies in the non-federal category of the number of inactive physicians, the number in general practice, and the totals in various specialties. Breakdown of the 1968 data indicated that of the total number of non-federal physicians in the state, 2,962 were engaged in general practice; 2,476 in medical specialties; 3,365 in surgical specialties; and 2,660 in "other" specialties. Comparable 1967 figures showed 3,266 in general practice: 2,333 in medical specialties; and 3,300 in surgical specialties.

Exactly 200 additional physicians were classified as inactive in 1968, 681 as compared to the 1967 figure of 481.

The two medical specialties with the most number of non-federal practitioners for both 1967 and 1968 were internal medicine with 1,172 in 1968 and 1,275 in 1967, and pediatrics with 658 in 1968 and 682 in 1967. The smallest medical specialty group was pediatric allergy, which totaled 15 in 1968 and 4 in 1967.

General surgeons headed the list of non-federal physicians in surgical specialties in 1968 with a total of 1,042, and obstetricians and gynecologists followed with 765. This ranking was also true for 1967, with 1,040 in general surgery and 739 in obstetrics and gynecology. The least populous surgical specialty was colon and rectal surgery. The total in this category in 1968 was 38, while the 1967 total was one notch higher with a total of 39.

Among "other" specialties, psychiatrists were ranked first in both years, with 566 in 1968 and 526 in 1967. Anesthesiologists were second in 1968, listing 452. In 1967, the 430 anesthesiologists were topped by 449 radiologists. Forensic pathology was the least practiced specialty, with the 1967 survey listing only one practitioner and the 1968 survey listing a total of four.

One table in *Distribution of Physicians, Hospitals, and Hospital Beds in the US, 1968,* also noted that more than 57,000 Texans live in a total of 23 counties where there are no non-federal practicing physicians to provide medical care. Of the 12,144 non-federal physicians in Texas, none were listed for Armstrong, Borden, Briscoe, Carson, Glasscock, Hartley, Hudspeth, Irion, Jeff Davis, Kenedy, King, Kinney, Lipscomb, Loving, McMullen, Martin, Oldham, Rains, Real, Roberts, San Jacinto, Stonewall, or Terrell counties.

The study also showed that for Texas' population of 10,984,900 (Dec. 31, 1967, figure), there were 499 hospitals comprising 43,004 beds available. The number of hospitals and hospital beds was based on Dec. 1, 1968, data.

UT Regents Okay Plans For New Dental School

Approval of the preliminary plans and specifications for the building that will house the new University of Texas Dental School at San Antonio was granted recently by the Board of Regents of The University of Texas System.

Plans call for the dental school building to be attached to The University of Texas Medical School at San Antonio through an open courtyard in order to allow integration of facilities for teaching.

The four-story building will be constructed along the same architectural lines as the medical school.

Dean-elect of the dental school, Dr. John Victor Olson, explained that the building will contain multidisciplinary laboratories with modern audio-visual equipment, a modern animal installation, offices, research laboratories, and other support facilities. In addition, students will be able to observe and learn from demonstrations in the more than 400 "simulated dental offices" that will be housed in the building.

Currently, there are 16 students enrolled in the San Antonio dental school, with facilities for the students being provided by the medical school. Dean Olson said that eventually the school's program and facilities will allow an entering class of 152 dental students, plus facilities for auxiliary training programs and graduate and postgraduate work.

Education Week On Smoking Scheduled

Gov. Preston Smith has designated the week of Jan. 11-16, 1971, as "Education Week on Smoking and Health" in Texas.

In the official memorandum concerning the five-day educational drive, the governor noted that the Texas Interagency Council on Smoking and Health believes that the "citizens of Texas should be fully informed on the harmful effects of cigarette smoking on health." "In order to achieve this goal," the memorandum stated, "it is important that statewide attention be focused on this public health problem and that an effort to reach all our citizens be intensified and expanded."

The Texas Interagency Council on Smoking and Health is composed of representatives of the Texas Division of the American Cancer Society, Texas Dental Association, Texas Education Agency, Texas Affiliate of the American Heart Association, Texas Congress of Parents and Teachers, Texas Tuberculosis and Respiratory Diseases Association, the Texas State Department of Health, and the Texas Medical Association. TMA council representative is Dr. L. S. Thompson, Jr., of Dallas, chairman of TMA's Committee on Public Health.

California Legislation Recognizes Assistants

California has enacted what appears to be the first legislation recognizing the new class of health-care workers in America, the physician's assistant, reports *Medical World News* (Oct. 9, 1970).

The California law gives authority to the state board of medical examiners to allow each physician to hire up to two assistants. These assistants may make initial diagnoses, take medical histories, serve as midwives, and perform minor surgery. It has been estimated that physicians' caseloads may be increased by as much as 50% for each assistant they employ.

At the present time, the statute covers only physicians' assistants who have been trained in other states, but California medical schools report that they are considering setting up their own training programs for assistants.

Several other states currently permit physicians' assistants to work under the doctor's supervision, but the California legislation is believed to be the first of its kind regarding physicians' assistants.

1. Texas' rank for 12 selected communicable diseases.

Disease	Texas' Rank
Poliomyelitis	1
Measles	1
Diphtheria	2
Leprosy	2
Pertussis	4
Gonorrhea	7
Tuberculosis	9
Syphilis	12
Rubella	18
Typhus	19
Hepatitis	20
Typhoid	33

Report Reveals Texas' Rank in 12 Diseases

Texas has more than its share of communicable diseases, according to a study released by the Governor's Office of Comprehensive Health Planning.

From statistical analysis of the reported incidence rate per 100,000 population of the entire United States and of each of the 50 states, Texas had the highest rate in 1968 for measles and poliomyelitis, the second highest rate for diphtheria and leprosy, and the fourth highest rate for pertussis.

Other diseases included in the study were rubella, gonorrhea, syphilis, tuberculosis, hepatitis, typhus, and typhoid fever. All data compared were for the year 1968, since these were the latest available for the United States and for each state at the time of the analysis.

According to the study, Texas reported 50% of all diphtheria cases in the United States, 42% of all poliomyelitis cases, 32% of all leprosy cases, 23% of all measles cases, and 17% of all pertussis cases, yet the population of Texas was but 5½% of the US population. For each of these diseases, the incidence rate in Texas was at least three times as high as the United States rate, and for diphtheria the Texas rate was nine times as high, the study concludes. Also noted was the fact that effective immunizing agents are available for four of these five diseases.

To accurately compare the incidence of the selected communicable diseases in Texas with that in other states, a ranking system designed to give equal weight to each disease was developed. Fig. 1 indicates Texas' rank for each of the 12 diseases.

The study also included a comparison of the incidence rate of the 12 diseases in each of the 21 planning regions in Texas. Fig. 2 shows partial results of this analysis.

2. Selected communicable diseases by planning region—1968.

Disease	Highest Rate	2nd Highest Rate
Gonorrhea	North Central Texas	Gulf Coast
Syphilis	Upper Rio Grande	Gulf Coast
Diphtheria	Capitol	Coastal Bend
Leprosy	South Texas	Coastal Bend
Typhoid	South Texas	North East Texas
Typhus	Lower Rio Grande	Coastal Bend
Measles	East Texas	South Texas
Rubella	South Texas	East Texas
Poliomyelitis	Concho Valley	Lower Rio Grande
Pertussis	Permian Basin	West Central Texas
Tuberculosis	Lower Rio Grande	Upper Rio Grande
Hepatitis	South Texas	Golden Crescent

Device Aids Healing Of Damaged Eyes

A veteran of the American Medical Association's Volunteer Physicians for Viet Nam program reported to a meeting of the Contact Lens Association of Ophthalmologists the development of a new therapeutic scleral lens, which helps save eyes damaged by burns or ulcers.

Dr. Loren B. Morgan, a Wyoming ophthalmologist, said in the Nov. 2 issue of the *Journal of the American Medical Association* that he made the first crude device out of plastic that he took with him on his third trip to Viet Nam, where the occurrence of endophthalmitis is common. The device has now been reported to have been used successfully to end pain and promote healing in 37 eyes for a variety of eye problems.

Eye problems that have been treated by use of the lens include bacterial ulcers; hypopyon ulcers; alkali, acid, and gunpowder burns; endophthalmitis; and even a case of advanced absolute glaucoma.

The *JAMA* article reports, "The device consists of a polished polymethylmethacrylate scleral lens in which a small hole has been made temporally from the center. One end of a 7-inch long polyethylene tube is fastened securely into this tiny hole. The other end of the tube is attached to a molded polyethylene luer-lock fitment which in turn is attached either to a syringe or an intravenous bottle. Hence, fluids can flow at a controlled rate through the tubing to the concave surface of the lens, and the patient's eye is continually bathed in fluids. (Part of the tube is taped to the forehead of the patient to keep the lens from rotating.)"

Dr. Morgan points out that this continual bathing of the eye allows the eye to "heal by itself." "This is unlike patching the eye," said the Wyoming ophthalmologist. "The patch just acts like an incubator for bacteria. In using the therapeutic scleral lens, however, we just allow the eye to get well by itself." In addition, the clear plastic of the lens allows the physician to observe the eye while the device is in place.

Other physicians in Minnesota and Wisconsin have reported successful use of the device in cases involving a chemical burn of the cornea and a severe gunpowder burn of the cornea.

Dr. Morgan feels that the most remarkable aspects of the treatment are the disappearance of pain within two to three hours after insertion and healing of the cornea; he foresees greater potential for the device in the routine preoperative preparation of the eye. The device, he also said, may be used in treating the "foreign body sensation and removing foreign bodies from the eye."

According to Austin ophthalmologist Dr. Robert L. Rock, this therapeutic lens with tubing attached is now manufactured commercially.

Baylor Offers New PhD Degree Program

A four-year graduate program leading to a doctor of philosophy degree in audiology and speech pathology is now being offered by the division of audiology and speech pathology in Baylor College of Medicine's department of otolaryngology.

Dr. James Jerger, head of the new degree plan, explained that the program, approved by the graduate executive committee in August, is one of approximately 120 in the United States and is designed to prepare candidates for careers as independent investigators in disciplines related to the scientific study of hearing, speech, and language processes.

Requirements for admission to the program include a bachelor's or master's degree from an accredited institution or a professional degree.

Applicants must also have taken one year each of biology, physics, and organic chemistry or experimental psychology; must have a grade point average above 1.7; and must have made acceptable scores on the Graduate Record Examination.

AMA Survey Shows Increased Enrollment

The largest enrollment increase in modern times was recorded by the nation's medical schools in the 1969-70 school year, according to a report in a current issue of the *Journal of the American Medical Association*. Preliminary figures indicate that the total will be even greater for the current academic year.

The statistics, included in the 70th annual report on medical education prepared under the auspices of the American Medical Association's Council on Medical Education, show that 37,669 students were enrolled last year in medical schools. This is an increase of 1,836 over the previous academic year.

The increase was achieved both by opening new schools and by expanding enrollment at many of the existing schools. Total of medical schools in the United States climbed from 86 in 1960 to 103 in 1970. Two new schools were added in the fall of 1970, and some 21 more schools were listed as now in the development stage.

The number of graduates in the class of June, 1970, reached an all-time high of 8,367, which was 308 more than in the previous year.

Statistics indicate that medical school enrollment in the United States has been gaining steadily for 10 years, and at an even more rapid rate in the past three years. From 1960 to 1966, enrollment increased approximately 500 per year. In 1967, the increase amounted to 1,115 students. In 1968, it was 1,295 students; and in 1969, 1,836.

The spurt in total enrollment that began in 1967 should be reflected by a corresponding increase in graduates starting with the class of June, 1971.

Texas medical school enrollment totaled 1,602 for the 1969-70 year. Breakdown by school showed The University of Texas Medical Branch at Galveston, the oldest medical school in the state, with the largest enrollment. The UT Medical Branch listed 598 students, with some 169 in their first year. Next largest was The University of Texas (Southwestern) Medical School, Dallas, with a total of 426. Southwestern had 107 first-year students in 1969-70. Baylor College of Medicine had an enrollment of 362, with 92 listed as first-year students. Smallest, but also newest, was The University of Texas Medical School at San Antonio. Enrollment at San Antonio was 216, with 105 in their first year.

Graduates from Aug. 1, 1969, through June, 30, 1970, included UT Medical Branch, 149; Southwestern, 107; Baylor, 88; and San Antonio, 33.

As medical schools expand enrollment and new schools open, another movement is gaining rapidly in medical education—shortening the period of training. About one-third of the schools have begun, or are considering, accelerated programs that permit graduation in three years rather than the traditional four years.

The dark side of the medical education picture is money, the AMA report shows. At a time when the operating budgets have reached record highs, there have probably never been so many medical schools in financial distress.

Financial data for 1968-69 as reported by the medical schools indicate the expenditure of $1,366,000,000 for the total educational, research, and medical service obligations. This was 16% above the previous year's amount.

UT Medical School Receives $100,000

A $100,000 pledge to The University of Texas Medical School at Houston was made recently to the UT System Board of Regents by UT Regent and Mrs. Jack Josey of Houston.

Dr. Cheves M. Smythe, dean of the Houston medical school, said that the funds will be used to initiate the Josey Professorship in Community Health Sciences to be established at the new medical school.

In accordance with the Joseys' wishes, the principal of the gift is to be held as a permanent endowment.

Health Costs Triple

Health spending will average more than $300 this year for every man, woman, and child in the United States, according to the Health Insurance Institute. Hospital services will account for almost one-third of the outlay.

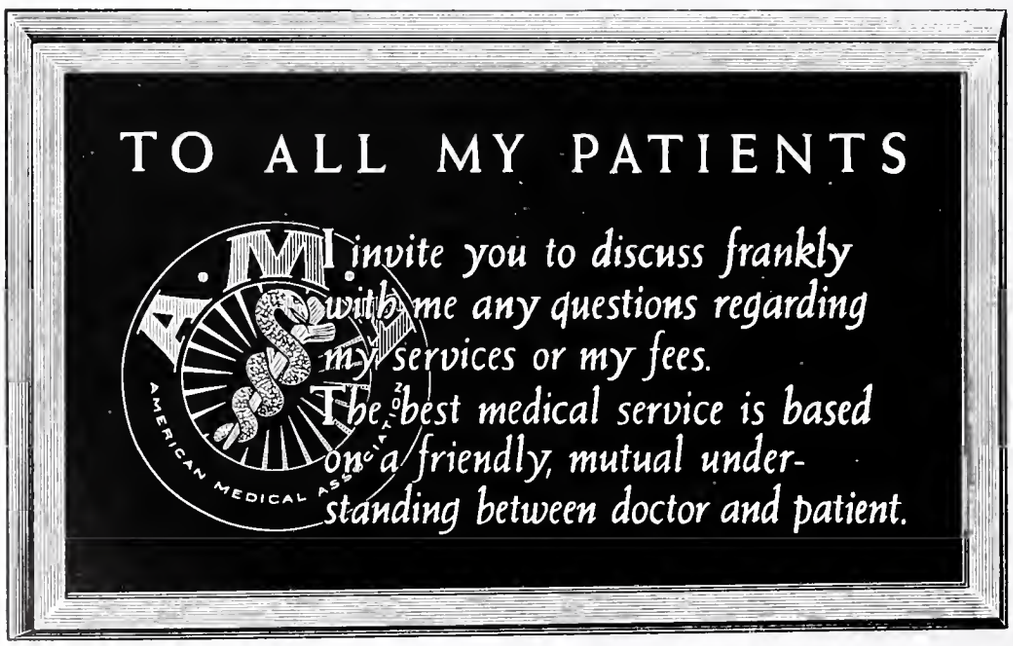
The institute also reported that according to government figures, the nation's health care bill for the fiscal year ending June, 1969, was $60.3 billion.

According to the Consumer Price Index, the cost of care has tripled since 1945, while the cost of all market items during the same time period has doubled.

1971
PHYSICIANS'
AND
WIVES'
ART EXHIBIT
May 6 - 7 - 8
Shamrock Hilton Hotel
Houston, Texas

Oil Paintings
Water Colors
Sculpture
Drawings & Prints
Arts & Crafts
Photography

For information and applications write:
Art Exhibit
Texas Medical Assn.
1801 N. Lamar
Austin, Texas 78701



This attractive office plaque, available from the American Medical Association, will encourage better understanding between you and your patients. Suitable for wall or desk display, the plaque measures 6" x 10½". The lettering is white on a dark brown background and the frame is durable beige plastic. The plaque is designed to blend well with any office decor. Cost of the plaque is $1.25, postpaid. To place your order, write to the Order Department, American Medical Association. Make check payable to the AMA.

AMERICAN MEDICAL ASSOCIATION
535 North Dearborn Street ● Chicago, Ill. 60610

MDs Put on 'Thinking Caps' for Bexar County Medical Society

Although not designed to study the thought processes of local physicians, the recently concluded "think sessions" of the Bexar County Medical Society did reveal several basic recurrent ideas that popped into doctors' heads as they attempted the one feat that only man has mastered—thinking.

The think sessions were first suggested by society president Dr. Jack B. Lee. Dr. Lee had in mind some short, but productive, sessions patterned after the think sessions that the San Antonio Chamber of Commerce had conducted. Dr. Lee, with the eventual coordinator of the Bexar County sessions, Ben O. White, Jr., visited, observed, and learned from one of these Chamber sessions. White, who also serves as assistant executive director of the society, said that Jimmy Gause of the Chamber of Commerce provided additional helpful information, and the foundations of the project were laid.

Next, Dr. Lee wrote to the society membership, asking for their participation. Enclosed with his letter was an answer postcard, which interested doctors were to return to the society staff, indicating their preference for one of seven scheduled sessions.

Two sessions were set for Sept. 1, one at noon and one in the evening. Other sessions were scheduled for morning, noon, and evening on Sept. 2 and for morning and noon on Sept. 3. A complimentary continental breakfast accompanied the morning session; a sandwich and soft drink were served at noon; and a complimentary beverage was available at evening sessions.

Staff members mailed postcard reminders to participants several days before their session.

According to White, 134 physicians took part in the sessions, and no more than 35 nor less than 18 were at any one session. White said that this was fortunate because "the importance of placing no more than six men at each table and confining the tables to a small area for maximum sound effects had been emphasized." He explained, "It is desirable to have a 'buzz' in the room."

The script used was similar to that used by the Chamber of Commerce, with appropriate revisions. The whole procedure went like clockwork, literally! Each of the steps in the procedure was timed with a stopwatch, and a typical sequence of events was as follows:

1. Participants were greeted and registered for groups.
2. Refreshments were served.
3. Moderator introduced himself and asked members of each table group to introduce themselves to other members of their group. Time allotted: 1 minute.
4. Participants filled out information card. Time allotted: 30 seconds.
5. A group chairman was elected. Time allotted: 30 seconds.
6. A group secretary was elected. Time allotted: 30 seconds.
7. Secretaries filled out required forms, and moderator explained ground rules.
8. Each participant took 3 minutes to present his idea. The group chairman timed each speaker with a stopwatch so that all group members were allotted exactly 3 minutes to speak. Total time allotted: 18 minutes.
9. Re-discussion period, in which group voted on the top three ideas. Time allotted: 10 minutes.
10. Participants listed bonus idea on back of information card. Time allotted: 3 minutes.
11. Each group secretary reported the top three ideas of his group. Information cards were collected, and participants were thanked and allowed to leave.

But, that was not the end of the work; rather, it was a beginning. After the Bexar County sessions, participants received a letter of thanks from Dr. Lee, and the staff began the enormous task of compiling and tallying ideas.

Said coordinator White, "This was a monumental task, but after many hours of work plus the invaluable help of our Public Relations Committee, a list was compiled beginning with the ideas that received the most 'mentions' down to the ideas that received just one comment."

Needless to say, many suggestions were made during the seven sessions, but the major ones called for more involvement of and cooperation among society members (mentioned 27 times), improvement of the physician image through public relations (17), improvement of town-gown relations (14), improvement of delivery of medical care to the community (11), and formation of a hospital staff committee (8). A total of 44 different ideas were mentioned, and several have already been implemented.

Not all of the ideas were in specific terms, however, so another problem was to decide "how" to accomplish the goals suggested. "The Public Relations Committee met after the ideas had been compiled into a list and agreed that now that they knew 'what' should be done, they must find out 'how' it should be done," said White. "The chairman of the committee, Dr. Boen Swinny, Jr., assigned each member of his committee four 'think session' participants to interview in a 'face-to-face' situation for additional input. Dr. Swinny charged his committee to obtain specific ideas from interviewees and, most important, to learn their feeling as to 'how' to accomplish these ideas."

In concluding, White noted, "Since we are nearing the end of the year, most of the ideas will be included in the appropriate committee's goals for 1971. However, it is interesting to note that some of the suggestions have already been implemented, and progress has been achieved as a result."

Education Directory Set For January Publication

Texas physicians soon will have a statewide continuing education directory.

The January issue of *Texas Medicine* will include a directory of continuing education courses to be offered in the state during 1971. The directory will offer pertinent information on programs planned by medical organizations, institutions, and medical schools. Currently, the Regional Medical Program plans to reproduce the directory after its initial publication in the journal and to distribute it to all physicians in the state.

The directory is being compiled in an effort to encourage greater participation in courses and more careful planning of continuing education programs by sponsors. It is hoped that the directory will aid those who plan courses by pointing out any duplications or voids in subject areas.

According to a recent survey, Texas physicians agreed that they would like to participate more in continuing education courses, but that they were not always aware of the various programs available.

Dr. Lee is shown here at the 4-manual pipe organ in the San Antonio Scottish Rite Temple.

Ophthalmologist also soothes ears...with organ music!

Editor's note: In addition to his ophthalmology practice in San Antonio and his many duties as a past president of the Bexar County Medical Society and vice-speaker of the Texas Medical Association's House of Delegates, Dr. Jack B. Lee schedules time to play the pipe organ for his own—and other's—enjoyment. In this article, another in the *Texas Medicine* hobby series, Dr. Lee presents his philosophy of music in general and his experience with organ music in particular.

Early Sunday morning if you are in San Antonio and if Dr. Jack B. Lee, ophthalmologist, is in town, you might hear the strains of a pipe organ at the early Holy Communion Service at St. Mark's Episcopal Church, where Dr. Lee is a member—and sometimes organist.

Behind the musical notes are almost 11 years of study and playing by a man who thoroughly enjoys the challenge of organ music.

"I first became seriously interested in the pipe organ in 1959, when I decided that I would like to learn to play it," says Dr. Lee. "I had previously played clarinet for 10 years in the Alzafar Shrine band in San Antonio."

"Then, too, I had studied the piano for several years during my childhood," he adds.

That year, 1959, he began in earnest to study the intricacies of the organ.

"The organist at my church agreed to accept me as a pupil, and I studied with him from 1959 until his death in 1964. He was indeed patient with me, and his encouragement was invaluable," says Dr. Lee. "My studies were limited to classical and sacred music, and even today I prefer this type of music to the so-called popular tunes."

"Following the death of my teacher, Walter Dunham, I continued my studies for an additional 18 months with Mr. Dunham's replacement, Gwylm Isaac. When Mr. Isaac returned to England, I then studied for an additional two years with one of the staff organists at San Antonio College, George Gregory."

As any good student knows, "Practice makes perfect," and Dr. Lee is certainly aware of the value of the cliche.

"I practice at the organ for about one hour daily," he says. "It brings me both pleasure and relaxation, and I hope that it brings pleasure to those who hear me play."

Although he stresses that his organ music is just a hobby and that he is not a professional, Dr. Lee can claim quite a few appearances as an organist.

He plays for some of the degrees in the local Scottish Rite ceremonies, and he has played for three Knights Templar Easter sunrise services.

Dr. Lee has also played at several funerals and for the TMA Memorial Service at the Annual Session in San Antonio in 1965, honoring TMA and Auxiliary members who had died during the previous year.

The "Wedding March" is also in his organ repertoire, as two of his three sons can well attest. He played at the nuptials of Jack B. Lee, Jr., and William B. Lee. Jack, Jr., was married to Miss Nancy Knight on July 2, 1966, in Houston, and Bill wed Miss Irene Mras on Oct. 11, 1969, in Chicago.

Probably much to his sons'—or rather, the fathers of his new daughters-in-law—delight, Dr. Lee does not accept remuneration. He says, "I have never accepted a fee for playing, nor shall I ever do so."

Dr. Lee notes, "In addition to playing for the weddings of my sons, I have played for the weddings of two daughters of physicians and also for the wedding of one of my secretaries. I shall play for the wedding of another physician's daughter here in San Antonio on Dec. 29."

He explains the philosophy behind his organ playing as: "The beauty of music as a hobby lies in the fact that one can both give and receive pleasure at almost any level of musical ability; and although my organ technique is far from that of a professional organist, my music does provide pleasure to me and, hopefully, to others."

Undoubtedly, this philosophy of providing for others carries over into organist Dr. Jack B. Lee's work as a practicing Texas physician.

1971 Conference on Legislation and Orientation Program

Saturday, January 16 • 9:00 am to 3:50 pm • TMA Building • Austin

WHO	WHAT	WHERE	WHEN
	Registration, Coffee	Reading Room	8:30 a.m.
[illegible] MD San Antonio President Texas Medical Association	1971—New Vistas and Challenges for Texas Medicine	Sam Thompson Room	9:00 a.m.
Walter H. Johnson, Jr. New York City Chairman of the Board Myers Johnson International, Inc.	The Anatomy of Change	Sam Thompson Room	9:20 a.m.
Ernest B. Howard, MD Chicago Executive Vice President American Medical Association	National Health Insurance, 1971-72	Sam Thompson Room	9:50 a.m.
Malcolm C. Todd, MD Long Beach, Calif. Member, Council on Health Manpower American Medical Association	Trends and Developments in Health Manpower	Sam Thompson Room	10:20 a.m.
	Coffee Break	Reading Room	10:50 a.m.
*	What's Happening In Congress? Medical and Health Bills Passed in 1970; Proposals for the 92nd Congress	Sam Thompson Room	11:05 a.m.
Compliments of TMA	Luncheon	Basement	12:30 p.m.
Truman G. Blocker, Jr., MD Galveston President UT Medical Branch	Presentation of TMA Distinguished Service Award	Sam Thompson Room	1:30 p.m.
Rep. G. F. Mutscher Brenham Speaker Texas House of Representatives	Issues Facing the 62nd Texas Legislature	Sam Thompson Room	1:35 p.m.
*	Medical And Health Issues Facing the 62nd Texas Legislature	Sam Thompson Room	2:15 p.m.
*	Orientation Program	Library Stack Area	2:15 p.m.
Host: The Medical Protective Company	Hospitality Hour	Madrid Room, Sheraton Crest Inn 111 E. First	6:00 p.m.

Complete programs on next page

What's Happening In Congress? Medical and Health Bills Passed in 1970; Proposals for the 92nd Congress

11:05 a.m. • Sam Thompson Room

WHO	WHAT
William O. LaMotte, Jr., MD Wilmington, Del. Chairman, Council on Legislation American Medical Association	Moderator
Participants: (members of the American Medical Association Council on Legislation) Edgar T. Beddingfield, Jr., MD Wilson, N.C. H. Phillip Hampton, MD Tampa, Fla. Rex E. Kenyon, MD Oklahoma City, Okla. Arthur A. Lampert, MD Rapid City, S.D. Samuel R. Sherman, MD San Francisco, Calif. Donovan F. Ward, MD Dubuque, Iowa	A panel presented by members of the American Medical Association's Council on Legislation concerning past and pending national medical and health legislation and future proposals to the new Congress

Medical and Health Issues Facing the 62nd Texas Legislature

2:15 p.m. • Sam Thompson Room

WHO	WHAT
Joseph T. Ainsworth, MD Houston Member, TMA Council on Medical Jurisprudence	Moderator
Joe T. Nelson, MD Weatherford Chairman, TMA Council on Medical Jurisprudence	1. Abortion; Licensure for Paramedical Groups; Chiropractic
Sam A. Nixon, MD Floresville Member, TMA Council on Public Relations and Public Service	2. Immunizations
Philip R. Overton, LLB Austin TMA General Counsel	3. Amendments to the Medical Practice Act; Emergency Room Care; The Texas Professional Association Act
Sam V. Stone, Jr., LLB Austin TMA Assistant General Counsel	4. Drug Legislation; Proposals for Controlling Drug Abuse

Orientation Program

2:15 p.m. • Library Stack Area

WHO	WHAT	WHERE	WHEN
Wendell H. Hamrick, MD, Houston Speaker, TMA House of Delegates	Presiding	Library Stack Area	2:15 p.m.
James A. Hallmark, MD, Fort Worth Member, TMA Board of Trustees	An Accounting of Stewardship; What Happens to Your Dues	Library Stack Area	2:15 p.m.
Charles B. Dryden, Jr., MD, Wichita Falls, Chairman TMA Board of Councilors	Medical Ethics—Obligations of the Physician to His Colleagues and to the Medical Profession	Library Stack Area	2:35 p.m.
C. Lincoln Williston, Austin TMA Executive Secretary	The Role of the Texas Medical Association in Representing the Physicians of Texas	Library Stack Area	2:55 p.m.
Donald M. Anderson, Austin TMA Assistant Executive Secretary	Serving the Doctors of Texas	Library Stack Area	3:15 p.m.
Robert Mayo Tenery, MD, Waxahachie, TMA Past President	Doctor-Patient Relations	Library Stack Area	3:35 p.m.

The actions of the official Tincture and Extract of Belladonna result chiefly from their Atropine content . . . conclude Goodman and Gilman

THE PHARMACOLOGICAL BASIS OF THERAPEUTICS
3rd Edition, page 522

ANTROCOL®

Antrocol provides the prompt, predictable antisecretory action of the belladonna alkaloid, atropine, fortified with sedation and blended with Bensulfoid, contributing to even absorption.

Each tablet or capsule contains: Atropine sulfate, 0.324 mg.; Phenobarbital, 16 mg. (may be habit forming); Bensulfoid, 65 mg. (see white section PDR). The atropine content of Antrocol is the maximum amount the average patient can take at six hour intervals over long periods with comfort.

SUPPLIED
Tablet in bottles of 100, 500 and 5000
Capsule in bottles of 100, 500 and 1000

Caution: Federal law prohibits dispensing without prescription.

PRESCRIBING INFORMATION

Contraindicated in glaucoma. Use cautiously in prostatic hypertrophy. Side-effects of toxic dose of atropine: flushing, dryness of mouth, cycloplegia, tachycardia and urinary retention.

DOSAGE: One tablet or capsule after each meal to correct emotional stress and normalize gastric secretions. In treating peptic ulcer, doses at regular intervals up to eight (8) tablets or capsules per day to provide the proper gastric titer for healing. After ulcer has healed, one tablet or capsule after each meal to maintain a titer unfavorable to recurrence.

Clinical supply available to physicians.

WILLIAM P. POYTHRESS & CO., INC.
RICHMOND, VIRGINIA 23217
Manufacturers of Ethical Pharmaceuticals

Clinical Extension of a pure Smooth Muscle Relaxant

TROCINATE®

Brand THIPHENAMIL HCl

400 mg./100 mg. S/C tablets

Trocinatc relaxes all smooth muscles. Its direct action (musculotropic) does not involve the autonomic nervous system and it is not mydriatic. It is metabolized by the body and eliminated in the urinc as harmless degradation products. Trocinatc has a remarkable history of frcedom from side-cffects.

When a pure direct-acting smooth muscle relaxant is indicated, Trocinate is the drug of choice.

DIARRHEA (functional) . . . *the first 400 mg. tablet usually relieves the discomfort of diarrhea so promptly that it ceases to be a bother.*

DIVERTICULITIS—MUCOUS COLITIS . . . *the accompanying discomforts can be relieved by this direct smooth muscle relaxant.*

BLADDER SPASM . . . *relaxation is immediate. One or two tablets condition the bladder for cystoscopy in one hour.*

SPASTIC URETER . . . *the specific relaxing effect of Trocinate on the spastic ureter has been proven by animal studies and affirmed clinically. (J. Urol. 73:487-93)*

PRESCRIBING INFORMATION

WARNING: Do not give in advanced kidney or liver disease. PRECAUTIONS: Trocinate relaxes all smooth muscles. Large dosage or prolonged usage may cause feeling of weakness or can theoretically precipitate gall-bladder colic, due to relaxing the vascular and duct systems. Caution should be observed in patients with urinary bladder obstruction. DOSAGE: 400 mg. May be repeated in 4 hours. After relief, lengthen thc dose frequency. (see side note)

NOTE: *The high therapeutic index of Trocinate permits its administration in dosage sufficient to relieve smooth muscle spasm promptly. 400 mg. dosage usually creates a therapeutic blood level. In reducing dosage after relief, lengthening the time between dosage rather than lessening the recommended dose is preferable. The prompt direct action allows a consciousness of the first suggestion of return of symptom . . . a guide to dose spacing and to determining when treatment is complete. A prescription for [illegible] 400 mg. tablets will [illegible] and leave a few [illegible]*

WILLIAM P. POYTHRESS & CO., INC.
RICHMOND, VIRGINIA 23217
Manufacturers of Ethical Pharmaceuticals

THE CHANGING FACE OF TEXAS MEDICINE

The December, 1920, issue of the *Texas State Journal of Medicine* (now *Texas Medicine*) conveyed Christmas greetings to all members of the Association by means of several articles revealing the temper of the times.

**One Christmas article entitled "A Yuletide Psalm" was reprinted in the journal; the article, by Julian Wetzel in *The Prism*, was as follows: "Verily, a man standeth as one appalled at Christmas time. His desire multiplyeth like unto a pair of guinea pigs, and his purse flatteneth with increasing flatness. He liveth in a nightmare of dread at the prospect of another lavender tie, and hopeth he may pass unto the land of his fathers in peace ere the evil day comes when the corner grocery delivereth another box of Cabajo de Stinka Duros from the wife of his bosom (charged to his account). The children of man rideth him by day and pestereth him by night with much talk of dolls, sleds, and BB guns, at which he grinneth foolishly and remembereth that eggs are 75 cents per. He contemplateth a birthday with exceeding composure, and even a wedding putteth him not out completely, but holidays, which lasteth from early fall nigh unto spring sorely distrateth him —yea, brethren, it getteth his goat. Likewise, it setteth him back so far at the First National that he barely noseth out by coming Yom Kippur, whereupon the Christmas festival loometh up again exceedingly large. But when he looketh upon the joys of Christmas and recollecteth that the world is heavy on the shoulders of many, he sayeth in the closet of his heart: 'It is well. Who am I that crabbeth the game? It looketh good unto mine eyes —I will get into it for my soul's sake.' Selah."

** Another Yuletide story told of the beginnings of the Christmas Health Seal: "The Christmas Health Seal had its origin years ago in a movement set on foot by the children of Denmark for the purpose of raising funds for a children's hospital. The idea was adopted in America in 1907, first in Delaware and later successively in other states as a means of raising funds with which to finance the war against tuberculosis."

**From the article on Christmas Seals and its discussion of the "war on tuberculosis" came other editorial stories and original articles—

* One story recounted the history of tuberculosis and mentioned that traces of the disease had even been found in Egyptian mummies.

* Another story told of the cost of tuberculosis: "It has been estimated that 150,000 people die each year from this disease—twenty deaths per hour . . . The Texas Public Health Association says that tuberculosis cost Texas over $42,000,000 in 1919. This estimate is based on the following data: the standard value of a life is $1,700 which, multiplied by the 3,396 deaths occurring in Texas during 1919, equals $5,773,200; the loss in earning, figuring the morbidity rate, equals $10,875,900, while the cost of medical attention, nursing and medicine, is estimated at $25,518,975."

* An editorial entitled "Climate vs. Treatment in Tuberculosis" presented this warning from the California State Board of Health. "IN TRAVELING FOR HEALTH, TAKE NOTICE! Tuberculosis demands rest, food, fresh air and peace of mind. This may not mean a change of climate. California has no public institutions with free care for non-residents. With funds to live for a year, come, but do rely on finding light work for support. The State Board of Health warns you, because it wishes to spare you homesickness and suffering from financial strain."

* Some statistics on "graduates" or ex-patients of the Texas Tuberculosis Sanatorium: Of the total number of patients, 303 had died, 328 were classified as well, 354 were chronically ill, 141 had not been heard from, and 3 had been definitely determined to be non-tuberculous. Vocationally, 38 were office workers, 55 were farmers, 174 were housewives, 42 were salesmen, 26 were laborers, 27 were nurses, 12 were students, and "the balance of such miscellaneous nature that they could not be classified." Male patients were most prevalent, with 637 males to 492 females.

* Original articles on tuberculosis looked at various aspects of the illness, with one author stating, "The medical profession is not entirely responsible for failure to make early diagnosis. The layman does not even suspect tuberculosis." The author explained the final situation with this poem: "God and the doctor like we adore/Just on the brink of danger, not before./ The danger past, both are requited;/ God is forgotten and the doctor slighted."

** In other news in the journal—

* A report that at a special session of the House of Delegates of the American Medical Association the annual Fellowship dues were raised from $5 to $6. The increase was due to higher costs of publishing the association's journal.

* A short article on Cisco's "ordinance out of the ordinary." The law provided that the members of the City Board of Health would consist of three physicians selected annually by the local medical society. From the *Dallas News*.

* A story on a new hospital in Dallas. "The North Texas Methodist Conference, on October 29th, voted unanimously to add a million dollar hospital to the Methodist institutions in Dallas." The probable site of the new hospital was to be across the street from the City Hospital.

Airline Devices Don't Affect Pacemakers

A recent article in the *Journal of the American Medical Association* reports that cardiac pacemakers will not be affected by the anti-hijacking devices currently being installed in many airports.

Dr. George J. Kidera, medical director of United Airlines, stated that the cardiac aids would not be affected by the magnetometers that the federal government and certain airlines are using to detect passengers who are carrying metal objects large enough to be weapons.

"We have received a rash of inquiries from physicians and the general public who have heard that certain types of microwave radiation or alternating current can affect transistorized pacemakers," said Dr. Kidera.

The medical director explained that the magnetometers used by airlines are passive devices that do not put out any energy. The device monitors the magnetic field of the earth, and when a metal object passes between the two sensing bars set up at the passenger loading gate, the background magnetic field is disturbed. This disturbance can be noted by airline officials and federal marshals.

Dr. Kidera added that neither the magnetometer nor any of the electronic equipment on board the aircraft will cause changes in the pacemakers.

Communication is goal of TMA's Public Relations and Advertising Division

Seeking an understanding of medicine's accomplishments and goals by both the public and the profession is a major aim of the Public Relations and Advertising Division of Texas Medical Association.

In addition to this goal, the division is charged with the responsibility of overseeing the advertising pages in *Texas Medicine*. In order to assure a first-class state medical journal that is also financially sound, advertising must be maintained at both high volume and high quality levels.

These two communications functions are handled for the physicians of Texas by Jon R. Hornaday, TMA's director of public relations and advertising.

Informing is the Key

With today's increased interest in medicine and health care by the public—both as individuals and as organizations—the need to inform the public about medicine's views is vitally important, says Mr. Hornaday. Educating the public regarding health matters has also been recognized as an effective means of preventing the spread of disease. For these reasons, TMA's public relations and advertising director spends much of his time developing good relationships with general news media and generating publicity about the Association.

Activities directed toward establishing good news media relations include the preparation of news releases on Association programs, policies, and meetings. Health education messages and other newsworthy events that TMA feels should be placed before the public and the profession are also subjects of releases. Scientific articles in *Texas Medicine* that have interest and value to the general public are frequently the basis for a statewide release to Texas news media.

But, since keeping TMA members and county medical societies informed is another vital part of the Association's communications program, Mr. Hornaday is also in charge of writing, editing, and producing *TMA Action*, the Association's newsletter, and its companion publication, *TMA Bulletin*, which is prepared and distributed daily during the Association's Annual Session.

Honest Responses Vital

The Public Relations and Advertising Division also handles specific requests for information on policy positions or medical facts from the news media. Every effort is made to answer such requests and to respond to news media reports as quickly as possible in an honest and forthright manner.

For example, when the Senate Finance Committee released a report early this year regarding the Medicare and Medicaid programs, widespread attention was given to the report's criticism of physicians and hospitals. Accusations ranged from inefficiencies to fraud.

TMA President Dr. Charles Max Cole felt it was vital that a response to these charges be made for Texas physicians. A statement by Dr. Cole was drafted, emphasizing that Texas physicians were not abusing these programs and that the basic problem resulted because the Medicare and Medicaid programs were politically conceived and designed at the national level, promising more than could be delivered. Dr. Cole also stated that if actual cases of abuse were found in Texas, TMA would cooperate fully in taking disciplinary action against the physicians involved.

A news release based on this statement was sent to all Texas daily and weekly newspapers, radio and television stations, and wire services. Advance copies of the release were sent to county medical society presidents and executive secretaries. Dr. Cole's statement was given good coverage by the news media, and several favorable newspaper editorials also appeared.

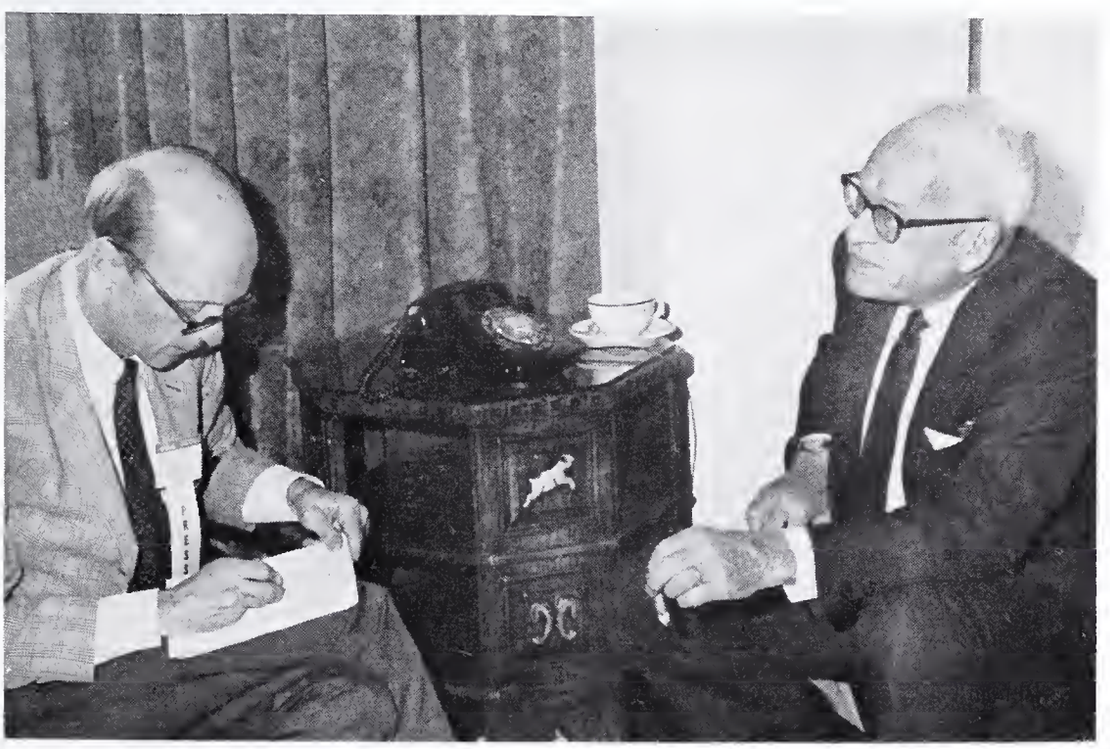
Now, with Congress already considering numerous proposals calling for a national compulsory health insurance program and other extensive changes in the delivery of health care, Mr. Hornaday emphasizes that the need for the medical profession to present its views to the public has never been greater. The communications skills of medical societies at all levels—national, state, and local—must be used extensively for this purpose.

Opportunities for Positive Communications

The Association's Annual Sessions provide an excellent opportunity to work with the news media on a positive basis. News releases and complete program information are provided to the news media in advance of the meeting, with particular attention being given to the media in the headquarters city and to the science writers in metropolitan areas.

During the meeting, a news room is maintained, providing working office space, handy interview rooms, and equipment and supplies for the convenience of the news media. By making it easier for the representatives of newspapers, radio, and television sta-

Jon Hornaday, TMA director of public relations and advertising, reads galley proof of *TMA Action.*



Behind this interview scene at the Association's Annual Session are hours of preparation by the Public Relations and Advertising Division. Here, medical reporter Brooks Keller (left) notes a point made by visiting speaker Dr. Chauncey D. Leake, a former executive vice-president of the UT Medical Branch and lecturer in pharmacology.

Proofs of advertisements in *Texas Medicine* are reviewed by Mrs. Anne Shelnutt, advertising assistant.

Medical student Richard J. Norman of Houston (center) receives a check for $1,000, placing the total amount loaned through the S. E. Thompson Fund to more than $500,000. Dr. Charles W. Yates (left) of Rosenberg, TMA trustee, presents the check while Dean Joseph M. White offers his congratulations.

tions to do their jobs, extensive coverage of the scientific program is obtained, and closer working relationships with the news media are developed. A similar liaison, although on a much smaller scale, is maintained with the Austin news media in connection with the Association's fall and winter meetings.

Presentation of the Association's annual Anson Jones Award is another means used to stimulate interest in the reporting of medical news, as well as to recognize the excellent work that is being done in this field. Presented annually since 1956, the award is given for excellence in communicating health information to the public and offers cash awards and plaques to both the printed and the electronic media. The Texas Press Association and the Texas Association of Broadcasters have been involved in TMA's award program, and contact with other news media organizations is maintained in order to promote the award throughout the state.

Special presentations are also a part of TMA's public relations plan. To call attention to TMA's medical student loan program, a special presentation was arranged when Richard J. Norman, a senior medical student at The University of Texas Medical Branch at Galveston, received a check for $1,000, which placed the total amount loaned by TMA through its loan program to more than $500,000. A photograph showing Dr. Charles W. Yates, member of the Association's Board of Trustees, presenting the check to Norman, with Dr. Joseph M. White, vice-president for academic affairs and dean of medicine at UT Medical Branch, standing by to offer his congratulations, was distributed to the news media.

In the publicity release that accompanied the photograph, emphasis was given to the fact that TMA's S. E. Thompson Scholarship Fund makes it possible for deserving students to continue their medical education and that it is thus possible for any qualified person in Texas to become a doctor of medicine, regardless of financial needs.

Positive communications and activities such as these not only reflect well on the medical profession, but also help dispel often-repeated criticisms such as the comment that medical societies attempt to limit the number of doctors.

Division Seeks to Further Health Education

Health education of the public is a continuing function of TMA's Public Relations Division. During the past five years, the Association has conducted extensive educational programs on a number of health topics, primarily through the use of 24-sheet outdoor posters or "billboards." A total of 3,350 of these posters have been placed throughout the state, carrying messages to the public on cancer, measles, mental illness, tuberculosis, polio, diabetes, heart disease, eye care, tetanus, drug abuse, air pollution, and the most recent subject, venereal disease. Printing of the posters has been done in cooperation with numerous voluntary health agencies and interested pharmaceutical manufacturers, while space for the posters has been provided as a public service by the outdoor advertising industry.

Newspaper releases, radio and television announcements, pamphlets, and other material are distributed in conjunction with the outdoor poster messages, and county medical societies are contacted and encouraged to conduct educational programs on the target subject at the local level.

Preparing various brochures, pamphlets, and other printed material for the Association is another function of TMA's public relations director. From complete booklets—such as the 12-page "Benefits of TMA Intern and Resident Membership"—to single-page items like the just-completed "VD is Sex Pollution" leaflet, these pieces are designed to fill specific needs in the Association's communications program.

An Association service that has only recently been assigned to the Public Relations and Advertising Division is the coordination of TMA's Speaker's Bureau. This operation is designed to provide knowledgeable speakers on a variety of subjects to both county medical societies and civic groups.

Guidance, direction, and basic public relations policy and philosophy of the Association are determined by the Council on Public Relations and Public Service. Mr. Hornaday and his secretary, Mrs. Anne Shelnutt, serve as staff representatives to the council.

Advertising Produces Association Income

The importance of the second major phase of Mr. Hornaday's division—advertising—is emphasized by the fact that income from advertising in *Texas Medicine* is the second largest source of Association revenue. In 1969, the advertisements published in the journal produced a gross income of $130,600. Only membership dues bring in more income to TMA.

In addition, the revenue from advertising finances publication of *Texas Medicine* and permits the journal to offer high-quality scientific articles and news to Association members.

The educational value of the advertising is also important. Information provided to Texas physicians each month on the journal's advertising pages is a primary source of current data on pharmaceutical products, medical supplies, and a variety of goods and services vital to the practice of medicine.

All advertising contracts, monthly space orders, and correspondence are handled by Mr. Hornaday and Mrs. Shelnutt, who also serves as advertising assistant. They work closely with the State Medical Journal Advertising Bureau, Inc., located in Chicago. This organization represents 35 state medical publications, serving as a sales representative and central billing office. It is responsible for most of the national pharmaceutical advertising carried in *Texas Medicine*.

Advertising from state organizations and companies is handled on a direct basis, as are all listings in the Texas Physicians' Directory section and the Classified Advertising section.

In addition to seeing that the proper ad is printed correctly in the right issue according to the advertiser's or advertising agency's exact instructions, the Public Relations and Advertising Division must obtain clearance on new ads that do not come through SMJAB, assist advertisers in preparing their ads when they do not use the services of an advertising agency, send proofs to advertisers for approval prior to publication, provide correct billing information to the Association's Business Office, and maintain up-to-date mailing lists of current advertisers and their agencies.

While the primary advertising sales effort for *Texas Medicine* is handled by SMJAB, TMA's public relations and advertising director also prepares promotional mailings and letters to advertisers and ad agencies and occasionally makes personal calls to promote the advertising potential of *Texas Medicine*.

More than 1,000 pages of advertising have been carried in TMA's journal during each of the past three years, and each of these pages passed through TMA's Public Relations and Advertising Division prior to publication.

Although TMA's public relations and advertising activities primarily involve extensive dealings with the lay world, these functions result in substantial benefits for the medical profession.

Baylor Offers MD Degree in 3 Years

Baylor College of Medicine has announced the establishment this fall of a new curriculum plan that will allow a medical student to complete his training in three years, instead of the traditional four years. The new curriculum plan also shortens the time the student spends in required courses, thus giving him additional time for elective courses.

The new plan will neither reduce the time requirements for an MD degree nor will it lower the cost of a medical education. A student at Baylor will still be required to spend 12 quarters in medical school, but if he elects the three-year plan, he will be studying all year round. Dr. Vernon Knight, chairman of the curriculum committee at Baylor, pointed out that while the new plan will not lower the total cost of tuition, it will allow the student to become a wage earner earlier.

Dr. Knight also noted, "We tried to shorten the captive hours," referring to the time a student spends in required courses. The hours previously devoted to such core courses have been reassigned to electives.

Hopefully, the new curriculum plan will allow for more efficient use of Baylor's facilities, according to Jack O'Wesne, administrative assistant to executive vice-president Dr. Joseph Merrill. O'Wesne also pointed out that students who wish to obtain master's degrees at the same time they are awarded their MD degrees can complete both programs in four years; previously, such a plan required five years.

Freshmen entering Baylor this fall will have the option of taking their courses under the new curriculum plan. Succeeding classes will begin their studies during the summer quarter. A student who finds he cannot cope with the pressures of a year-round program may switch to the four-year curriculum plan.

UT Official Calls For More Preventive Care

One of the nation's leading educators has called on American medical schools and others concerned with producing health manpower to shift their emphasis to preventive care as a means of bringing the country's health crisis under control.

Dr. Joseph Gallagher, assistant vice chancellor for health programs for The University of Texas System said that the nation's health systems will not be able to deliver adequate services to the population—"no matter how much we increase the health manpower"—because of misdirected priorities. Dr. Gallagher made the comments at a conference on effective use of health-care facilities and services sponsored by the Health Insurance Council at the Sheraton-Blackstone Hotel in Chicago.

"Our present health systems are based primarily on the premise that a person enters a system only if he is sick or injured," he said. "Waiting for a person to get sick or injured before he can seek assistance from our health system or before he can be admitted into the system is not only barbaric, it is not consistent with our accomplishments as a nation.

"If we pursue our episodic illness pattern as the *sine qua non* in the delivery of health services, we will not be able to afford it."

Dr. Gallagher urged the health professions educational systems and those providing health services to orient their work toward activities that would avoid "spending gigantic sums of money to educate greater and greater numbers of students to lock us deeper and deeper into our present delivery methods."

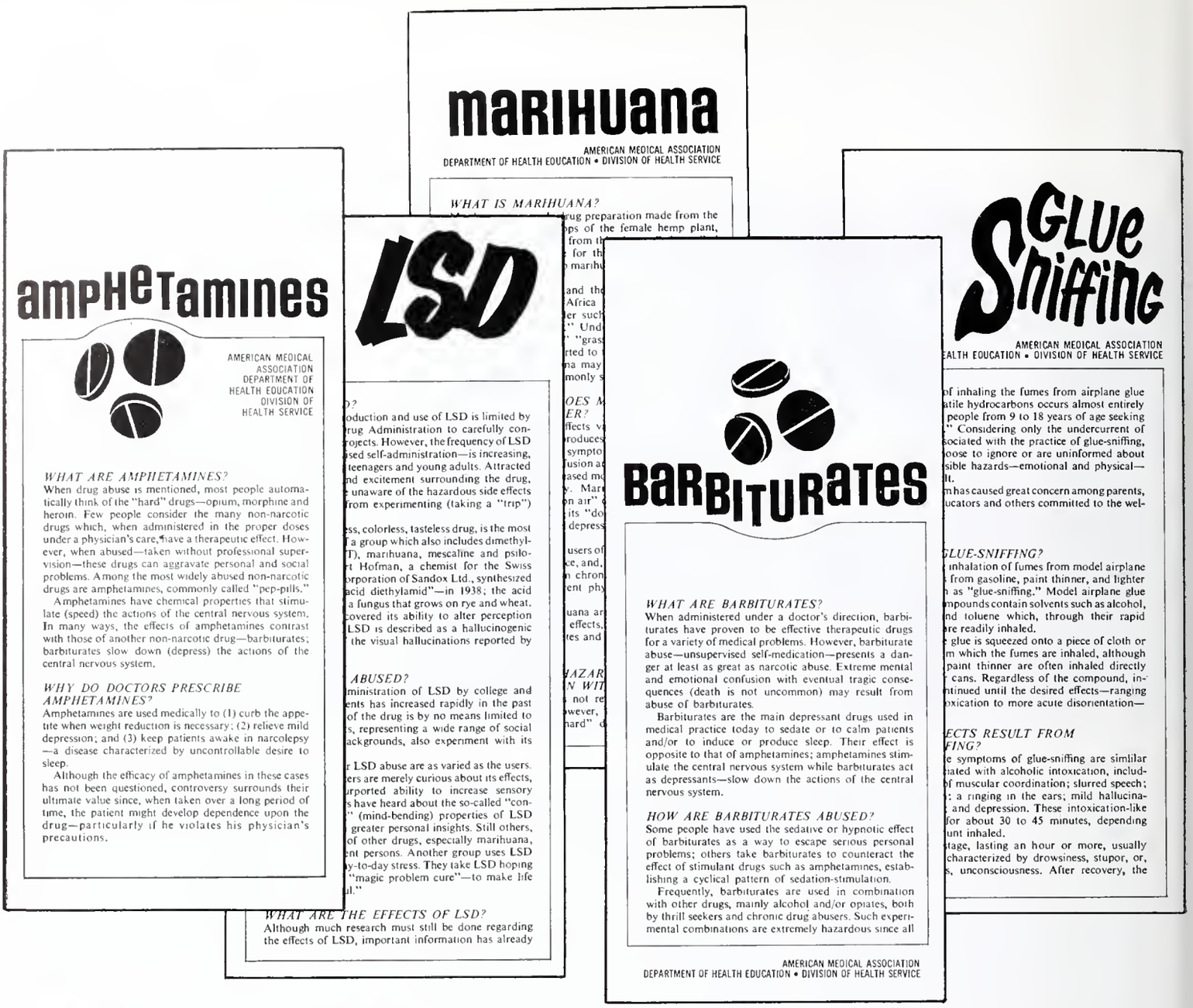
Among the measures Dr. Gallagher advocated were:

1. Maximum use of preventive measures.

2. Identification of areas requiring preventive know-how to enable the nation's research capability to focus on such areas.

3. Exploitation of the educational system and the communication media to educate people in preventive health practices, "instead of exclusively emphasizing the glory of hospital medicine, particularly in the sterile whiteness of surgery."

Increasing the emphasis toward preventive health, said Dr. Gallagher, "would set into motion a method for decreasing episodic illness, even injury" and would be "far less costly."



Millions of Americans are abusing drugs

Drug abuse has emerged into sharp focus as a difficult problem of growing concern to the medical profession and the public. Of particular concern is the fact that many young people today are experimenting with marihuana and a wide array of other drugs. Although many are highly sophisticated, young people are not truly aware of the dangers posed by abuse of drugs.

Because of the severity of the problem and the confusion which exists, in many quarters, about whether certain drugs are truly dangerous, there is an urgent need for intensive public education.

The five leaflets shown above provide **facts** that will be eagerly received by the public. Order the quantity you need today. There is no charge.

ORDER THESE PAMPHLETS TODAY—FREE—FROM TMA!

CLIP AND MAIL TO: PUBLIC RELATIONS DIVISION
TEXAS MEDICAL ASSOCIATION
1801 NORTH LAMAR BLVD.
AUSTIN, TEXAS 78701

QUANTITY	TITLE
_____	MARIHUANA
_____	LSD
_____	AMPHETAMINES
_____	BARBITURATES
_____	GLUE SNIFFING

Name_____

Address_____

City_____ State_____ Zip_____

Doctor, Beware Of The 'Silent' Sound

Your "tripped-out" patient may not be on drugs at all. He may simply be the victim of infrasound—sound with a frequency below the limit of normal hearing.

In a recent issue of *Medical World News*, Dr. Richard W. Procunier of Lockheed reports the discovery of a new syndrome that produces symptoms similar to those experienced by a person taking drugs. The new syndrome produces such characteristics as nausea, disorientation, headache, lassitude, and blurring of vision. According to Dr. Procunier, exposure to this silent infrasound may damage the human body.

The physician also notes that the infrasound may apparently result from explosions, earthquakes, aircraft activity, the noise of construction equipment and trains, and even the malfunctioning of an air-conditioning system.

Texas 1 of 4 States Producing Biologics

Production of human immunizing biologics by the Texas State Department of Health is an unusual scientific activity in the southwestern part of the nation.

Reportedly one of only 13 major producers of human immunizing agents in the entire United States, the Biologics Production Division of the State Health Department laboratory has a history that dates back to 1933 when a special session of the 43rd state legislature instructed the State Health Department laboratory to prepare rabies vaccine, diphtheria toxoid, and typhoid vaccine.

Currently, only three other state health department laboratories produce their own biologics—Michigan, Illinois, and Massachusetts. The other nine suppliers are commercial producers, and most states generally buy immunizing biologics from these commercial companies.

The Texas laboratory furnishes several kinds of vaccine for public health immunization programs within the state. The laboratory maintains a large supply of finished vaccine such as smallpox, tetanus, typhoid, and diphtheria so that in the event of an epidemic or a natural disaster, these vaccines will be available for use on short notice. In addition to this stockpile, the laboratory holds in reserve concentrated stocks of vaccine that can be quickly made into finished products.

Influenza, measles, polio, and rabies vaccines are not manufactured in the Biologics Production Division, since these types of vaccine can be purchased cheaper than the state can produce them.

The Biologics Production Division operates under the regulations of the National Institutes of Health in Washington, D.C. Before release, products are tested extensively in Austin and then given a final testing in the control laboratory in Washington. All biologics, including those offered for sale by commercial manufacturers, must undergo this testing process.

PAMPHLETS

SEX! is no joking matter when it leads to the frightening consequences of venereal disease, according to a recent leaflet printed by Texas Medical Association.

The pamphlet, prepared in conjunction with TMA's current outdoor advertising campaign against VD, urges those who suspect they have either syphilis or gonorrhea to "get the facts" and to "seek early treatment." The leaflet gives general information on who is contracting the disease, the signs of trouble, the test required to diagnose VD, and what a person should do if he suspects he has the disease.

Available free of charge, the pamphlet will hopefully provide much-needed facts to a generally uninformed population. Requests should be sent to TMA Public Relations and Advertising Division, 1801 North Lamar Boulevard, Austin 78701.

"Oh, I get high with a little help from my friends," gurgles the rock singer, and indeed today many young people —and others, too—are getting high with the help of so-called "friends"—pushers of illegal drugs.

The growing abuse of drugs is not limited to persons in a particular socio-economic class or age group, nor is it limited to any particular type of drug. Drug abusers are smoking pot (marihuana), dropping acid (LSD), sniffing glue, popping pep-pills (amphetamines), and downing goofballs (barbiturates). Five pamphlets, one on each of these types of drugs now being misused, have been prepared by the American Medical Association's Department of Health Education, Division of Health Service to aid physicians and others in the battle to educate both hard-core and potential drug abusers and their families.

The pamphlets are written in an easy-to-read, easy-to-understand manner so that they are suitable for educating the general public also. Following a general outline, the free pamphlets begin by giving information relating to the chemical composition and legitimate uses of the drugs—marihuana, LSD, amphetamines, glue, and barbiturates—and what form abuse usually takes. The pamphlets continue, noting the effects of the drug on users and the hazards of abuse. Legal controls now in effect are also discussed.

With the permission of the AMA, these five pamphlets have been reprinted by the Texas Medical Association for use by concerned Texas physicians and others who must deal with the drug problem. For free copies of the pamphlets, address requests to the TMA Public Relations and Advertising Division, 1801 North Lamar Boulevard, Austin 78701.

An aid for the physician who works with athletes and athletic programs is now available from the American Academy of Orthopaedic Surgeons.

Compiled by the Academy's Committee on Sports Medicine, *A Bibliography of Sports Medicine* serves as an introduction to the interdisciplinary literature available on sports.

The 96-page volume has some 175 index subjects, and more than 1,300 article and publication references are cross-indexed on subjects ranging from allergy to wrestling.

Edited by Jack C. Hughston, committee chairman, and Kenneth S. Clarke, former Academy coordinator of continuing education, the reference aid is available for $2 per copy with quantity discounts from the Publications Committee, American Academy of Orthopaedic Surgeons, 430 North Michigan Avenue, Chicago, Ill. 60611.

According to a recent monograph, the problem of child abuse continues to frustrate states and communities. While there is no convincing evidence of an increase in the rate of abuse, the reality is that, numerically, more cases of child abuse are being identified each year.

The newly-published monograph presents an analytical study of current state laws regarding the reporting of

child abuse and discusses legislation in each of the 50 states and territories of the United States.

Specifically, the publication includes information on changes in reporting laws brought about by amendments enacted during the past five years; the current status of the law in each of the states and territories; the caliber and direction of novel approaches found in new legislation; problem areas found in present laws; and the need for additional funds and larger, trained staffs to fully implement services designed to protect neglected and abused children.

Guidelines for communities seeking to modify their laws are given by presenting selected portions of existing state laws chosen to be most representative of current thinking and trends.

The 134-page monograph costs $1.50 and is available upon request from The American Humane Association, Children's Division, P. O. Box 1266, Denver, Colo. 80201.

PERSONALS

New president-elect of the American Society of Anesthesiologists is **Dr. M. T. Jenkins,** Margaret Milam McDermott professor and chairman of the department of anesthesiology at The University of Texas (Southwestern) Medical School in Dallas. Dr. Jenkins also works with Parkland Memorial Hospital in Dallas.

Dr. Alfred G. Knudson has been appointed the new dean of The University of Texas Graduate School of Biomedical Sciences at Houston. Dr. Knudson, who has been serving as associate director for education at the University's M. D. Anderson Hospital and Tumor Institute in Houston, succeeds **Dr. Sumter S. Arnim,** who is retiring.

An expert on the relationship between blood fat and hardening of the arteries, **Dr. Antonio M. Gotto** has accepted a position at Baylor College of Medicine as professor of medicine and chief of the newly created division of atherosclerosis and lipo-protein research.

Dr. Gotto is presently head of the section on molecular structure of the molecular disease branch of the National Heart Institute in Bethesda, Md. He will move to Houston in July, 1971.

DR. MacDONALD

Dr. Paul C. MacDonald, a 1955 graduate of The University of Texas (Southwestern) Medical School and a member of its faculty since 1960, was recently named chairman of the department of obstetrics and gynecology at the school. He succeeds **Dr. Jack A. Pritchard,** who served as head of the department for 15 years.

Immediate past president of TMA, **Dr. Charles Max Cole** of Dallas, has been named a member of the American Medical Association's Council on Long-Range Planning and Development. Dr. Cole will serve on the council for three years.

Dr. David Paton, current associate professor of ophthalmology and assistant dean of medical school admissions at Johns Hopkins University School of Medicine in Baltimore, Md., has been appointed chairman of the department of ophthalmology at Baylor College of Medicine.

Dr. Paton will be the first occupant of the Margaret Root Brown Chair of Ophthalmology. He will assume responsibilities as ophthalmologist-in-chief at Methodist, Ben Taub General, and Veterans Administration hospitals and will develop a program in pediatric ophthalmology at St. Luke's-Texas Children's Hospital.

Latest winner of the Gold Headed Cane award, presented to the most outstanding physician in Tarrant County, was **Dr. William P. Higgins.** Dr. Higgins, a native of Fort Worth, began his general practice there in 1939.

Dr. William W. Miller, associate professor of pediatrics at The University of Texas (Southwestern) Medical School in Dallas, has been named the new director of the division of cardiology at Children's Medical Center.

Dr. Miller received the 1969 Young Investigator's Award of the Cardiology Section of the American Academy of Pediatrics.

A past president of TMA and current member of the Board of Directors of Scott and White Clinic in Temple, **Dr. G. V. Brindley, Jr.,** has been appointed to the Regional Medical Programs Review Committee. He was notified of his appointment by the US Department of Health, Education, and Welfare. Dr. Brindley will serve as a special consultant through Dec. 31, 1974.

Dr. Vernie A. Stembridge, chairman of the department of pathology at The University of Texas (Southwestern) Medical School, has been appointed to a five-year term on the Scientific Advisory Board of Consultants for the Armed Forces Institute of Pathology.

Dr. Arthur S. Keats, Houston anesthesiologist, has been elected editor-in-chief of *Anesthesiology*. He will serve a three-year term on the journal of the American Society of Anesthesiologists, Inc.

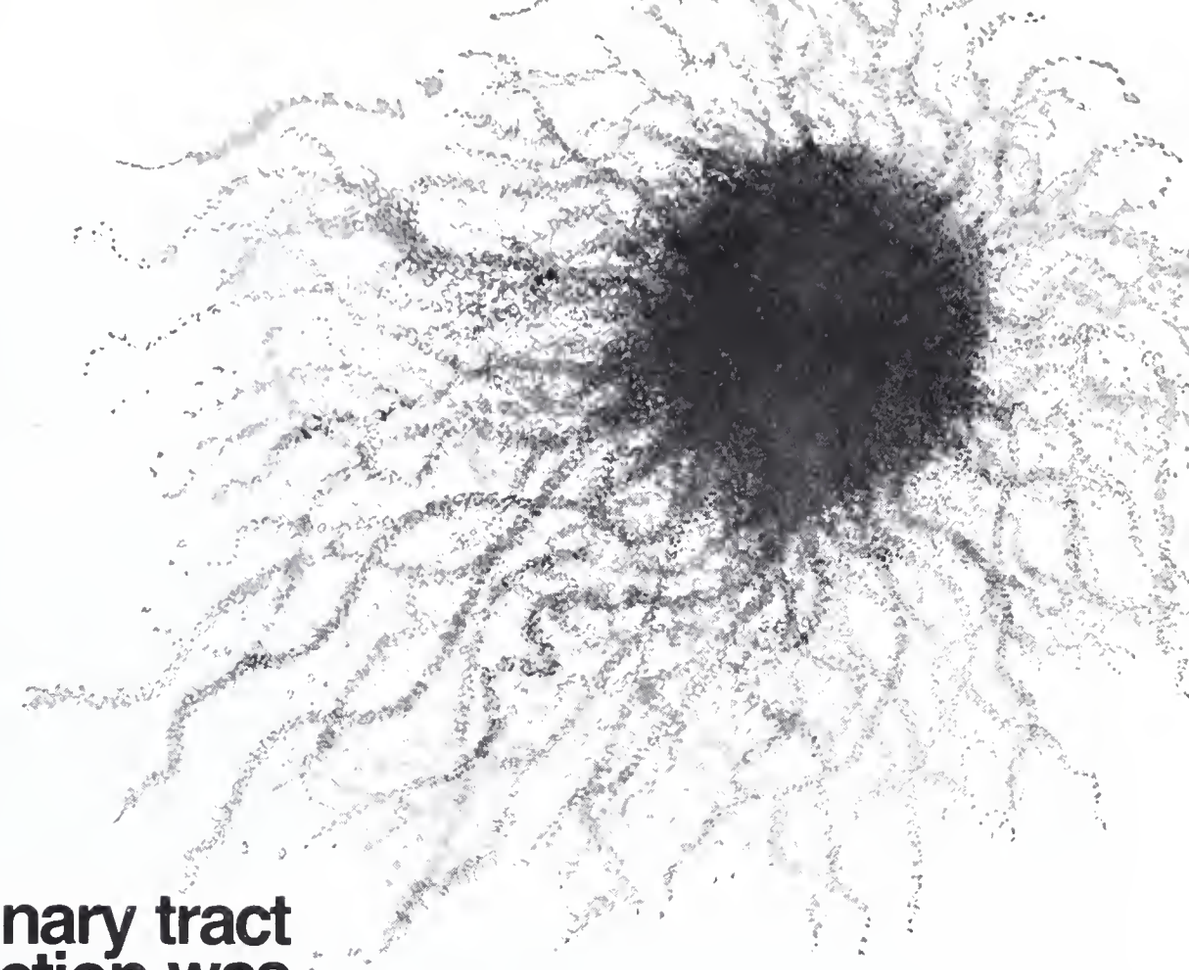
Dr. Wilfred T. Tumbusch, chief of the department of surgery at Brooke General Hospital at Fort Sam Houston, has been named commanding officer of the hospital. Dr. Tumbusch was formerly chief of plastic surgery at Walter Reed General Hospital in Washington, D.C.

Dr. Denton A. Cooley of Houston was elected a vice-president of The University of Texas Dads' Association at a recent business meeting of the group held during the annual Dads' Day observance on the UT Austin campus.

Pathologist **Dr. Gwyn H. Harwell** of Longview, past president of the Gregg County Medical Society, was recently elected and installed as governor of District X of Zonta International, a 17,000-member service organization composed of executive women in business and the professions.

Dr. John P. McGovern, former president of the American Academy of Allergists, has been appointed by President Richard M. Nixon to serve a four-year term as a member of the Board of Regents of the National Library of Medicine.

Dr. McGovern is professor and chairman of the department of the history of medicine and clinical professor of allergy at The University of Texas Graduate School of Biomedical Sciences in Houston, as well as clinical professor of pediatrics (allergy) at Baylor College of Medicine.



A urinary tract infection was eliminated last week

Intestinal monilial overgrowth has appeared this week

For women who are diabetic or debilitated, oral antibiotic therapy often sets the stage for monilial overgrowth in the intestine.

When you anticipate such a problem, take action with DECLOSTATIN 300. It combines the broad-spectrum potency of demethylchlortetracycline with the antifungal effectiveness of nystatin—it helps avoid monilial take-over. Experience has shown DECLOSTATIN to be highly useful for many women patients; individual culture studies will show exactly where this usefulness may best be applied.

It doesn't let monilia begin where bacteria end. Declostatin® 300

Demethylchlortetracycline HCl 300 mg and Nystatin 500,000 units Capsule-Shaped Tablets Lederle

Effectiveness: Because its antibacterial component is DECLOMYCIN® Demethylchlortetracycline, DECLOSTATIN should be equally or more effective therapeutically than other tetracyclines in infections caused by tetracycline-sensitive organisms. The antifungal component, nystatin, protects against superinfection by antibiotic-resistant fungal overgrowth (particularly monilia) in the intestinal tract.

Contraindication: History of hypersensitivity to demethylchlortetracycline or nystatin.

Warning: In renal impairment, usual doses may lead to excessive accumulation and liver toxicity. Under such conditions, lower than usual doses are indicated and, if therapy is prolonged, serum level determinations may be advisable. A photodynamic reaction to natural or artificial sunlight has been observed. Small amounts of drug and short exposure may produce an exaggerated sunburn reaction which may range from erythema to severe skin manifestations. In a smaller proportion, photoallergic reactions have been reported. Patients should avoid direct exposure to sunlight and discontinue drug at the first evidence of skin discomfort. Necessary subsequent courses of treatment with tetracyclines should be carefully observed.

Precautions: Overgrowth of nonsusceptible organisms may occur. Constant observation is essential. If new infections appear, appropriate measures should be taken. In infants, increased intracranial pressure with bulging fontanels has been observed. All signs and symptoms have disappeared rapidly upon cessation of treatment.

Side Effects: Gastrointestinal system—anorexia, nausea, vomiting, diarrhea, stomatitis, glossitis, enterocolitis, pruritus ani. Skin—maculopapular and erythematous rashes; a rare case of exfoliative dermatitis has been reported. Photosensitivity; onycholysis and discoloration of the nails (rare). Kidney—rise in BUN, apparently dose-related. Transient, reversible, nephrogenic diabetes insipidus with excessive thirst and polyuria (rare). Hypersensitivity reactions—urticaria, angioneurotic edema, anaphylaxis. Teeth—dental staining (yellow-brown) in children of mothers given this drug during the latter half of pregnancy, and in children given the drug during the neonatal period, infancy and early childhood. Enamel hypoplasia has been seen in a few children. If adverse reaction or idiosyncrasy occurs, discontinue medication and institute appropriate therapy. Demethylchlortetracycline may form a stable calcium complex in any bone-forming tissue with no serious harmful effects reported thus far in humans.

Average Adult Daily Dosage: One tablet b.i.d. Should be given 1 hour before or 2 hours after meals, since absorption is impaired by the concomitant administration of high calcium content drugs, foods and some dairy products. Treatment of streptococcal infections should continue for 10 days, even though symptoms have subsided.

Lederle LEDERLE LABORATORIES, A Division of American Cyanamid Company, Pearl River, New York 450-9

Here Dr. Fink works on a new piece in his modern, fully-equipped shop.

Welcome to Dr. Fink's Woodworking Shop!

By Frederick Fink, M.D.

Editor's note: Scattered throughout the home of Dr. Frederick Fink, medical director of the Union Bankers Insurance and Combined American Insurance Companies in Dallas, are numerous pieces of furniture, all beautifully made of top-quality walnut. That such pieces of furniture are found in a home is not unique, but the fact that Dr. Fink produces the furniture himself is unusual. Another in the *Texas Medicine* series on hobbies enjoyed by Texas physicians, this article by Dr. Fink traces his interest in woodworking and the accompanying photographs illustrate his proficiency in the hobby.

My first interest in woodworking started when I was a small boy on the farm in Leon Springs, Tex. I made little pine boxes and burned designs on them with a magnifying glass by using the rays of the sun.

During my years at school away from home, I did not do any woodworking and did not start again until in the 1930's when I began to equip a shop in my garage with rather simple tools. Some of the technical problems which presented themselves were most challenging and interesting. I remember that my first jig saw was made out of an old sewing machine which I rigged up so that it would work as a jig saw. Many other homemade gadgets came in handy for solving problems.

I again became active in woodwork about six years ago when we converted our garage, which is attached to our house, into my woodworking shop, known as "Dusty Corners." Then, I really began to accumulate tools in earnest, my main tool being a shopsmith, which is a multi-purpose tool and can be adapted to many different modalities. Fortunately, my shop is air-conditioned, and I can work very comfortably during both summer and winter months.

In addition to the shopsmith, I have numerous hand tools, including a set of carving tools, and I have done some rather minor wood carving, as you can see in the photographs accompanying this article. I am especially proud of the coffee table which I personally designed and made, mostly by hand. Not only was the carving on it done by hand, but the Queen Anne type legs were done entirely by hand, using various tools.

To me, the two most interesting procedures in woodworking are hand-carving and lathe work. At this time, I am using only walnut for my wood because it is beautifully grained and works very easily. For finishing, I prefer a wax finish. You can put a high polish on a piece of wood with a wax finish, and in the event it gets scratched or damaged in any way, it is easily corrected merely by using sand paper and more wax.

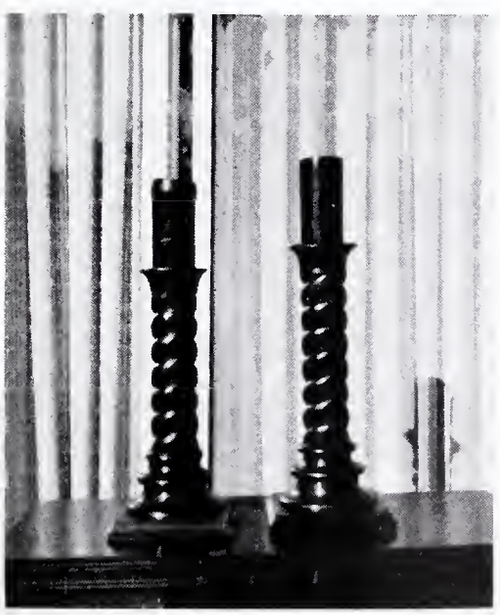
Working with wood is very relaxing to me, and it is hard to say how much time I spend engaged in my hobby. Let me say that I treat woodworking purely as a hobby and work at it when I feel like it. I may work every day for a while and then not touch it for a week or two, depending largely upon what other activities I must engage in.

Of course, my family keeps me busy by giving me orders for various and sundry articles which they would like to have made. If my interest seems to lag, my wife will put a picture of some piece of furniture on my desk at home in order to stimulate me!

Dr. Fink modeled this walnut Bible stand after a similar piece he had seen. Partially hand-carved, it was completed in 1968. A walnut candle stand goes with it.

This walnut, hand-carved ottoman was made by Dr. Fink about 1934.

One of his proudest achievements was the design and manufacture of this hand-carved coffee table. The table is of walnut with a carved tray on top. It was completed about 1935.



Two unusual, hand-made candle holders were a 1969 project of the woodworking enthusiast.

★

Specialized Service

IN

PROFESSIONAL LIABILITY INSURANCE

is a high mark of distinction

THE

MEDICAL PROTECTIVE COMPANY

FORT WAYNE, INDIANA

Professional Protection Exclusively since 1899

AUSTIN OFFICE: Robert F. Reiman, Representative
3201 Clearview, Austin 78703 Telephone: 512-472-9603
DALLAS OFFICE: Gayle Nelson and Arthur F. Ennis, Jr., Representatives
816 Medical Arts Building, Dallas 75201 Telephone: 214-742-4980
HOUSTON OFFICE: Richard B. Ross and William A. Orsburn, Representatives
1525 Hermann Professional Bldg., Houston 77025 Telephone: 713-523-1127

Turner's Clinical & X-Ray Laboratories

Medical Center

El Paso, Texas

Telephone 532-4689

☆

SURGICAL PATHOLOGY
CLINICAL PATHOLOGY
RADIOLOGY

☆

GEORGE TURNER, M.D.
JEANNE TURNER BOWMAN, M.D.
DAVID LIBMAN, M.D.

The Martin X-Ray and Radium Clinic

3501 Gaston Ave. Dallas, Texas

ADJOINING
GASTON EPISCOPAL HOSPITAL

For X-ray diagnosis and the X-ray and radium treatment of cancer and other conditions suitable for radiation therapy.

Chas L. Martin, M.D. James A. Martin, M.D.

Recent Books Consider Variety of Medical Experiences, Knowledge

Synopsis of Ear, Nose, and Throat Diseases, ed. 3, Robert E. Ryan, Joseph H. Ogura, Hugh F. Biller, and Lindsay L. Pratt, 379 pp., 95 illus., St. Louis, The C. V. Mosby Co., 1970, $10.75

THE AUTHORS of this synopsis have performed a great service to the medical student and also to the practicing otolaryngologist who may want a rapid, concise outline for teaching material or who may wish to refresh his memory concerning certain fundamentals that may be a little hazy in his mind.

From this synopsis, the reader can go to larger texts for more detailed study. I do not feel this book is completely adequate to teach an otolaryngologist the various surgical procedures he is called upon to perform.

The synopsis is easy to read and understand for both the student and the practitioner, and I recommend it highly as a ready reference book.

MARVIN L. WILLIAMS, M.D.
Texarkana.

A Guide to Dermatohistopathology, Hermann Pinkus and Amir H. Mehregan, 546 pp., 403 illus., New York, Appleton-Century-Crofts, 1969, $20.

SMALL ENOUGH to be read without producing muscle strain, this 7- by 10-inch book weighs only about 4 pounds. It follows an excellent sequence, and an attempt has been made to analyze and classify lesions as they would be if one actually examined them on a microscope slide.

There are seven broad sections: general part, 94 pages; superficial inflammatory process, 76 pages; deep inflammatory process, 49 pages; granulomatous inflammation and proliferation, 57 pages; metabolic and other noninflammatory dermal diseases, 33 pages; nonneoplastic epithelial and pigmentary disorders, 47 pages; and malformation and neoplasia, 60 pages.

These seven sections are well arranged and written, but this book is surpassed as a reference book by more recently published books. However, this text seems to have fulfilled the authors' goal—"a guide to diagnosis based on personal experience and interpretation. It is not a complete textbook in the old sense . . . ."

The fact that 83 of the 281 references in the text list either Hermann or Felix Pinkus among the authors indicates how personal the guide is. This statement is not intended to be derogatory; in fact, the large number of references show how entwined the senior author and his father are in dermatology and dermatopathology. The authors' opinions and views are usually identified.

The volume is copiously illustrated. The illustrations are clear and sharp and show what they attempt. In reading the text, I was mildly annoyed by references to figures only, which required leafing through the book to find the page where the figure is located. However, there is an index to illustrations. If this were my own book, I would pencil the page number above the illustration reference. Unfortunately, none of the illustrations are in color.

In summary, this seems to be an excellent book for the pathology or dermatology resident. It should be included in any good dermatology library and perhaps read as a review by the serious practicing dermatologist. The continuing development of the text handicaps its use as a reference book, but hardly detracts from its overall value in teaching.

HOWARD BURT, M.D.
Austin.

Exploitable Molecular Mechanisms and Neoplasia, published for The University of Texas M. D. Anderson Hospital and Tumor Institute at Houston, Texas, 66 pp., illus., Baltimore, Williams & Wilkins Co., 1969, $17.

REPRESENTING THE proceedings of the 22nd annual Symposium on Fundamental Cancer Research held at Houston, Texas, in 1968, **Exploitable Molecular Mechanisms and Neoplasia** explores various concepts in several fields of basic science in an effort to solve the puzzle of the malignant process.

Chairman of the symposium, Dr. Robert B. Hurlbert, and participants investigate questions relating to the linking of molecular events with neoplasia in this collection of symposium papers. A discussion follows each area presentation.

These annual symposiums endeavor to bring together the latest concepts in fundamental cancer research, and each conference is planned around a single subject, such as this one on molecular mechanism and neoplasia.

The Vitreous in Clinical Ophthalmology, Norman S. Jaffe, 310 pp., 334 illus., St. Louis, The C. V. Mosby Co., 1969, $32.50.

THIS BOOK is intended to serve as a review of the vitreous for both the practicing clinical ophthalmologist and the resident in ophthalmology. To accomplish this purpose, Dr. Jaffe has compiled the available scientific knowledge concerning the vitreous into one volume.

The first four chapters of the book deal with the embryology, physiology, biochemistry, electronmicroscopy, and anatomy of the vitreous; subsequent chapters treat other, more complex matters involving this component of the eye.

Written more from a retinal and anterior segment surgeon's point of view, the book contains 334 illustrations, including nine in two colors and two full-color plates. It also lists references at the end of each chapter for the reader's convenience.

A Physician's Living Thoughts, Carl Thenebe, 163 pp., New York, Philosophical Library, Inc., 1970, $4.95.

REFLECTING HIS almost 50 years of medical practice, Dr. Carl Thenebe has written a book on his philosophy and personal wisdom. As a physician, with an opportunity to view many aspects of human life, Dr. Thenebe gives a penetrating insight into his experiences with human responses and behaviors.

The following quotation is a good example of this author's style and philosophy: "The physician with an alert mind, strives always, to make disease more sufferable to humanity, and eternally hopes, for the certain preventive measures and the sure cures."

NEW BOOKS IN TMA LIBRARY

Bülbring, E., Brading, A. F., Jones, A. W., et al.: *Smooth Muscle*, Baltimore, Williams & Wilkins Co., 1970.

Cancro, R., ed.: *The Schizophrenic Reactions: A Critique of the Concept, Hospital Treatment, and Current Research*, New York, Brunner-Mazel, Inc., 1970.

Constant, J.: *Bedside Cardiology*, Boston, Little, Brown & Co., 1969.

Gordon, B. L., II: *Dyscrasias of Immunoglobulin Production: Their Impact on Modern Immunology*, Philadelphia, F. A. Davis Co., 1969.

Kagan, B. M.: *Antimicrobial Therapy*, Philadelphia, W. B. Saunders Co., 1970.

Macfarlane, L. R. S.: *A Short Synopsis of Human Protozoology and Helminthology*, ed. 2, Edinburgh and London, E. & S. Livingston, Ltd., 1969.

Montagna, W., Brentley, J. P., and Dobson, R. L.: *The Dermis, Proceedings of a Symposium on the Biology of the Skin Held at Salishan Lodge, Gleneden Beach, Oregon, 1968*, vol. X of *Advances in Biology of Skin*, New York, Appleton-Century-Crofts, Inc., 1970.

Morton, R. A., ed.: *Fat-Soluble Vitamins*, Oxford, Pergamon Press, Ltd., 1970.

Nelson, J. H., Jr.: *Atlas of Radical Pelvic Surgery*, New York, Appleton-Century-Crofts, Inc., 1969.

Raspe, G., ed.: *Schering Workshop on Pharmacokinetics, Berlin, May 8 and 9, 1969*, vol. 5 of *Advances in the Biosciences*, Oxford, Pergamon Press, Ltd., 1969.

Schneeberg, N. G.: *Essentials of Clinical Endocrinology*, St. Louis, The C. V. Mosby Co., 1970.

Sicuteri, F., Rocha e Silva, M., and Back, N., eds.: *Bradykinin and Related Kinins: Cardiovascular, Biochemical, and Neural Actions*, vol. 8 of *Advances in Experimental Medicine and Biology*, New York, Plenum Press, 1970.

Stewart, W. D., Danto, J. L., and Maddin, S.: *Synopsis of Dermatology*, ed. 2, St. Louis, The C. V. Mosby Co., 1970.

Thacher, J.: *American Medical Biography or Menoirs of Eminent Physicians Who Have Flourished in America (First published in Boston in 1828)*, New York, Milford House, Inc., 1967.

Veirs, E. R.: *So You Have Glaucoma*, ed. 2, New York, Grune & Stratton, Inc., 1970.

Williams, S. W.: *American Medical Biography or Memoirs of Eminent Physicians (Embracing Principally Those Who Have Died Since the Publication of Dr. Thacher's Initial Work in 1828 on the Same Subject. Greenfield, Massachusetts, 1845.)* New York, Milford House, Inc., 1967.

Wolstenholme, G. E. W., and Knight J., eds.: *Control Processes in Multicellular Organisms, A Ciba Foundation Symposium*, London, J. & A. Churchill, 1970.

Many of the books listed are available for review. If you would like to prepare a review on one of the new books listed, or if you would like to review other new books on a specific topic, write to the TMA Library, 1801 North Lamar Boulevard, Austin 78701. Guidelines for book reviewers are available from the Library.

Recent Deaths

Dr. J. G. Sanders

Dr. Jewell Gaskill Sanders, 71, retired Bremond, Tex., general practitioner, died Sept. 9, 1970. He had practiced medicine in Central Texas for 41 years.

Dr. Sanders attended Austin College at Sherman, the University of California at Berkeley, and Southern Methodist University at Dallas before receiving his MD degree in 1928 from Baylor University College of Medicine, then located at Dallas. Postgraduate study was completed at New York Postgraduate School and Hospital in New York City in 1929. Before moving to Bremond in 1932, Dr. Sanders practiced for one year in Marlin, Tex. He retired in 1967.

A member of Brazos-Robertson Counties Medical Society and the American Academy of General Practice, he was elected to inactive membership in Texas Medical Association and American Medical Association in 1968. He was also a lifetime member of Southern Medical Association. He

DR. SANDERS

was an organizer of the Bremond Chamber of Commerce and Agriculture and was a charter member of the Phi Delta Theta social fraternity, helping to organize the chapter at SMU. He also served on the school board for 25 years. He was a member of the Bremond First Baptist Church and served as a deacon for 30 years.

Dr. Sanders was born in Denison, Tex., on Aug. 23, 1898, and was the son of Jewell Richard and Louisa Jane Gaskill Sanders.

He is survived by his wife, Cathryne; a son, Jewell G. Sanders, Jr., of Dallas; a daughter, Mrs. John G. Kerr of Houston; a brother, Dr. Paul Sanders of Nashville, Tenn.; and three grandchildren.

Dr. E. P. Hall, Jr.

General practitioner Dr. Ewin Petty Hall, Jr., 69, died Oct. 7, 1970, in All Saints Episcopal Hospital in Fort Worth. Cause of death was arteriosclerotic heart disease.

A native of Fort Worth, Dr. Hall was born on May 1, 1901, to Ewin Petty and Ladye Dennis Hall. He attended The University of Texas at Austin and was graduated from Baylor College of Medicine in 1927 with an MD degree. He interned at Baylor University Medical Center in Dallas and at City-County Hospital in Fort Worth (now John Peter Smith Hospital).

Dr. Hall had practiced in Fort Worth from 1928 until the time of his death, with the exception of four years he spent in the armed services. He served in the US Army Air Corps from 1942 to 1946, attaining the rank of lieutenant colonel. Awarded a Bronze Star for meritorious achievement as a base surgeon at Harmon Field on Guam, Dr. Hall was also a retired honorary reserve lieutenant colonel in the US Army Medical Corps.

He was a member of Tarrant County Medical Society, Texas Medical Association, and American Medical Association. Dr. Hall had served as a member of the TMA House of Delegates and a delegate from Texas to the AMA. He had also served as chairman of the

Board of Managers of John Peter Smith Hospital in Fort Worth. Dr. Hall was active in the Central Methodist Church and was a member of Masonic Lodge No. 148 and Moslah Temple Shrine. He had served as physician for the Masonic Home in Fort Worth for more than 40 years and was also a member of Phi Chi medical fraternity.

Survivors include his wife, Jim Corene Harris Hall; a son, James Ewin Hall of Fort Worth; two sisters, Mrs. Margaret Livingstone of Dallas and Mrs. Sarah Browne of Albuquerque, N.M.; and his mother of Dallas.

Dr. J. S. Stanley

Retired Matador general practitioner Dr. James Sidney Stanley died Oct. 24, 1970, at Baylor University Medical Center in Dallas after a short illness.

Born in Gause, Tex., on July 17, 1907, Dr. Stanley was the son of Dr. Clarence J. and Abbie Gail Clark Stanley. He attended Southwest Texas State Teachers College in San Marcos and Southern Methodist University. He then taught school for three years, and in 1932, he was graduated from The University of Texas Medical Branch in Galveston with an MD degree. From 1932 to 1933, he served as an intern at Jefferson Davis Hospital in Houston and was also a resident there from 1933 to 1934.

Dr. Stanley had practiced in Lubbock before moving to Matador in 1935. In Matador, he established the Stanley Hospital, which operated from 1944 to June 1, 1966, when because of a heart ailment, Dr. Stanley closed the 18-bed hospital.

The physician was a member of American Medical Association and Texas Medical Association. He was a past president of the Hardeman-Cottle-Foard - Motley - Dickens - King Counties Medical Society. He also held membership in the American Academy of General Practice.

In civic affairs, he was a past president of the Matador Lions Club, past president of the Matador School Board, and a member of the Matador City Council. A member of Matador Methodist Church, he was also a 32nd degree Mason and a Shriner.

He is survived by his wife, Pearly Stacey Stanley; two daughters, Mrs. Ruth Marie Harrison of Dallas and Mrs. Marillyn Kay Thrasher of Mt. Vernon; a brother, Robert Morris Stanley of Matador; a sister, Mrs. Kathryn M. Israel of Austin; and three grandchildren.

DR. YOUNG

Dr. J. W. Young, Sr.

Pioneer general practitioner and founder of the Young Medical Center, Dr. James Wells Young, Sr., died Oct. 18, 1970, at his home in Sweetwater after a lengthy illness. He was 90.

Dr. Young, the son of William H. and Mary Wells Young, was born in Hillsboro on March 5, 1880. He attended Polytechnic College in Fort Worth (now Texas Wesleyan College) from 1899 to 1901 and then taught school near Loveless before entering The University of Texas Medical Branch in Galveston. He was graduated with an MD degree in 1907 from UT Medical Branch.

The same year as his graduation, Dr. Young began practicing in Roscoe, Tex., and he remained in that town for 45 years. While in Roscoe, he established the Young Hospital, which now serves as a nursing home. In 1951, he and his wife moved to Sweetwater, where he and his sons founded the Young Medical Center.

Dr. Young was a member of the Nolan-Fisher-Mitchell Counties Medical Society while he was practicing in Roscoe, and he served as society president in 1934 and again in 1947. After his move to Sweetwater, he became a member of the Colorado Basin Counties (Nolan-Fisher-Mitchell-Scurry-Borden-Kent-Stonewall) Medical Society. Dr. Young was also a member of American Medical Association and was elected to honorary membership in Texas Medical Association in 1960.

Also active in community affairs, Dr. Young was a member of the Roscoe Lion's Club and the Roscoe school board. He was a 50-year Mason and was active in First Methodist Church of Roscoe and Sweetwater. A past director of the Roscoe State Bank, he supported the work of various churches, the Girl Scouts, and the Roscoe Boys Club. In 1949, he and his wife were honored as Roscoe's Outstanding Citizens.

The author of a book entitled "It All Comes Back," Dr. Young had delivered more than 5,000 babies during his practice in Roscoe and Sweetwater.

His survivors include two sons, T. D. Young, MD, of Sweetwater and J. W. Young, Jr., DDS, of Kerrville; a daughter, Mrs. Lady Iona Childers of Abilene; two sisters, Mrs. Mary Virginia Loveless of Lubbock and Alma Young of Hillsboro; eight grandchildren; and five great-grandchildren. His wife, the former Iona Kearse of Cameron, died in 1952.

Dr. H. H. Ditto

General surgeon Dr. Hugh Howard Ditto, a native of Arlington and a long-time practicing physician in Fort Worth, died Sept. 13, 1970, in Fort Worth. Cause of death was an apparent heart attack.

Dr. Ditto, 65, was born July 22, 1905, in Arlington. He was the son of Mike and Amanda Thrash Ditto, Sr. He was graduated from The University of Texas at Austin and received his MD degree from Baylor College of Medicine in 1933.

He interned at Methodist Hospital of Dallas from 1933 to 1934, and served a residency at the Los Angeles County General Hospital in California from 1934 to 1935 and a surgical residency at the General Hospital of Ventura County in California from 1935 to 1936. In 1944 after practicing in Los Angeles, Dr. Ditto returned to private practice in Fort Worth. He retired in 1967.

Dr. Ditto was a member of Texas Medical Association, American Medical Association, and the Tarrant County Medical Society. He was also a 32nd degree Mason in Arlington Masonic Lodge No. 438 and was a member of the Moslah Shrine Temple in Fort Worth and the First Methodist Church in Arlington. He held memberships in Pi Kappa Alpha social fraternity and Phi Rho Sigma medical fraternity. He also held membership in the American Society of Abdominal Surgeons.

Survivors include his wife, Princess; two brothers, Jack and Mike W. Ditto of Arlington; and a sister, Mrs. Dorothy Clements of San Marino, Calif.

DR. DITTO

Senior Consultants
Perry C. Talkington, M.D.
Charles L. Bloss, M.D.

Psychiatrist-in-Chief
Howard M. Burkett, M.D.

Medical Director
James K. Peden, M.D.

Associate Psychiatrists
Jerry M. Lewis, M.D.
Claude L. Jackson, M.D.
Dode Mae Hanke, M.D.
Thomas H. Allison, M.D.
Maurice S. Green, M.D.
Doyle I. Carson, M.D.
Stanley L. Seaton, M.D.
Keith H. Johansen, M.D.
Charles G. Markward, M.D.
Joe W. King, M.D.
Claude R. Nichols, M.D.
Larry E. Tripp, M.D.
Aretta J. Rathmell, M.D.
Donald N. Offutt, M.D.

Clinical Psychology
David H. Lipsher, Ph.D.
John T. Gossett, Ph.D.
Dale R. Turner, Ph.D.
Robert W. Hagebak, Ph.D.

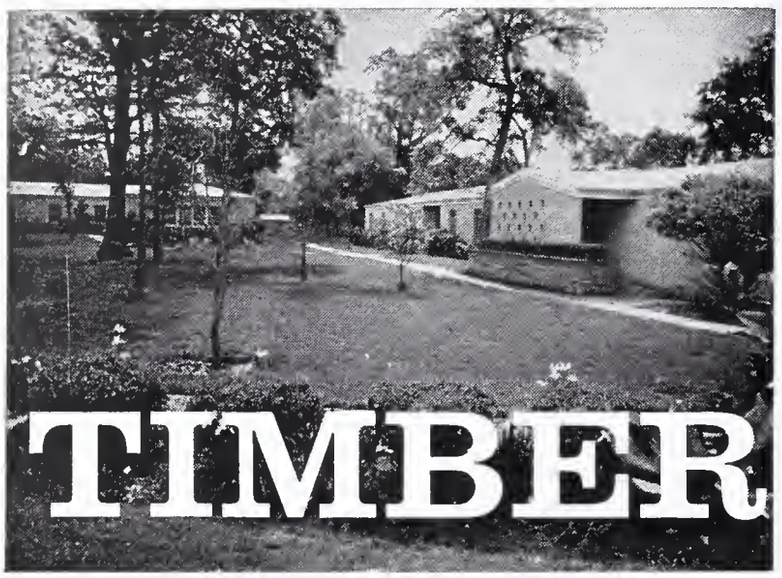
Social Work
Sally Stansfield, M.S.W.
Kathleen Wood, M.S.W.
Robert P. Stewart, M.S.S.W.
Margie W. Buell, M.S.S.W.
Cecilia Coffelt, M.S.S.W.
Lionel C. Landry, M.S.W.

Occupational Therapy
Geraldine Skinner, B.S., O.T.R., Director

Recreational Therapy
Lois Timmins, Ed.D., Director

Director of Nurses
Mae Belle James, R.N.

Administrator
Ralph M. Barnette, B.B.A.



PSYCHIATRIC HOSPITAL

DAY HOSPITAL

DEPARTMENT OF OUT PATIENT PSYCHIATRY

DEPARTMENT OF ADOLESCENT PSYCHIATRY

Narcotic Cases Not Admitted

TIMBERLAWN

PSYCHIATRIC HOSPITAL

381-7181 Dallas, Texas 75223 P. O. Box 11288

KELSEY-SEYBOLD CLINIC

6624 FANNIN STREET HOUSTON, TEXAS 77025

AC (713) 526-2671

INTERNAL MEDICINE

Endocrine and Metabolic Diseases
Mavis P. Kelsey, M.D., F.A.C.P.
Alfred E. Leiser, M.D., F.A.C.P.
Joy Mackay, M.D.

Pulmonary Diseases
Stanton P. Fischer, M.D., F.A.C.P.

Gastrointestinal Diseases, Gastroscopy
John R. Kelsey, M.D., F.A.C.P.
Philip S. Bentlif, M.D., F.A.C.P.
Ralph D. Eichhorn, M.D., F.A.C.P.
F. Scott O'Neil, M.D., F.A.C.P.
James W. McBee, M.D., F.A.C.P.

Heart Disease and Cardiac Catheterization
Earl F. Beard, M.D., F.A.C.P.
Efrain Garcia, M.D., F.A.C.P.

Arthritis and Rheumatic Diseases
James W. Kemper, M.D., F.A.C.P.
Martin S. Fischer, M.D.

Hypertension and Peripheral Vascular Diseases
Gene E. Burke, M.D.

*Military Service

General Medicine and Oncology
Carlos F. Taboada, M.D.

Nephrology
Francis X. Schloeder, M.D., F.A.C.P.

Hematology
Jerome B. Bart, M.D.

Infectious Diseases
Stuart Riggs, M.D., F.A.C.P.

Occupational Health Services
Paul E. Wright, M.D., M.P.H., F.A.C.Pr.M., F.A.C.P.
Maurice B. Johnston, M.D., F.A.C.Pr.M.
Richard M. Fenno, M.D., M.P.H., F.A.C.Pr.M., F.A.C.P.
Cannon A. Owen, M.D., F.A.C.S.

GENERAL & THORACIC SURGERY
William D. Seybold, M.D., F.A.C.S.
James D. McMurrey, M.D., F.A.C.S.
Jerry L. Doggett, M.D., F.A.C.S.
Michael F. Appel, M.D.

OBSTETRICS & GYNECOLOGY
Melville L. Cody, M.D., F.A.C.O.G., F.A.C.S.
William A. Johnson, III, M.D., F.A.C.O.G.

PSYCHIATRY
Chester G. Cochran, M.D.
*Ricardo Daichman, M.D.
William H. Boylston, M.D.
Manuel C. Ramirez, M.D.

PEDIATRICS

Rheumatology
Earl J. Brewer, Jr., M.D., F.A.A.P.

Allergy
Charles W. Ewing, M.D., F.A.A.P.

Gastroenterology
George D. Ferry, M.D., F.A.A.P.

OTO-LARYNGOLOGY
J. Charles Dickson, M.D., F.A.C.S.
James L. Smith, M.D., F.A.C.S.

NEUROLOGY
Robert R. Pierce, M.D.

DERMATOLOGY
Wilson M. Fraser, M.D., F.A.A.D.
Donald W. Owens, M.D., F.A.A.D.

UROLOGY
Don W. Pranke, M.D., F.A.C.S.

ORTHOPEDIC SURGERY
W. Malcolm Granberry, M.D.
Jesse H. Dickson, M.D.

OPHTHALMOLOGY
Henry E. Wahlen, M.D., D.A.B.O.

RADIOLOGY
Robert J. Kurth, M.D., F.A.C.R.
David M. Rulfs, M.D.

PATHOLOGY
Robert A. Jordan, Ph.D., M.D., F.A.S.C.P.

DENTISTRY
Eugene W. Gray, D.D.S.

PSYCHOLOGY
Mrs. Ruth Blackman, M.A.
Cheryl Greathouse, M.A.
Educational Diagnostician
Mrs. Jean F. White, M.Ed.

SPEECH PATHOLOGY AND AUDIOLOGY
Donna R. Fox Ph.D.
Carolyn C. Garcia, M.S.

CONSULTANTS
Maxillo Facial Surgery
Edward C. Hinds, M.D., D.D.S., F.A.C.S.
John N. Kent, D.D.S.
Psychiatry
Albert Owers, M.D.
Pulmonary Diseases
H. Irving Schweppe, Jr., M.D., F.A.C.P.
Nuclear Medicine
John A. Burdine, Jr., M.D.
Occupational Medicine
Valliant C. Baird, M.D., F.A.C.Pr.M.
Podiatry
Levitt A. Peters, D.P.M.

SPECIAL FACILITIES
Radioisotope Laboratory
Registered Dietitian
Electroencephalography
Electrocardiography
Vectorcardiography
Registered Physiotherapist
Pulmonary Function Laboratory
Regional Immunization Center
FAA Examinations
Complete Endoscopy
Audiology Laboratory
Electrolysis

ADMINISTRATOR
James A. Bakken

DR. LIVINGSTON

Dr. E. N. Livingston

Dr. Edward Nathan Livingston, 60, retired psychiatrist and neurologist, died Sept. 27, 1970, at Kerrville. He retired Feb. 1, 1970, after serving 31 years with the Texas System of Mental Hospitals and Special Schools.

The son of Sam G. and Laura Noailles Smith Livingston, Dr. Livingston was born in San Antonio on Sept. 28, 1909. He was graduated from The University of Texas at Austin and had attended St. Mary's University in San Antonio before obtaining his MD degree in 1934 from Baylor University College of Medicine, then located in Dallas. Dr. Livingston held an internship at People's Hospital in Akron, Ohio, from July, 1934, to June, 1935; he also was a resident at the hospital from July, 1935, to June, 1936.

A former captain in the US Air Force from 1942 to 1946, he had previously practiced at Bowie Clinic, Terrell State Hospital, Big Spring State Hospital, and San Antonio State Hospital.

He was a member of Texas Medical Association, American Medical Association, and Bexar County Medical Society. He also held memberships in American Psychiatric Association and Texas Neuropsychiatric Association. He was a member of First Presbyterian Church.

Surviving Dr. Livingston are his wife, Jean Weatherford Livingston, and a brother, Charles S. Livingston, MD, of Temple.

Dr. H. W. Harris, Jr.

Dr. Homer Walter Harris, Jr., former psychiatrist at San Antonio State Hospital and Kerrville State Hospital, died Oct. 10, 1970, in San Antonio.

Dr. Harris was the son of Homer Walter and Mary Scearce Harris. He was born July 8, 1917, in Berea, Ohio. In 1940, he was graduated from The University of Texas at Austin with a BA degree, and in 1942, he was awarded his MD degree from The University of Texas Medical Branch in Galveston. Dr. Harris was an intern at Queen's Hospital in Honolulu, Hawaii, from 1943 to 1944. From 1963 to 1966, he held a psychiatry residency at Austin State Hospital.

A captain in the 82nd Airborne Division, US Army, Dr. Harris had previously practiced medicine in Hawaii and Houston and had been medical director of Gulf Oil Company in Houston. He had also previously been employed at San Antonio State Hospital from 1958 to 1963, and he returned to practice there in 1966.

While in Hawaii, Dr. Harris was a member of Kauai County Medical Society and served as secretary-treasurer of the society in 1946. That same year, he was also president of the G. N. Wilcox Memorial Hospital staff in Lihue, Kauai County, Hawaii. He had also been a member of Harris County Medical Society, and at the time of his death, he held membership in Bexar County Medical Society, Texas Medical Association, and American Medical Association.

A member of the Theta Kappa Psi medical fraternity, he is survived by his wife, Edna Mara Harris; two daughters, Mrs. Marilyn Overtree of Austin and Penny Kristie Harris of San Antonio; a son, Glenn Austin Harris of San Antonio; a brother, Winston B. Harris of Houston; his mother of Houston; and one grandson.

Dr. P. E. Suehs

Henderson physician and surgeon Dr. Paul Edward Suehs died Oct. 29, 1970, at his home after a sudden illness. He was 69.

A resident of Henderson for the past 22 years, Dr. Suehs was the son of Max Edward and Anna Marie Pfefferkorn Suehs. He was born in Giddings, Tex., on Sept. 18, 1901.

He was a premedical student at The University of Texas at Austin from 1919 to 1921, and in 1924, he was graduated with a BS degree in medicine from The University of Texas Medical Branch in Galveston. A year later, he was awarded his MD degree from the UT Medical Branch. From 1924 to 1927, Dr. Suehs held an internship and a residency in surgery at the San Francisco General Hospital. He then practiced in San Francisco until 1945. Before he moved to Henderson in 1949 to practice with his brother, Dr. H. A. Suehs, he took postgraduate courses at the University of Southern California School of Medicine. Dr. Suehs gave special attention to gastroenterology and cardiology.

DR. SUEHS

A member of the staff and the Board of Directors of Henderson Memorial Hospital, Dr. Suehs also was a member of American Medical Association and Texas Medical Association; he was also secretary of Rusk County Medical Society. He also held membership in Theta Kappa Psi medical fraternity. Dr. Suehs was active in the First Presbyterian Church in Henderson and was a charter member of the Henderson Rotary Club.

His survivors include his wife, Ann Robinson Suehs; a sister, Mrs. Lillian Pratho of Giddings; and two brothers, H. A. Suehs, MD, of Henderson, and M. E. Suehs, MD, of Beaumont.

Dr. G. V. Brindley, Sr.

Nationally known figure in the field of medicine and a past president of the Texas Medical Association, Dr. George Valter Brindley, Sr., died in Temple on Oct. 7, 1970. He was 84.

Dr. Brindley, one of five children, was born on a farm near Maypearl, Tex., on Jan. 8, 1886, to George Goldthwaite and Mattie Hanes Brindley. He attended junior college in Grandview and was graduated with an MD degree from The University of Texas Medical Branch in 1911. Dr. Brindley was a student intern at John Sealy Hospital in Galveston and then moved to Temple where he served a regular internship at Scott and White Memorial Hospital. Specializing in general surgery, he remained with the Scott and White institution throughout his 50-year medical career, serving both the hospital and the clinic in various capacities.

After serving as chief of surgical service at Scott and White for approximately 40 years, Dr. Brindley was named surgeon emeritus. He was also a member of the hospital's Board of Trustees, serving in that position for more than 30 years.

In addition to his work at Scott and White, he also held the position of associate chief surgeon of the Gulf, Colorado, and Santa Fe Hospital, also located in Temple, for many years. In 1961, Dr. Brindley retired from the Scott and White Clinic and Memorial Hospital staff.

Dr. Brindley was extremely active in

DR. BRINDLEY

TMA, serving as the Association's 84th president in 1949-1950. He also was chairman of the Section on Obstetrics and Gynecology in 1919, councilor of the Twelfth District from 1943 to 1948, chairman of the Board of Councilors in 1947, and vice-chairman of the Board of Trustees from 1950 to 1960.

Dr. Brindley also served as president of the Bell County Medical Society in 1931. A governor of the American College of Surgeons and a member of that organization's Board of Regents, Dr. Brindley was a member and past president of both the Texas Surgical Society and the Southern Surgical Association. He had also served as a council member for the latter group. He also held membership in the International College of Surgeons and was a founder member of the Society for Surgery of the Alimentary Tract.

For several years, he was chairman of the executive committee of the Texas Division of the American Cancer Society, and he served the national organization as a member of its Board of Directors, chairman of its Medical and Scientific Committee, and finally, as its president. In 1959, he was made an honorary life member of the Board of Directors of the American Cancer Society, Inc.

Dr. Brindley was a lecturer in surgery at his alma mater and professor of surgery and associate dean of the UT Postgraduate School of Medicine, Temple Division. Also a past president of the Alumni Association of the UT Medical Branch, Dr. Brindley was named the recipient of the Ashbel Smith Distinguished Alumni Award at the Galveston school in 1968. Four years previously, he was awarded an honorary doctor of humanities degree by Howard Payne College in Brownwood.

A veteran of TMA Annual Sessions, Dr. Brindley was first honored at the Association's yearly conference in 1936, when he—along with Dr. A. C. Scott, Sr., and Dr. M. W. Sherwood—won a certificate of merit for displaying one of the best scientific exhibits at that year's meeting. Twenty-four years later, at the 1960 TMA Annual Session in Fort Worth, he was honored again by the Association—this time for his half-century of contributions to the field of medicine.

Dr. Brindley was elected an emeritus member of TMA in 1962. Then, on Sept. 5, 1967, he was presented the highest award the Association can confer, the TMA Distinguished Service Award. The presentation was made at the fourth annual George Valter Brindley Surgical Lecture held at Scott and White Memorial Hospital.

In addition to his many medical activities, Dr. Brindley served as a member of the Board of Trustees of Mary Hardin Baylor College in Belton. He was also a Shriner, Rotarian, and a deacon of the First Baptist Church of Temple.

Surviving Dr. Brindley are his wife, Arabella Owens Brindley; three sons, Geoge Valter Brindley, Jr., MD, also a past president of TMA, of Temple, Clyde Owens Brindley, MD, of Johnson City, Tenn., and Hanes Hanby Brindley, MD, of Temple.

DR. MOODY

Dr. C. O. Moody

Dr. Charles Oliver Moody, 65, general practitioner in Coleman, Tex., died Oct. 26, 1970, in Scott and White Hospital in Temple following a short illness.

The son of Charles Oliver and Mina Lucas Moody, Dr. Moody was born on July 19, 1905, in Cedartown, Ga. He was graduated from West Virginia University in Morgantown, W. Va., with a BS degree in 1928. He studied medicine at West Virginia University School of Medicine and the Virginia Commonwealth University, Medical College of Virginia in Richmond, receiving his MD degree from the latter institution in 1931.

An instructor of pathology and bacteriology at West Virginia University School of Medicine for three years, Dr. Moody interned at Little Company of Mary Hospital, Evergreen Park, Ill., from 1934 to 1935. He was a resident at Sealy Hospital in Santa Anna, Tex., from 1935 to 1936.

In January, 1937, Dr. Moody moved to Coleman and practiced there until his death, with the exception of approximately 3½ years he spent in the armed forces. While in the US Army Corps, Dr. Moody served as a flight surgeon, attaining the rank of major.

Dr. Moody was a member of Texas Medical Association, American Medical Association, 4th District Medical Society, and Texas Academy of General Practice. He had also served as president and secretary of the Coleman County Medical Society. He was a Mason and had served as an elder in the First Presbyterian Church of Coleman. Dr. Moody had also been chief of staff at Overall-Morris Memorial Hospital in Coleman from 1947 to 1955.

He is survived by his wife, the former Ruth Virginia Elver; a daughter, Mrs. Ingrid Ann DeGrassi, Jr., of Amarillo; three sons, Charles Oliver Moody, III, of Santa Fe, N.M., Richard Lucas Moody of Warner Robins, Ga., and Frederick Elver Moody of Carson, Calif.; and four grandchildren.

Dr. W. H. Teague

Retired general practitioner Dr. William Hilliard Teague died Oct. 23, 1970, in Fort Worth after a lengthy illness.

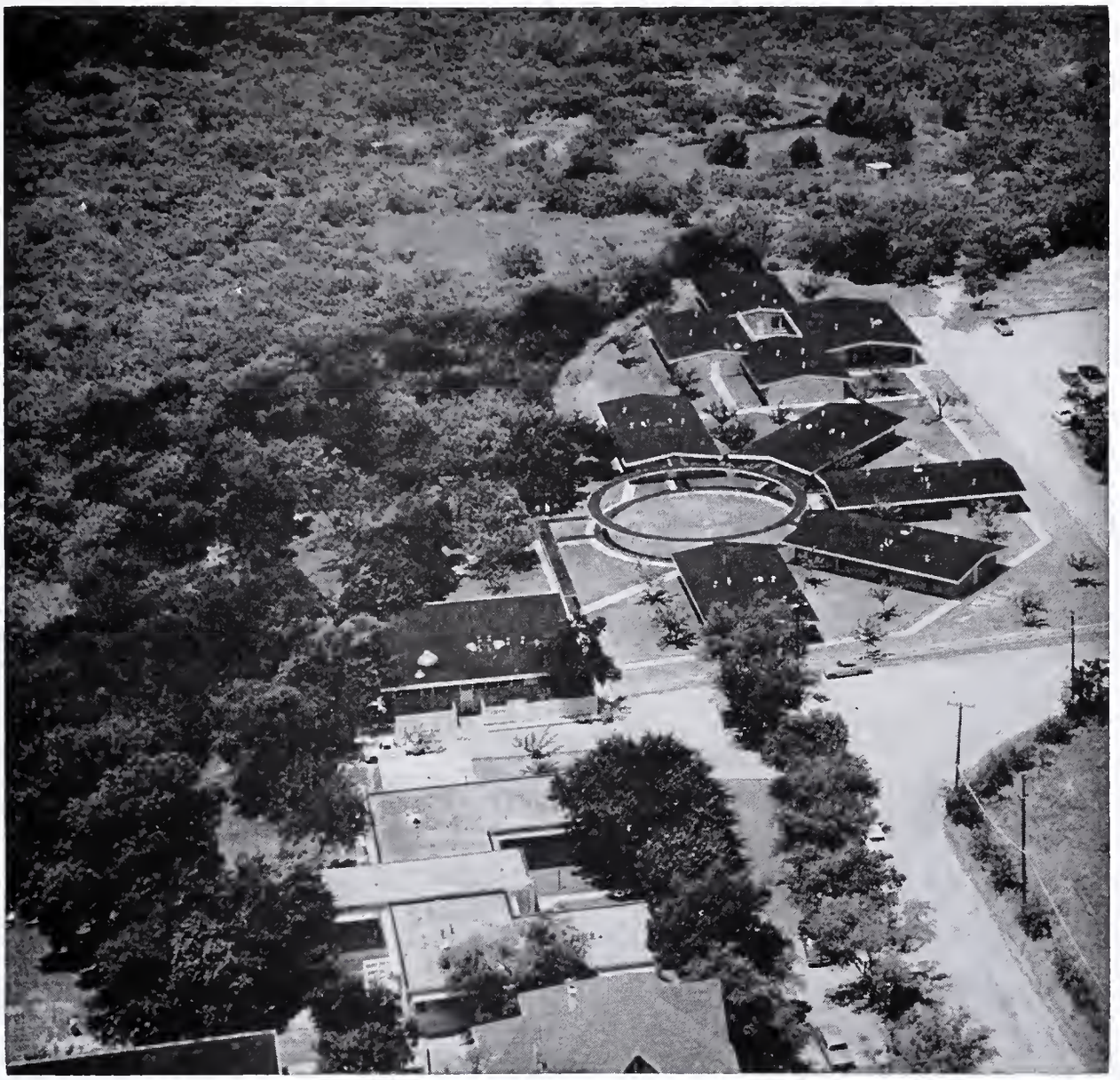
Dr. Teague was born on Aug. 17, 1904 in Mexia, Tex., the son of William and Myra Alma Wooten Teague. He was graduated from Baylor University in Waco in 1924 with a BS degree, and in 1928, he was awarded an MD degree from The University of Texas Medical Branch in Galveston. He then served a one-year rotating internship at Jefferson Davis Hospital in Houston, and in 1949, he took a postgraduate course in surgery at Cook County Hospital in Chicago, Ill.

Dr. Teague had previously practiced in Thornton, Kosse, Waco, Galveston, and Plainview before settling in Fort Worth.

He had been a member of Hale-Floyd-Briscoe Counties Medical Society, and at the time of his death, he was a member of Tarrant County Medical Society and American Medical Association. In 1969, he was elected to inactive membership in Texas Medical Association. He was also a member of St. Andrew's Episcopal Church in Fort Worth.

Surviving Dr. Teague is his wife, Alta Warner Teague of Fort Worth.

DR. TEAGUE



BEVERLY HILLS HOSPITAL
BEVERLY HILLS CLINIC

PSYCHIATRY
INPATIENT – OUTPATIENT

Multiple-approach treatment of thinking disorders. Established diagnostic procedures available. Secluded in-town location convenient to the medical community.

Psychiatry

Joseph L. Knapp, M.D.
Fred H. Jordan, M.D.
Jackson H. Speegle, M.D.
Joseph H. Lindsay, M.D.
Jack R. Tomlinson, M.D.

1353 North Westmoreland Avenue Dallas, Texas 75211 214 331-8331

Gone with the wind

The gas/acid group of disorders

"The two most common complaints referable to the upper gastrointestinal tract for which patients seek medical relief are hyperacidity and 'gas.' The two often occur together."*

Frees captured gas...neutralizes free acid

SILAIN-GEL Tablets and Liquid are separate formulas designed to provide equivalent dual-action symptomatic relief. Both dosage forms contain simethicone which effectively frees trapped gas, enabling the patient to eliminate it. Magnesium hydroxide in both assures a rapid rise in pH for prompt relief of hyperacidity. The special co-dried aluminum hydroxide/magnesium carbonate gel in the tablets assures the same rapid and uniform reaction rate as the liquid. Thus, both medications achieve prompt and prolonged neutralization of free acid *plus* prompt relief from the pain and pressure of trapped gas.

Always in good taste

The pleasant, distinctive flavor of SILAIN-GEL, as well as its non-constipating feature, make it a therapy your patients can live with—in comfort and without complaint.

Select the form of SILAIN-GEL you want to provide symptomatic relief in: gastric ulcer • duodenal ulcer • heartburn • gastric hyperacidity • gastritis • dyspepsia

when the patient prefers the convenience of a tablet, select

Silain-Gel® Tablets:

when the patient prefers a liquid, select

Silain-Gel® Liquid

Also available for the patient who needs an antifrothicant/antiflatulent agent only: **Silain®** (simethicone) Tablets

*Slanger, A.: Med. Times *94*:150 (Feb.) 1966.

Announcing the "Antgasid"

Silain-Gel®

Tablets: simethicone plus aluminum hydroxide/magnesium carbonate co-dried gel and magnesium hydroxide

Liquid: simethicone plus aluminum hydroxide and magnesium hydroxide

one dose does both: frees captured gas...neutralizes free acid

A·H·ROBINS A.H. Robins Company, Richmond, Virginia 23220

The Doctor

One of the doctor's most important roles is in education.

For his patients, the physician provides the facts, supplies the rationale, triggers the action for life-saving health practices. To his students, he passes on his knowledge and the benefits of his clinical experience. With his colleagues, he shares new information and concepts.

Assisting the doctor in his teaching role is a major function of our professional education program. Through medical conferences, films, exhibits, pamphlets, monographs and other publications, we provide him with the most important and current information on cancer.

If, as Henry Brooks Adams speculated, "A teacher affects eternity; he can never tell where his influence stops", the outlook is optimistic.

LACTINEX®

TABLETS & GRANULES

■ to help restore and stabilize the intestinal flora

■ for fever blisters and canker sores of herpetic origin

Introduced to help reestablish the normal physiology of the intestinal tract in gastrointestinal disturbances[1], particularly diarrheas (including those resulting from antibiotic therapy), Lactinex is also useful for reestablishing the flora following bowel surgery, infant colic, mucous colitis, foul-smelling stools, pruritus ani, flatulence and hives.[2,3,4,5,6]

Lactinex contains a viable mixed culture of both *Lactobacillus acidophilus* and *L. bulgaricus* with the naturally occurring metabolic products produced by these organisms.

No untoward side effects have been reported to date.

Literature on indications and dosage available on request.

HYNSON, WESTCOTT & DUNNING, INC.

Baltimore, Maryland 21201

(#LX06)

LX

References:
(1) Siver, R. H.: CMD, 21:109, September 1954. (2) Frykman, H. H.: Minn. Med., 38:19-27, January 1955. (3) McGivney, J.: Tex. State Jour. Med., 51:16-18, January 1955. (4) Quehl, T. M.: Jour. of Florida Acad. Gen. Prac., 15:15-16, October 1965. (5) Weekes, D. J.: NY State Jour. Med., 58:2672-2673, August 1958. (6) Ellis, S. and Spratt, J. S.: JOUR. AMER. GER. SOC., 18:410-415, May 1970.

Starlite Village Clinic

Center Point, Texas

Ph.: ME 4-2426

- - - A specialized clinic dedicated to the physical, mental, and spiritual treatment of men and women suffering from alcoholic and similar disturbances.

F. E. Seale, M.D.
Medical Director

Bland Seale
Administrator

RADIOLOGY ASSOCIATES OF FORT WORTH

John S. Alexander, M.D., M.A.C.R.
Robert J. Atcheson, M.D., M.A.C.R.
Douglas E. Bibby, M.D., F.A.C.R.
James W. Buice, M.D., F.A.C.R.
Richard C. Gasser, M.D., M.A.C.R.
Paul W. Mathews, Jr., M.D., M.A.C.R.
Preston W. Nash, M.D., M.A.C.R.
Rolland F. Oakes, M.D., M.A.C.R.
Norman L. Presley, M.D., M.A.C.R.
Sanford Reitman, M.D., M.A.C.R.
Gomer W. Roberts, M.D., M.A.C.R.
Herman C. Sehested, M.D., F.A.C.R.
Glenn A. Stokdyk, M.D., M.A.C.R.
J. Thomas Telle, M.D., D.A.B.R.
C. H. Tseng, M.D., M.A.C.R.
Claude Williams, M.D., M.A.C.R.

DIPLOMATES OF THE AMERICAN BOARD OF RADIOLOGY

Offices:

100 Medical Tower Bldg. — 336-8681
1217 West Cannon — 336-8627
900 W. Randol Mill Rd., Arlington, Texas 76010 — 277-7681

TRAVIS CLINIC ASSOCIATION AND THE NAN TRAVIS MEMORIAL HOSPITAL

JACKSONVILLE, TEXAS

STAFF

General Surgery:
L. L. Travis, M.D.
J. S. O'Hare, M.D.
R. K. Willms, M.D.

Orthopedic Surgery:
E. L. Mahon, Jr., M.D.

Urology:
H. F. Rives, M.D.

Pathology:
Harbert Davenport, Jr., M.D.

Internal Medicine:
J. T. Boyd, M.D.
F. H. Verheyden, M.D.
J. T. Scogin, M.D.
J. H. Pesnell, M.D.
Mary A. Bone, M.D.

Obstetrics and Gynecology:
J. C. Rucker, M.D.
J. D. Crawford, M.D.

Pediatrics:
M. L. Gray, M.D.

Radiology and Radioactive Isotopes:
L. W. Ralston, M.D.

William J. Fowler
Administrator of Nan Travis Memorial Hospital

J. G. Casey
Business Manager of Travis Clinic

MEDICAL ARTS CLINIC

Box 841
Corsicana, Texas

PEDIATRICS
JOHN W. GRIFFIN, M.D., F.A.A.P.*
JAMES E. SPEIER, M.D.

INTERNAL MEDICINE
ROBERT D. BONE, M.D., F.A.C.P.*
JAMES F. WITTEN, M.D., F.A.C.P.*
CHARLES I. BILTZ., M.D.*

OBSTETRICS & GYNECOLOGY
KELLY PAUL BURKHART, M.D., F.A.C.O.G.*

DERMATOLOGY
JOSEPH M. GLICKSMAN, M.D.

BUSINESS MANAGER
OWEN G. ELLIOTT, M.G.M.A.

SURGERY
LOUIS E. GIBSON, M.D., F.A.C.S.*
E. SCOTT MIDDLETON, M.D.

OPHTHALMOLOGY
ROBERT D. MERTZ, M.D., F.A.A.O.O.*
WILLIAM E. LAGOMARSINO, M.D.

EAR, NOSE, THROAT
PHILLIP M. AWTREY, M.D.,* F.A.A.O.O.

DENTISTRY
ROBERT A. LANG, D.D.S.

*Diplomate of the American Board

DIRECTORY RATES & DATA: Space is available to TMA members at $8.00 per column inch and listings must run for a minimum of six months. New listings are limited to those specialties recognized by the American Medical Association. A discount of 5% is allowed for six months' advance payment. Mail copy to Advertising Assistant, TEXAS MEDICINE, 1801 North Lamar Blvd., Austin, Texas 78701. Deadline is 20th of the month preceding publication month.

Texas Physicians' Directory

Aerospace Medicine

D. OWEN COONS, M.D., M.P.H., F.A.M.
Diplomate American Board of Preventive Medicine
AEROSPACE MEDICINE
Comprehensive aircrew examinations and FAA certification
Executive physical examinations
Problem medical case evaluation for FAA re-certification

6011 Harry Hines Blvd., Dallas, Texas 75235, 214 638-4594

Allergy

DRS. FEIN AND KAMIN
Allergy and Immunology

Bernard T. Fein, M.D., F.A.C.A., Fellow, American Academy of Allergy
Peter B. Kamin, M.D., F.A.A.P., Diplomate, Sub-Board Pediatric Allergy

216 Medical Prof. Bldg., San Antonio, Texas, 226-7671, 227-6331

HOUSTON ALLERGY CLINIC
Clinical Allergy and Immunology

Richard L. Etter, M.D., F.A.C.A., F.A.A.A.
Richard H. Jackson, M.D., F.A.C.A.
Warren J. Raymer, M.D., F.A.C.A.
Ramon Garrido, M.D. (Certified American Board of Pediatrics)
Suite 156, Hermann Professional Building
6410 Fannin St., Houston, Texas 77025, 526-3281

V. E. FRIEDWALD, M.D., F.A.C.P.
Allergy

Diplomate American Boards of Internal Medicine and Allergy
2203 West Tennessee, Midland, Texas 79701, 682-5385

McGOVERN ALLERGY CLINIC
Diagnosis and Treatment of Allergic Diseases

John P. McGovern, M.D.
Orville C. Thomas, M.D.
Charles D. Haunschild, M.D.
Theodore J. Haywood, M.D.
Joseph T. Queng, M.D.
James A. Murray, M.D.
Hermann Gregory, M.D. (Military Leave of Absence)
Certified American Boards of Pediatrics and Allergy
6655 Travis Street, Houston, Texas 77025, 528-5591

HARRIS HOSEN, M.D., F.A.A.Pd.
Clinical Allergy and Immunology

2649 Procter Street, Port Arthur, Texas

ALLERGY CLINIC

Saul Grossman, M.D., F.A.C.A., Allergy-Dermatology
W. A. Crozier, M.D., F.A.C.A., Allergy-Immunology
2530 Morgan, Corpus Christi, Texas, 882-3487

STUART A. MASON, M.D.
Allergic Diseases

921 Eighth Avenue, Fort Worth, Texas 76104
Phone: 336-1574 If no answer: 924-4231

PHYLLIS HUFFMAN, M.D.
Fellow American Academy of Pediatrics
Certified by Sub-Board of Pediatric Allergy
Pediatric Allergy and Immunology

606 North Kent Street, Midland, Texas 79701
Telephone 915 682-9479

Cardiovascular Disease

EVERETT C. PRICE, M.D.
Diplomate American Boards of Internal Medicine and Cardiovascular Disease
Consultation, Cardiac Catheterization, and Angiography in Children and Adults
EKG interpretation by return mail
1705 Medical Towers Bldg., Houston, Texas 77025
523-4388 523-6949

Clinics

CLINIC HOSPITAL MEDICAL ASSOCIATES
CLINIC-HOSPITAL FOUNDATION
224-234 West Beauregard Avenue, San Angelo, Texas

R. M. Finks, M.D., Pediatrics
M. D. Knight, M.D., Surgery
W. H. Brauns, M.D., Internal Medicine
Roy E. Moon, M.D., Obstetrics and Gynecology
Chas. F. Engelking, M.D., Ear, Nose and Throat
R. A. Morse, M.D., Internal Medicine
Ralph R. Chase, M.D., Pediatrics
Tom R. Hunter, M.D., Surgery
Robert P. Gordon, C.P.A., Administrator
Dale W. Hayter, M.D., Ophthalmology
O. Sterling Gillis, III, M.D., Obstetrics and Gynecology
Consultant in Pathology—Lloyd R. Hershberger, M.D.
Consultant in Radiology—John E. Ballard, M.D.
John G. Bolen, M.D.
William T. Gordon, M.D.

THE FORT WORTH CLINIC
1221 West Lancaster Avenue, Fort Worth, Texas

John M. Church, M.D.
T. J. Coleman, M.D.
O. M. Phillips, M.D.
Wm. L. Asper, Bus. Mgr.
Robert L. Sewell, M.D.
John H. Sewell, M.D.
C. K. Holsapple, M.D.

FIFTH AVENUE CLINIC
650 Fifth Avenue, Fort Worth, Texas

MEDICINE
Sidney E. Stout, M.D.
Frank L. Bynum, M.D.
Ed Etier, Jr., M.D.

GENERAL PRACTICE
Donald S. Gibbs, M.D.

RADIOLOGY
Otto H. Grunow, M.D.

THOMAS-SPANN CLINIC AND HOSPITAL
1546 South Brownlee, Corpus Christi, Texas 78404
Telephone 884-3861

SURGERY
R. Gayle Spann, M.D., F.A.C.S. (Deceased)
S. T. Coleman, M.D., F.A.C.S. (Consultant)
Donald E. Jackson, M.D., F.A.C.S. (Consultant)

OPHTHALMOLOGY
L. David Wright, M.D., F.A.C.S.

GENERAL PRACTICE
Travis B. Phelps, M.D.
T. D. Harvey, M.D.
H. R. Rose, M.D.
C. L. Vernor, M.D.

ORTHOPEDICS
Carlos M. Yanez, M.D., F.A.C.S.

GYNECOLOGY
J. H. Thomas, M.D.

INTERNAL MEDICINE
William E. Morris, M.D
Gerald A. Reeves, M.D.
Pruett Moore, Jr., M.D.

RADIOLOGY
Crysup Sory, M.D.

ADMINISTRATOR
B. J. Clark

DIRECTOR OF NURSES
Clinic - Pat Parker
Hospital - Mrs. Joyce Petit

THE JOHN BUIST CHESTER HOSPITAL & THE CHESTER CLINICS
3330 S. Lancaster Road, Dallas, Texas
Telephone 376-5411

John B. Chester, M.D., F.A.C.S., Orthopedic Surgery
Gene W. Rogers, M.D., General Surgery
Douglas M. Hardy, M.D., Obstetrics & Gynecology
Ervin R. Miller, M.D., Cardiovascular Diseases
Ralph C. Disch, M.D., D.A.B.S., F.A.C.S., Surgery
Catherine P. Chester, M.D., Pediatrics & Allergy
Doyle L. Sharp, M.D., General Surgery
Arlan P. Larson, M.D., D.A.B.O.S., F.A.C.S., Orthopedic Surgery
Robert B. Curry, M.D., General Practice
Amado E. Dominguez, M.D., Diagnosis & Internal Medicine
Jose Newman, M.D., Internal Medicine
Alfredo Zevallos, M.D., Obstetrics & Gynecology
Souren Chakmakjian, M.D., D.A.B.P., Pediatric Cardiology
D. Owen Coons, M.D., Aerospace Medicine & General Practice
Emmett R. Hamby, D.D.S., General Dentistry
H. A. Mueller, M.D., Consultant in Radiology
Gerard Noteboom, M.D., Consultant in Pathology
F. Joseph Carabin, M.D., Consultant in Nuclear Medicine
Elizabeth Garnett, R.N., Superintendent of Nurses
E. B. Morgan, F.A.A.M.A., Administrator

LANCASTER OFFICE
525 W. Pleasant Run Rd., Lancaster, Texas; Telephone 227-2151
David E. Krebs, M.D., Pediatrics & Medicine
Charles W. Waldrop, M.D., General Practice
Miles W. Davis, M.D., General Practice
Garrett W. Maxwell, M.D., Internal Medicine

COUNTRY CLUB CORNERS OFFICE
7140 Baytree Drive, Dallas, Texas; Telephone 224-1181
Rudolf M. Flasdick, M.D., Diagnosis & Diseases of the Heart
J. A. Harris, M.D., General Practice

DeSOTO OFFICE
804 N. Hampton Rd., DeSoto, Texas; Telephone 223-7701
Herbert M. Hinckley, M.D., General Practice
David L. Webb, M.D., General Practice

DUNCANVILLE OFFICE
621 Hustead St., Duncanville, Texas; Telephone 298-3378
Terry S. Vincent, M.D., General Practice

BEELER-MANSKE CLINIC
9th Avenue N. at 5th Street N., Texas City, Texas 77590
Telephone 713 948-8521

Obstetrics & Gynecology
G. W. Beeler, M.D.

Internal Medicine
W. T. Matlage, M.D.
C. M. Maruri, M.D.

General Surgery
B. W. Hink, M.D., F.A.C.S.

General Practice
J. H. Cochrane, M.D.
J. W. O'Bryant, M.D.
O. O. Smith, M.D.

Clinic Manager
Stan M. Sheppard

Complete X-Ray, Physical Therapy and Laboratory Facilities

MALONE AND HOGAN CLINIC
901 Main Street, Big Spring, Texas 79720
Telephone 267-6361

OPHTHALMOLOGY AND OTOLARYNGOLOGY
P. W. Malone, M.D., F.A.C.S.
J. W. Tipton, M.D.

GENERAL SURGERY
J. E. Hogan, M.D., F.A.C.S.
C. B. Marcum, Jr., M.D., F.A.C.S.

ORTHOPEDIC SURGERY
P. H. Rhymes, M.D.

INTERNAL MEDICINE
J. H. Burnett, Jr., M.D.
W. A. Riley, M.D.
R. S. Griffin, M.D.
R. T. Torp, M.D.

OBSTETRICS AND GYNECOLOGY
M. A. Porter, M.D.

PEDIATRICS
J. M. Woodall, M.D.
M. W. Talbot, Jr., M.D., F.A.A.P.

RADIOLOGY
W. R. Cashion, M.D.

UROLOGY
G. F. Dillon, M.D.

CONSULTANTS IN PATHOLOGY
Jarrett E. Williams, M.D.
B. B. Trotter, M.D.

BUSINESS MANAGER
R. L. Heith

THE LORIMER CLINIC
901 West Leuda Street, Fort Worth, Texas 76104
Telephone 335-4333

SURGERY
W. S. Lorimer, Jr., M.D., F.A.C.S.
R. J. Turner, III, M.D., F.A.C.S.

INTERNAL MEDICINE
W. W. Moorman, M.D., F.A.C.P.
D. W. Johnston, M.D., F.A.C.P.
Stephen Eppstein, M.D.
A. R. Daniell, M.D.

Mrs. Evelyn Farr, Business Manager

RUGELEY AND BLASINGAME CLINIC
2100 North Fulton Street, Wharton, Texas
Telephone 713 532-1700

ADMINISTRATION
C. H. "Ham" Rugeley
Malcolm D. Rugeley

INTERNAL MEDICINE
R. D. Little, M.D.
D. W. Samuelson, M.D.

GENERAL PRACTICE
C. E. Woodson, M.D.

PEDIATRICS
F. W. Kolle, M.D.

NEUROPSYCHIATRY
R. R. Gleason, Jr., M.D.

DERMATOLOGY & SKIN CANCER
J. S. Stell, M.D.

GENERAL & THORACIC SURGERY
R. E. Goelzer, M.D.

GENERAL SURGERY
R. B. Caraway, Jr., M.D.

UROLOGY
H. Z. Fretz, M.D.
C. M. Collins, M.D.

OBSTETRICS & GYNECOLOGY
D. M. Voulgaris, M.D.
H. E. Secor, M.D.

OPHTHALMOLOGY
V. A. Black, M.D.

OTOLARYNGOLOGY
J. L. Holcomb, M.D.

DENTISTRY
C. J. Shumbera, D.D.S.
J. R. Kieler, Jr., D.D.S.

PATHOLOGY—CONSULTANT
H. M. Perches, M.D.

ANESTHESIOLOGY—CONSULTANT
C. G. Spears, M.D.

RADIOLOGY—CONSULTANT
L. D. O'Gorman, M.D.

DIAGNOSTIC CLINIC OF HOUSTON
6448 Fannin, Houston, Texas 77025
Telephone 713 526-2051

Internal Medicine and Diagnosis

CARDIOVASCULAR DISEASE
Thomas J. Fatheree, M.D.
Hugh F. Arnold, M.D.
Hugh H. Hanson, M.D.
Michael B. Raine, M.D.
Michael A. Modelski, M.D.
Sigmund W. Friedland, M.D.

ENDOCRINOLOGY AND METABOLIC DISEASES
H. Leland Kaplan, M.D.
Thomas G. Vandivier, M.D.
Charles H. Gregory, M.D.
R. Frederick Gregory, M.D.

ENDOCRINOLOGY, METABOLIC DISEASES AND DIRECTOR OF CLINICAL RESEARCH
Raymond L. Gregory, M.D.

GERIATRICS
Frederick G. Dorsey, M.D.

GASTROENTEROLOGY
Dolph L. Curb, M.D.
W. Tom Arnold, M.D.
Belton G. Griffin, M.D.
Frederick R. Lummis, Jr., M.D.
Dean C. Solcher, M.D.

HEMATOLOGY
Edmund N. Gouldin, M.D.
George W. Conrad, Jr., M.D.

HYPERTENSION AND RENAL DISEASES
K. Ronald Bingman, M.D.
R. Robert Durrett, M.D.

INFECTIOUS DISEASES
Lewie L. Travis, Jr., M.D.
Jack L. Reddin, M.D.

INTERNAL MEDICINE
Jeffrey Zatorski, M.D.

NEUROLOGY
Donald J. Russell, M.D.

ONCOLOGY
Lester L. Hoaglin, Jr., M.D.
Peter Sullivan, M.D.

PATHOLOGY
Jack P. Abbott, M.D.
Paul B. Radelat, M.D.

PULMONARY DISEASE
William M. Donohue, M.D.
Joel E. Reed, M.D.
Gene R. Lindley, M.D.

RADIOLOGY AND NUCLEAR MEDICINE
William L. Hinds, M.D.
Charles P. Eldridge, Jr., M.D.
David D. Lawrence, M.D.
Charles A. Spain, M.D.

RHEUMATOLOGY
John E. Norris, M.D.

ADMINISTRATION
C. G. Mercy, Administrator
Robert B. Hall, Assistant Administrator

LABORATORY
Clinical Pathology
Cytology

NUCLEAR MEDICINE
Isotope uptake, Gammagram and Therapy

ROENTGENOLOGY

PROCEDURES:
Bronchoscopy
Pulmonary Functions
Cardiac Catheterization
Electrocardiography-Phonocardiography
Esophagoscopy
Gastroscopy
Proctosigmoidoscopy

Consultation By Appointment

CLINIC OF THE SOUTHWEST
6437 High Star at Hillcroft, Houston, Texas 77036
Telephone 774-7671

INTERNAL MEDICINE
William C. Franklin, M.D.
Arthur B. Conde, M.D.

OBSTETRICS & GYNECOLOGY
Joy L. Deere, M.D.
Loren B. Goss, M.D.

PEDIATRICS
John R. Dunn, Jr., M.D.
Blanca S. Azios, M.D.

PHYSICAL THERAPY
Richard D. Tinsley, R.P.T.

GENERAL SURGERY
Harvey B. Koch, M.D.

UROLOGY
Glen E. Lewis, M.D.

DENTISTRY
Burley G. Ingram, D.D.S.

RADIOLOGY
Neil B. Longley, M.D.
Richard E. Schuette, M.D.

BUSINESS MANAGER
C. C. Walker

Colon & Rectal Surgery

ALVIN BALDWIN, JR., M.D., F.A.C.S.
Practice Limited to Diseases and Surgery of the Colon and Rectum

714 Doctors Building, 3707 Gaston Avenue, Dallas, Texas
Office Telephone 824-2573; Residence Telephone 361-4500

HUGH C. WELSH, M.D.
Proctology and Abdominal Surgery

2715 Fannin Street, Houston, Texas

J. WADE HARRIS, M.D., F.A.C.S.
JOHN E. COGAN, M.D., F.A.C.S.
Surgery of the Rectum and Colon

406 Hermann Professional Bldg., Houston, Texas

C. D. L. CROMAR, M.D.
Surgery of the Rectum and Colon

617 South Tatar Street, Pasadena, Texas 77502

Dermatology

ROGER W. MANAR, M.D.
Dermatology and Superficial X-Ray Therapy

1400 Eighth Street, Wichita Falls, Texas

BEDFORD SHELMIRE, M.D.
BEDFORD SHELMIRE, JR., M.D.
DAVID S. SHELMIRE, M.D.
Dermatology

1410 Medical Arts Bldg., Dallas, Texas

DRS. PIPKIN, RESSMANN & RICHARDSON
J. Lewis Pipkin, M.D.
Arthur C. Ressmann, M.D.
A. W. Richardson, M.D.
Dermatology
X-Ray and Radium in the Treatment of Skin Malignancies
714 Medical Arts Bldg., San Antonio, Texas

EVERETT R. SEALE, M.D.
Dermatology and Treatment of Skin Malignancies

1217 Hermann Professional Bldg., Houston, Texas

J. GILMORE BRAU, M.D.
Dermatology and Syphilology
X-Ray and Radium Therapy
Hours 9 to 1—3 to 5
3817 Brown Street, Dallas, Texas

J. FRANKLIN CAMPBELL, M.D.
EDMUND N. WALSH, M.D.
Dermatology and Syphilology, and Treatment of Skin Cancer, Radium and X-Ray Therapy

1410 Pruitt Street, Fort Worth, Texas

Leslie M. Smith, M.D.
H. D. Garrett, M.D.
John C. Wilkinson, M.D.

DRS. SMITH, GARRETT & WILKINSON
Dermatology and Syphilology X-Ray and Radium in the Treatment of Skin Malignancies
Medical Center, 1501 Arizona, El Paso, Texas

WALTER B. MANTOOTH, JR., M.D.
JOE M. LEHMAN, M.D.
ROBERT LEHMAN, M.D.
Dermatology, Syphilology, and Cancer of the Skin

3801 19th St., Suite 500, Lubbock, Texas

MARVIN E. CHERNOSKY, M.D.
Dermatology and Syphilology

703 Hermann Professional Bldg., Houston, Texas; Phone 526-3733

THOMAS L. SHIELDS, M.D.
Dermatology and Syphilology
X-Ray Therapy in the Treatment of Skin Malignancies
Hours 9 to 1—3 to 5
800 Fifth Ave., Fort Worth, Texas

DAVID R. WEAKLEY, M.D., F.A.C.P.
Dermatology
Treatment of Skin Malignancies
8548 Northwest Plaza Drive, Dallas, Texas; Phone 369-2321
315 North Shiloh Road, Garland, Texas; Phone 272-2561

M. A. (Mac) HAIRSTON, JR., M.D.
Dermatology, Hair Transplantation & Dermoplaning

Memorial City Professional Bldg., 902 Frostwood, Suite 184
(Between Memorial & Katy Fwy.)
Houston, Texas 77024, Phone 464-6369

JOHN B. McMASTER, JR., M.D.
Dermatology
Dermabrasion & Chemosurgery
416 M & S Tower, San Antonio, Texas 78205; Phone 222-2147

Eye, Ear, Nose, Throat

DRS. CANON, WATKINS, ANDERSON, NALLE AND ELLSASSER
Eye, Ear, Nose and Throat, Broncho-Esophagology and Allergy
R. T. Canon, M.D., F.A.C.S.
Wm. F. Anderson, M.D., DAB Oph., F.A.C.S.
M. G. Ellsasser, M.D., DAB Oph.
M. D. Watkins, M.D., F.A.C.S., A.I.C.S.
Ernest Nalle, Jr., M.D. DAB Oto., F.A.C.S., F.I.C.S.
West Texas Clinic, 1312 Main, Lubbock, Texas

W. HUBERT SEALE, M.D.
Eye, Ear, Nose & Throat

HUBERT JAMES SEALE, M.D.
Disease & Surgery of the Eye
1321 Hickory St., Abilene, Texas, Phone 673-3751

Gastroenterology

JAMES J. GORMAN, M.D., F.A.C.P.
Gastroenterology
Diagnosis, Gastroscopy
1111 El Paso National Bank Bldg., El Paso, Texas 79901

CECIL O. PATTERSON, M.D., F.A.C.P.
Gastroenterology, Gastroscopy, Esophagoscopy
1414 Medical Arts Buildings, Dallas, Texas, 742-6141-44

MILFORD O. ROUSE, M.D., F.A.C.P.
Consultations in hospitals only

DRS. BAILEY, DOUGLAS AND FISHER ASSOCIATION
3434 Swiss Avenue, Suite 303, Dallas, Texas
Diseases of the Digestive System
Herbert A. Bailey, M.D.
F. Clark Douglas, M.D.
John W. Fisher, M.D.

W. CROCKETT CHEARS, JR., M.D.
Gastroenterology, Gastroscopy & Esophagoscopy
1027 Medical Arts Building, Dallas, Texas, 748-4975

MEMORIAL LIBRARY
TEXAS MEDICAL ASSOCIATION

A clinical library designed to assist the practicing physician

45,000 BOUND VOLUMES — 1100 CURRENT JOURNALS
EXTENSIVE REPRINT COLLECTION — 400 FILMS
AUDIO-DIGEST TAPES & AMA NEWS JOURNAL

1801 North Lamar Blvd., Austin, Texas 78701, 512 477-6704

General Surgery

J. PEYTON BARNES, M.D., F.A.C.S.
Surgery
1000 St. Joseph Professional Bldg., Houston, Texas 77002

L. GONZALEZ CIGARROA, M.D., F.A.C.S.
Diplomate American Board of Surgery
Practice Limited to Surgery
1502 Logan Ave., Laredo, Texas

BURT B. SMITH, M.D.
Surgery
Emphasizing Breast, Thyroid and Gastro-Intestinal Surgery
728 Hermann Professional Bldg., Houston, Texas 77025, 523-8323

ADOLPH F. KAUFFMANN, M.D., F.A.C.S.
Diplomate American Board of Surgery
General Surgery
707 Fifth Ave., Fort Worth, Texas, Phone 332-7597

BRYAN V. WILLIAMS, M.D., F.A.C.S.
Diplomate American Board of Surgery
General Surgery
1506 St. Joseph Professional Bldg., Houston, Texas 77002, 227-5505

PAUL CARRILLO-RIVERA, M.D., F.A.C.S.
General, Pulmonary, Cardiovascular Surgery
105 University Towers, 1900 N. Oregon St., El Paso, Texas 79902
Telephone 915 533-2508

Internal Medicine

JOHN A. WIGGINS, JR., M.D.
Diseases of the Chest
Bronchoscopy
1105 Pennsylvania Ave., Fort Worth, Texas

HENRY N. GEMOETS, M.D., F.A.C.P., F.C.C.P.
Internal Medicine and Diseases of the Chest and Heart

THOMAS H. GEMOETS, M.D.
Internal Medicine and Diagnosis
1003 Memorial Professional Building
1010 Louisiana, Houston, Texas 77002, 222-7224

STANLEY FELD, M.D.
Practice Limited to Endocrinology
Douglas Plaza Bldg., Telephone: 363-5535
8226 Douglas Avenue, Dallas, Texas 75225

Neurology & Psychiatry

STEPHEN WEISZ, M.D.
Practice Limited to
Neurology and Psychiatry

1637 Medical Arts Bldg., Dallas, Texas, 747-5183

ALEX K. MUNSON, M.D.
Child Psychiatry
KERBEY LANE EVALUATION AND TREATMENT CENTER
Office Hours By Appointment

3400 Kerbey Lane, Austin, Texas 78703, 512 454-8718

HAUSER CLINIC
Psychiatry, Neurology and Electroencephalography

Section of Psychiatry
*Abe Hauser, M.D.
*Robert I. Hauser, M.D.
*Barry M. Brown, M.D.
*Harris M. Hauser, M.D.

Section of Neurology
*Harris M. Hauser, M.D.
*Gerald Ratinov, M.D.
Robert M. Gordon, M.D.
*Abe Hauser, M.D.

Section of Social Work
Ethel Feinsilver, M.S.

Administrator
Gordon D. Keller

808 Memorial Professional Building, Houston, Texas 77002
Telephone 224-5041

*Diplomate, American Board of Psychiatry and Neurology

Perry C. Talkington, M.D.
Charles L. Bloss, M.D.
Howard M. Burkett, M.D.
Jerry M. Lewis, M.D.
James K. Peden, M.D.
Claude L. Jackson, M.D.
Dode M. Hanke, M.D.
Doyle I. Carson, M.D.
Thomas H. Allison, M.D.
Stanley L. Seaton, M.D.
Maurice S. Green, M.D.
Joe W. King, M.D.
Keith H. Johansen, M.D.
Charles G. Markward, M.D.
Aretta J. Rathmell, M.D.
Donald N. Offutt, M.D.

practice limited to
PSYCHIATRY

4645 Samuell Blvd., Dallas, Texas
Timberlawn Psychiatric Hospital
4600 Samuell Blvd., Dallas, Texas
Telephone 381-7181

CHAPMAN ISHAM, M.D.
Diplomate American Board of Psychiatry
Child Psychiatry and Marriage Counseling
Hypnotherapy for Smoking and Obesity

3701 21st Street, Lubbock, Texas 79410, 795-4023

MEDICAL NEUROLOGY AND ELECTROENCEPHALOGRAPHY

205 Swiss Avenue Medical Building
3434 Swiss
Dallas, Texas 75204, 827-3610

Sheff D. Olinger, M.D.
Joseph S. Jenike, M.D.
Charles W. Barrier, M.D.

Hours By Appointment Only

THE FORT WORTH NEUROPSYCHIATRIC CENTER

*Bernard J. Dolenz, M.D.
*Herbert G. Rush, M.D.

1066 W. Magnolia Avenue, Fort Worth, Texas 76104, 336-5469

*Diplomates American Board of Psychiatry and Neurology

PASADENA NEUROPSYCHIATRIC CLINIC ASSN.
Robert E. Hazlewood, M.D., Richard M. Orr, M.D.

Department of Psychology
T. E. Morosko, Ph.D., Allen Goss, Ph.D.

Practice Limited to Neurology and Psychiatry
Office Hours By Appointment

First Pasadena State Bank Building
1001 E. Southmore, Suite 1103, Pasadena, Texas 77502, 473-7646

W. ROBERT STOBBE, M.D.
Diplomate American Board of Psychiatry and Neurology
GENERAL PSYCHIATRY

706 Medical Towers, Houston, Texas 77025; Telephone 713 524-1306

Neurological Surgery

JAMES GREENWOOD, JR., M.D.
Neurosurgery

718 Hermann Professional Bldg., Houston, Texas 77025

Office: 528-5373; Residence: 528-4038

Morris Sanders, M.D.
Jack I. Woolf, M.D.

DRS. WOOLF AND SANDERS
Diplomate American Board of Neurological Surgery

Locke Medical Bldg., 6011 Harry Hines Blvd., Dallas, Texas, 631-1500

JACK STERN, M.D.
GARY C. HUTCHISON, M.D.
CLARK WATTS, M.D.
Neurological Surgery

8226 Douglas, Suite 609, Dallas, Texas 75225, 363-8524

Casey E. Patterson, M.D.
Charles W. Simpson, M.D.
Tom M. Nash, M.D.
James E. Bland, M.D.
DRS. NASH, PATTERSON & SIMPSON, ASSN.
Neurological Surgery

Suite 557, Locke Medical Building
6011 Harry Hines Blvd., Dallas, Texas 75235, 637-0420

1971 CONFERENCE ON LEGISLATION
TMA Headquarters Bldg., Austin, January 16

Watch out for the other guy!
DRIVE DEFENSIVELY

RONALD SMITH, M.D.
Neurological Surgery

901 South Lake, Fort Worth, Texas, 336-0551

GLENN R. CHERRY, M.D., F.A.C.S.
R. GORDON LONG, M.D.
Diplomate American Board of Neurological Surgery

712 North Washington, Dallas, Texas, 826-7060

ROBT. C. L. ROBERTSON, M.D., F.A.C.S.
JOSEPH W. ROBERTSON, M.D.
Neurological Surgery

2210 Maroneal, Houston, Texas 77025, 523-3684

WILLIAM J. NELSON, M.D.
Certified by the American Board of Neurological Surgery

Suite 300, University Towers
1900 N. Oregon St., El Paso, Texas 79902, 915 542-0643

CHARLES A. BORNE, JR., M.D.
Neurological Surgery

Suite 834, Sealy-Smith Professional Building
200 University Blvd., Galveston, Texas 77550, 713 763-1688

Nuclear Medicine

HERBERT C. ALLEN, JR., M.D.
Practice Limited to Nuclear Medicine

100 Hermann Professional Bldg., Houston, Texas 77025, 526-1501

The advertising in

TEXAS MEDICINE

keeps you informed and

pays for publishing costs!

When the local representative calls,

tell him you saw his company's ad

in your journal.

ADDRESS CHANGE? Avoid missing or delayed mail. Send old and new address to Texas Medical Association, 1801 North Lamar Blvd., Austin, Texas 78701.

Ophthalmology

HOUSTON EYE ASSOCIATES
1121 Hermann Prof. Bldg., Houston, Texas 77025, 713 526-7261

Richard S. Ruiz, M.D., F.A.C.S.
Charles E. Russo, M.D.
Malcolm L. Mazow, M.D.
Robert H. Stewart, M.D.
Robert B. Wilkins, M.D.

DRS. MURPHY, ALPAR, TAYLOR & HOWELL
Ophthalmology

Weldon O. Murphy, M.D.
John J. Alpar, M.D.
Coleman Taylor, M.D.
J. Franklin Howell, Jr., M.D.
Diplomates of the American Board of Ophthalmology
2300 West 7th Avenue, Amarillo, Texas

ALBERT VAISER, M.D.
WILLIAM B. SNYDER, M.D.
Diseases and Surgery of the Retina

318 Medical Arts Building, Dallas, Texas, 748-0958

LIEVEN J. VAN RIET, M.D.
Ophthalmology
Medical—Surgical

Saint Joseph Professional Bldg., Houston, Texas 77002, 224-0654

W. REX HAWKINS, M.D.
Diseases of the Retina

608 Medical Center Professional Building

Houston, Texas 77025, 713 528-6341

DAVID R. STAGER, M.D.
Pediatric Ophthalmology

8226 Douglas Ave., Dallas, Texas 75225

ARTHUR M. CLEMENTS, M.D.
Surgery and Diseases of the Eye

Northlake Professional Bldg., 8535 Ferndale Road, Dallas, Texas 75238

Telephone 214 341-3407

BRYSON AND STRUVE ASSOCIATES
General Ophthalmology

J. Gordon Bryson, M.D.
C. A. Struve, M.D.
Disease and Surgery of the Retina
John A. Bryant, M.D.
3166 Reid Drive, P. O. Box 6374, Corpus Christi, Texas 78411
Telephone 512 853-7319

Do your patients understand your fees?

Displaying an AMA Fee Plaque serves as an invitation for patients to discuss medical costs with you. It shows you care and helps prevent doctor-patient misunderstanding. Send $1.25 to: Order Department, American Medical Association, 535 North Dearborn Street, Chicago, Illinois 60610.

Orthopedic Surgery

H. H. Beckering, M.D.
L. Ray Lawson, M.D.
George Truett James, M.D.
Robert D. Vandermeer, M.D.
Wynn M. Snoots, M.D.

W. B. CARRELL MEMORIAL CLINIC

2828 Lemmon Ave., Dallas, Texas

FORT WORTH BONE & JOINT CLINIC

918 8th Avenue, Fort Worth, Texas

Louis J. Levy, M.D.
Henry C. McDonald, Jr., M.D.
Cuvier P. Lipscomb, M.D.
Fred W. Sanders, M.D.

Ralph E. Donnell, M.D.
F. Carlton Hodges, M.D.

ORTHOPEDIC ASSOCIATES

Diplomates American Board of Orthopaedic Surgery

1133 N. 19th St., Abilene, Texas 79601

HOUSTON ORTHOPEDIC CLINIC

Joseph Barnhart, M.D.

Donald T. Lazarz, M.D.

1817 Dryden Road, Houston, Texas, 529-4389

LUBBOCK ORTHOPEDIC SURGERY CLINIC
Surgery of the Hand

Royce C. Lewis, Jr., M.D.
Kenneth C. Scholz, D.D.S., M.D.
Ray E. Santos, M.D.
Robert O. Bateman, M.D.

3702 21st St., Suite 9, Lubbock, Texas 79410, 806 795-8261

THE EL PASO ORTHOPEDIC SURGERY GROUP

Diplomates American Board of Orthopaedic Surgery

Louis W. Breck, M.D.
W. Compere Basom, M.D.
Morton H. Leonard, M.D.*
Oren H. Ellis, M.D.
Wellington J. Pindar, M.D.
Donald A. Shearer, Administrator

*Special Attention to Surgery of the Hand

1220 N. Stanton St., El Paso, Texas 79902
Telephone 533-7465

B. C. HALLEY, JR., M.D.
DAVID R. WEBB, JR., M.D.
Orthopaedic Surgery

3909 Worth at Washington, Dallas, Texas 75246, 821-1417

RUSS B. GRAHAM, M.D., F.A.C.S.
Orthopedic Surgery

306 Presbyterian Professional Building,
8210 Walnut Hill Lane, Dallas, Texas 75231, 369-8191

THE ORTHOPEDIC GROUP OF RICHARDSON

Charles E. Graham, M.D.
M. Gayle Glidewell, M.D.

812 S. Central Expressway, Richardson, Texas 75080, 231-6396

Orthopedic Surgery

L. LEE LANKFORD, M.D.
Diplomate American Board of Orthopaedic Surgery
Hand Surgery and Upper Extremity
Reconstructive Surgery

3707 Gaston Ave., Dallas, Texas 75246, 214 823-5351

THE ARLINGTON ORTHOPEDIC GROUP

H. W. Bendel, Jr., M.D.
E. E. Rising, Jr., M.D.
C. Poindexter, M.D.

Diplomate American Board of Orthopaedic Surgery

801 West Randol Mill Road, Arlington, Texas 76010, 817 261-8284

THE BOSWELL-EVANS ORTHOPAEDIC CLINIC

George M. Boswell, Jr., M.D., F.A.C.S.
Gerald W. Schofield, M.D.

James P. Evans, M.D.
Lewis R. Thompson, M.D.

4849 W. Lawther Dr., Dallas, Texas 75218, 348-8300

Otolaryngology

TOM BARR, M.D.
Ear, Nose, and Throat
Diseases of Larynx, and Laryngeal Surgery

Medical Arts Building, Dallas, Texas

HERBERT H. HARRIS, M.D., F.A.C.S., F.I.C.S.
Oto-Laryngology Broncho-Esophagology and
Laryngeal Surgery

907 Hermann Professional Bldg., Houston, Texas

MARVIN G. SHEPARD, M.D., F.A.C.S.
Practice Limited to Otology and Otological Surgery

Medical Tower Bldg., Suite 514, 712 N. Washington, Dallas, Texas

Hours By Appointment

W. P. ANTHONY, M.D.
Otology

662 South Henderson, Fort Worth, Texas 76104

DONALD N. MATHESON, M.D., F.A.C.S.
Diplomate American Board of Otolaryngology

800 Fifth Avenue, Fort Worth, Texas, 336-7133

TEXAS MEDICAL ASSOCIATION MEMBERS' RETIREMENT TRUST

This fully trusteed retirement program qualifies under the Keogh Act and is approved by IRS. For full information, write: TMA Members' Retirement Trust, 1801 North Lamar Blvd., Austin, Texas 78701.

JACK BLUM, M.D.
LLOYD F. RITCHEY, M.D.
Otolaryngology

8215 Westchester, Suite 135, Dallas, Texas

Pathology

A. B. CAIRNS, M.D.
GERARD NOTEBOOM, M.D.
MARC GARZA, M.D.
RONALD E. BUCHANAN, M.D.
WADE M. BRANNAN, M.D.

Diplomates American Board of Pathology

1105 N. Bishop, Methodist Hospital, Dallas, Texas

FORT WORTH MEDICAL LABORATORIES

John J. Andujar, M.D.
Dorothy Patras, M.D.

1404 Pennsylvania Ave., P. O. Box 1118, Fort Worth, Texas 76101

Telephone (817) 336-7137

BROWN & ASSOCIATES MEDICAL LABORATORY

Tissue Pathology, Exfoliative Cytology, Hematology, Serology, Clinical Chemistry, Bacteriology, Parasitology, Serum Protein Electrophoresis and Hemoglobin Electrophoresis

Wilson G. Brown, M.D.
Walter G. Olin, M.D.
S. J. Skinner, M.D.
George V. Miller, M.D.
John R. Thomas, M.D.
Joe B. Haden, M.D.

Diplomates American Board of Pathology

165 Hermann Prof. Bldg., Houston, Texas
Telephone 526-4031

Mailing Containers on Request—Office Pickup Service in Houston

DR. PREUSS PATHOLOGY LABORATORY

Exfoliative Cytology and Surgical Pathology

FRED S. PREUSS, M.D., F.C.A.P.

3607 Gaston Ave., Room 305, Dallas, Texas 75226, 823-6912
Specimen Containers on Request

NUCLEAR MEDICINE LABORATORIES OF TEXAS

Texas Medical Center
6411 South Main Street, Houston, Texas 77025

Completely Equipped Radioisotope Laboratory for Diagnostic Radioactive Tests in: Hematology, Thyroidology, Endocrinology, Gastroenterology, Cardiology, Neurology, Neurosurgery, Urology, Ophthalmology and Obstetrics-Gynecology

Herbert C. Allen, Jr., M.D., Director, 526-1501

John H. Childers, M.D.
R. R. Rember, M.D.
E. H. Valentine, M.D.
W. L. Crofford, M.D.
E. P. Jenevein, M.D.

MEDICAL LABORATORY SERVICE OF DALLAS

Clinical Pathology
Diagnostic Radioisotopes
Surgical Pathology
Exfoliative Cytology

6011 Harry Hines Blvd., Dallas, Texas 75235, 637-0210
(Mailing Containers Available Upon Request)

SEAT BELTS SAVE LIVES—
BUT ONLY IF YOU USE THEM

PRUITT MEDICAL LABORATORIES

Jack Pruitt, M.D.
Diplomate, American Board of Pathology

Tissue Pathology, Exfoliative Cytology, Clinical Pathology, Medicolegal Consultation

P. O. Box 160, Lufkin, Texas 75901, 634-4451

WACO CLINICAL PATHOLOGY LABORATORY

K. P. Wittstruck, M.D., F.C.A.P., Walter Krohn, M.D., F.C.A.P.
Harold M. Block, Jr., M.D., F.C.A.P.
Clinical Pathology
Surgical Pathology
Exfoliative Cytology
Medicolegal Consultation

Mailing Containers on Request
2112 Washington Ave., P. O. Box 3160, Waco, Texas 76707, 756-7226

GEORGE J. RACE, M.D. AND ASSOCIATES

Pathologists

421 Medical Tower Building,
712 North Washington, Dallas, Texas 75246, 214 824-1258

DELTA PATHOLOGY LABORATORIES

James W. G. Carman, M.D.
Clinical Pathology and Anatomic Pathology
Cytology

6209 Stuebner Airline, Houston, Texas 77018, 713 697-7875

J. S. WILKENFELD, M.D.

Diplomate, American Board of Pathology
Anatomical Pathology, Clinical Pathology
Exfoliative Cytology and Dermatopathology

8850 Long Point Road, P.O. Box 55008
Houston, Texas 77055, 468-0738

Mailing Containers on Request—Office Pickup Service in Houston

Physical Medicine & Rehabilitation

TEXAS REHABILITATION HOSPITAL OF GONZALES
WARM SPRINGS FOUNDATION, INC.

P.O. BOX 58, GONZALES, TEXAS 78629

Facilities for Physical Restoration
Physical Therapy, Occupational Therapy, Speech Therapy, Recreational Therapy, School from first grade through twelfth grade

ROBERT M. IZARD, JR., M.D., Medical Director
LYNN SMITH, SR., Administrator

Plastic Surgery

THOMAS D. CRONIN, M.D., F.A.C.S.
RAYMOND O. BRAUER, M.D., F.A.C.S.
THOMAS M. BIGGS, M.D., F.A.C.S.
Diplomates American Board of Plastic Surgery

JAMES H. PENOFF, M.D.

PLASTIC SURGERY

5419 Caroline St., Houston, Texas 77004, 523-8131

WILLARD C. SELLMAN, JR., M.D.

Plastic, Maxillo-Facial and Hand Surgery

530 Locke Medical Building,
6011 Harry Hines Blvd., Dallas, Texas 75235, 637-4770

BROMLEY SMITH FREEMAN, M.D., F.A.C.S.
Diplomate American Boards of Surgery and Plastic Surgery

PLASTIC AND RECONSTRUCTIVE SURGERY

Tumors of the Head and Neck

1810 The Medical Towers, Houston, Texas 77025
Telephone 529-3579; Residence 782-1628

JOHN B. PATTERSON, M.D., F.A.C.S.
Diplomate American Board
Plastic Surgery

612 Doctors Bldg., Fort Worth, Texas, 336-0356

SIMON FREDRICKS, M.D., F.A.C.S.
Diplomate American Board of Plastic Surgery

Houston Office
1103 Medical Towers, Houston, Texas 77025, 523-5575

Pasadena Office
904½ E. Southmore, Pasadena, Texas 77502, 473-5488

DAVID A. GRANT, M.D., F.A.C.S.
Diplomate American Boards of Surgery and Plastic Surgery
Plastic & Reconstructive Surgery
Cosmetic Surgery

800 Fifth Avenue, Fort Worth, Texas 76104, 335-4751

CARL R. COERS, III, MD., F.A.C.S.
Diplomate American Board of Plastic Surgery
Plastic, Reconstructive & Hand Surgery

800 Fifth Avenue, Fort Worth, Texas 76104, 335-4751

MARCUS L. FINLEY, M.D., F.A.C.S.
Diplomate American Board of Plastic Surgery
Plastic, Reconstructive and Hand Surgery

1115A Pennsylvania Avenue, Fort Worth, Texas 76104, 335-6439

VALENTIN GRACIA, M.D., F.A.C.S., F.I.C.S., D.A.B.
Aesthetic Surgery—Burns

1001 W. Rosedale, Fort Worth, Texas 76104, 336-0446

FRANCIS A. MORRIS, JR., M.D.
WILLIAM E. BARNES, M.D.
Diplomates American Board of Plastic Surgery
Plastic, Reconstructive and Hand Surgery

3100 Red River, Austin, Texas, 476-9149

Plastic Surgery
JOHN R. HILL, M.D., F.A.C.S.
Diplomate American Board of Plastic Surgery
Practice Limited to Plastic, Reconstructive and Hand Surgery
Medical Center Office:
272 Hermann Prof. Bldg., Houston, Texas 77025, 528-2481
Spring Branch Office:
9320 Westview, Houston, Texas 77055, 528-2481

E. FRANK DUNTON, M.D., F.A.C.S.
Plastic & Reconstructive Surgery and
Surgery of the Hand

Suite 104, 3434 Swiss Avenue, Dallas, Texas, 824-7290

W. W. SCHUESSLER, M.D., F.A.C.S.
Diplomate of American Board of Plastic Surgery
Plastic, Reconstructive & Maxillo-Facial Surgery

Suite 4-C Medical Center,
1501 Arizona Avenue, El Paso, Texas 79902, 533-6362

Radiology

AMARILLO RADIOLOGICAL GROUP
Practice Limited to Radiology
Royal Wertz, M.D., F.A.C.R.
Wilbur Q. Budd, M.D., D.A.B.R.

800 Rusk Street, Amarillo, Texas 79106, 373-8324

J. R. MAXFIELD, JR., M.D., M.A.C.R.
JACK G. S. MAXFIELD, M.D., M.A.C.R.
Radiological Center, Including Radioisotopes

2711 Oak Lawn, Dallas, Texas, 526-6661

MAURICE C. ARCHER, M.D., M.A.C.R.
MARY L. KILLINGSWORTH, M.D., M.A.C.R.

Diplomates of the American Board of Radiology

Doctors Bldg., 800 Fifth Avenue, Fort Worth, Texas, 332-3401

DRS. CARLSON AND BAREKMAN
Glenn D. Carlson, M.D., F.A.C.R.
William H. Barekman, M.D., D.A.B.R.
Agnes M. Guthrie, M.D., D.A.B.R.
X-Ray Diagnosis, X-Ray and Radium Therapy,
Radioisotopes

1221 Medical Arts Bldg., 741-3621
6011 Harry Hines Blvd., 631-7070
3607 Gaston Ave., 823-9961
Dallas, Texas

Harvey M. Lowry, M.D., F.A.C.R.
James R. Gish, M.D., D.A.B.R.
Edward A. Sheldon, M.D., D.A.B.R.
James P. Wills, M.D.
RADIOLOGY
109 Doctors Bldg., 838-4543
502 Goodhue Bldg., 838-2224
Baptist Hospital, 833-6421
Beaumont, Texas

JAMES L. CLIFFORD, M.D., D.A.B.R.
Cobalt 60 Rotational Therapy, X-Ray and
Radium Therapy
X-Ray Diagnosis, Radioisotopes

845 Clarksville St., Paris, Texas, 784-4624

TMA
ANNUAL
SESSION
MAY 6-9
HOUSTON

Thoracic Surgery

Donald L. Paulson, M.D.
Harold C. Urschel, Jr., M.D.

DRS. PAULSON AND URSCHEL
Thoracic and Cardiovascular Surgery

3810 Swiss Ave., Dallas, Texas, 824-2503

CHARLES T. MEADOWS, M.D.
Diplomate American Board of Thoracic Surgery
Thoracic and Cardiovascular Surgery
Broncho-esophagology

1101 North 19th, The Professional Bldg., Abilene, Texas, 673-8184

LeROY J. KLEINSASSER, M.D., F.A.C.S.
Diplomate American Board of Surgery &
The Board of Thoracic Surgery
Cardiovascular and Peripheral Vascular Surgery

The Doctors Bldg., 3707 Gaston Ave., Dallas, Texas 75246

Robert R. Shaw, M.D.
John L. Kee, Jr., M.D.

DRS. SHAW AND KEE
Thoracic Surgery

The Doctors Bldg., 3707 Gaston Ave., Dallas, Texas 75246, 826-5184

WILLIAM W. TAYLOR, M.D.
Diplomate Board of Thoracic Surgery
Thoracic, Cardiac, and Vascular Surgery

804 Locke Med. Bldg., 6011 Harry Hines Blvd., Dallas, Texas 75235
Telephone 637-4833

ALLAN L. GRAHAM, M.D.
Diplomate American Board of Surgery and
Board of Thoracic Surgery
Cardiovascular and Peripheral Vascular Surgery

502 Docotrs Bldg., 800 Fifth Ave., Fort Worth, Texas, 332-7879

ALTON C. LAWTON, M.D., F.A.C.S.
Diplomate American Board of Thoracic Surgery
Thoracic and Cardiovascular Surgery
Endoscopy

626 Doctors Bldg., 800 Fifth Ave., Fort Worth, Texas, 332-5791

Texas Medicine

Present your ideas
in Texas Medicine

For details on submitting manuscripts,
send for a copy of "Information for Authors."

Mrs. Marilyn Baker
Managing Editor
TEXAS MEDICINE
1801 North Lamar Blvd., Austin, Texas 78701

Urology

CECIL M. CRIGLER, M.D., F.A.C.S.
Practice Limited to Urology

1519 Hermann Professional Bldg., Houston, Texas

JO C. ALEXANDER, M.D., KARL B. KING, M.D.,
FOSTER FUQUA, M.D., ELGIN W. WARE, JR., M.D.,
GEORGE E. HURT, JR., M.D., EUGENE R. TODD, M.D.,
DONALD E. JOHNSON, M.D. & ASSOCIATES
Urology

3707 Gaston Avenue, Dallas, Texas 75246

THE UROLOGY CLINIC
1415 Pennsylvania Ave., Fort Worth, Texas 76104

Dolphus E. Compere, M.D., M.S., F.A.C.S.
Diplomate of American Board of Urology
Grant F. Begley, A.B., M.D.
Diplomate of American Board of Urology
Hugh Lamensdorf, M.D.

H. M. GIBSON, JR., M.D., F.A.C.S.
Certified by American Board of Urology
Practice Limited to Urology

512 University Towers Bldg., 1900 N. Oregon St., El Paso, Texas
Telephones 532-8130 & 533-4765

MARVIN GREER RAPE, M.D.
Diplomate of American Board of Urology
NEWTON F. McDONALD, M.D.
Diplomate of American Board of Urology
Practice Limited to Urology

1703 St. Joseph Prof. Bldg., 2000 Crawford, Houston, Texas 77002

JOHN B. TRIBLE, M.D.
Practice Limited to Urology

1209-10 Medical Arts Bldg., Houston, Texas 77002, 222-7521

ERWIN C. WINKEL, M.D.
Practice Limited to Urology

Northwest Professional Center,
2925 West T.C. Jester Blvd., Houston, Texas, 681-0343

THE UROLOGY CLINIC
1010 Louisiana, Houston, Texas 77002, 227-1414
James S. Boren, M.D.
Robert I. Cox, M.D.

Diplomates American Board of Urology

JOHN F. COLLINS, JR., M.D.
Urology

Doctor's Park, 1400 Crescent, Denton, Texas 76201, 817 387-3828

Remember your less fortunate colleagues.
Give to the TMA Physicians Benevolent Fund.

Classified Advertising

Physicians Wanted

ORTHOPEDIC SURGEON AND TWO GP's needed hy 19 doctor group. 100-bed fully accredited hospital. Salary open. Full partnership in one year. For additional details, write John B. Chester, M.D., 3330 South Lancaster Road, Dallas, Texas 75216.

GENERAL PRACTITIONER NEEDED to assume well-established practice in Milford, Texas. The community's only doctor recently suffered a heart attack and has moved. An eight room small clinic owned hy the City is available rent free. Income limited only by interest and ability. Good school and churches. Twelve and 17 miles from two first-class hospitals, 48 miles south of Dallas, 48 miles north of Waco. Contact C. O. Miller, P.O. Box 546, Milford, Texas 76670, area code 214, 493-2511.

EXCELLENT OPPORTUNITY FOR PHYSICIANS in Carrizo Springs, Texas. Office space availahle in new professional huilding adjacent to hospital and nursing home. Excellent schools and housing in city. One general practitioner needed. For information write or call C. W. Vandervoort, 500 North 1st Street, Carrizo Springs, Texas 78834. Phone 876-2550.

UROLOGIST, board certified or eligihle, to associate with a progressive and expanding multispecialty group in West Texas. Many fringe benefits including retirement program. No investment required. Adjoining accredited hospital. City population 35,000. Contact Ad-236, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

PEDIATRICIAN, board certified or eligible, to associate with a progressive and expanding multispecialty group in West Texas. Many fringe benefits including retirement program. No investment required. Adjoining accredited hospital. City population 35,000. Contact Ad-236, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

ORTHOPEDIC SURGEON, PEDIATRICIAN, OBSTETRICIAN AND TWO GENERAL PRACTITIONERS needed hy 19 doctor-group. Salary open. Full partnership in one year. 100-bed fully accredited hospital. Many fringe benefits including tax-sheltered retirement plan. For additional details write Chester Clinic and Hospital Association, 3330 South Lancaster Road, Dallas, Texas 75216, Attn: John B. Chester, M.D.

GENERAL PRACTITIONER OR GP-SURGEON WANTED in East Texas community of Crockett (Houston County). Office space available for solo practice or association with other physicians in area—106-bed new hospital. Center for industry, farming, livestock, and forestry operations. Excellent schools, churches, and recreational facilities availahle. For additional information contact Houston County Development Foundation, P.O. Box 807, Crockett, Texas 75835, area code 713, 544-2359.

PATHOLOGY RESIDENCIES AND INTERNSHIPS availahle in 600-bed general hospital. Fully approved four year program in anatomical and clinical pathology. Average annual specimens and tests—348,587. Interns—$6300; residents—$8100 up. Board and laundry. Charles B. Mitchell, M.D., Director of Laboratories, Harris Hospital, 1300 West Cannon, Fort Worth, Texas 76104.

GENERAL PRACTITIONER WANTED to join five man clinic in growing town of Clifton, 30 miles northwest of Waco near Lake Whitney. 41-bed fully accredited hospital with plans to expand by 30 beds. Salary to start, commensurate with present requirements; partnership later. Good schools, churches and hunting and fishing facilities. Contact V. D. Goodall, M.D., Goodall & Witcher Clinic, Clifton, Texas 76634.

PHYSICAL MEDICINE AND REHABILITATION RESIDENCY, 3-year, integrated with Baylor College of Medicine affiliated hospitals. Non-career $7,500-$8,700; career $11,905-$16,760 (license in any one of the states required). Nondiscrimination in employment. William P. Blocker, Jr., M.D., VA Hospital, Houston, Texas 77031.

M.D.'S TO DO GENERAL PRACTICE WITH SURGERY, Houston area, new offices in an expanding general hospital. Liberal guarantee first six months. Avcrage monthly income of present doctors $8,000 plus. Pasadena Memorial Hospital, 4040 Red Bluff Road, Pasadena, Texas 77503. Area code, 713, 473-3311.

GENERAL PRACTITIONER TO JOIN 2 GP'S in Central Texas town between San Antonio and Houston on Interstate 10, 80 miles from Austin. Modern three-man clinic adjacent to 30-bed hospital being remodeled. Salary open. Please reply to Ad-293, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

NEWLY CONSTRUCTED AND EXPANDED multi-specialty clinic and 120-bed general hospital has openings for physicians in fields of general practice, radiology, urology, pathology, anesthesiology, and orthopedic surgery. Construction to be completed in February, 1971. Located in growing West Texas city of 180,000. Renumeration open depending on board certification and experience. Partnership in two years. Interested applicants send medical curriculum vitae to Ad-287, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

OPPORTUNITIES IN YOAKUM COUNTY, TEXAS. DENVER CITY, TEXAS. Actual need for four general practitioners. Three overworked general practitioners for the past six years until January 15, 1970. One man left at that time to enter industrial medicine, leaving two. His modern well equipped clinic availahle, rent free for six months, low rent for following six months, with option to huy, records available. This clinic on same block with hospital. Hospital is 50 beds, well equipped, has radiology, clinical and tissue pathology consultation on regular hasis. Present two physicians will welcome one or two other physicians, will help introduce. Amicahle working arrangement for time off, patient coverage and consultation. PLAINS, TEXAS. County seat of Yoakum County, 15 miles north of Denver City, excellent highway. Completely equipped modern clinic available for one dollar ($1.00) a month. Utilities furnished hy city. Large enough for two physicians. Physicians in Denver will make same arrangements for coverage, etc. as outlined above. Yoakum County has excellent schools, good churches, Yoakum County Park between the two towns with very good grass, green nine hole golf course. Lubbock with Texas Tech University, one hour, twenty minutes away. Midland-Odessa area one hour, thirty minutes away. Contact administrator Yoakum County Hospital, Denver City, Texas, area code 806, 592-2121 or County Judge Gene Bennett, Plains, Texas, area code 806, 456-8606.

GENERAL PRACTITIONER WANTED to associate with five-doctor clinic, including one general surgeon. Community of 6,000 with fully accredited 53-bed hospital; country club and lakes close by. General surgery and Ob/Gyn interest especially wanted. Contact Bowie Clinic, P. O. Box 681, Bowie, Texas 76230.

$30,000.00 GUARANTEED FIRST YEAR with little or no practice expense. Private solo and group practices available. Maximum leisure time with family. Both small town and city locations. Not an employment agency. No cost to the doctor. Sanford Smith, Director, Physician and Personnel Planning, P. O. Box 9836, Houston, Texas 77015. 713-453-6324.

PSYCHIATRIC RESIDENCY in approved three year program. Effective connections with universities, medical schools, private clinics, and community centers. Outstanding faculty, and programs. Stipends with Texas license are $13,000, $14,000 and $15,000 per year. NIMH grants available. For full information write Anthony P. Rousos, M.D., Director of Training and Research, Austin State Hospital, 4110 Guadalupe, Austin, Texas 78751.

WANTED: PHYSICIANS WITH INTEREST IN SURGERY AND/OR OBSTETRICS to locate in progressive East Texas area with complete support of local medical staff. Contact Paul R. Bennett, 300 West Upshur, Gladewater, Texas, or phone AC 214, 845-2281.

INTERNIST, board certified or eligible to join four internists in 15-doctor, multi-specialty clinic in West Texas city of 35,000. Life and malpractice insurance, disability and retirement programs provided. Modern clinic building adjacent to accredited hospital. Starting salary $25,000. Contact Jack H. Burnett, Jr., M.D., Malone and Hogan Clinic, 901 Main Street, Big Spring, Texas 79720.

FAMILY PHYSICIAN—Preferably with some residency training who would like to associate with two physicians, ages 32 and 38, doing competent and comprehensive family practice in small East Texas town. Present physicians have residency experience, one is board certified. 50-bed county hospital now under construction, complete in May, 1971, Hill-Burton standards. Near Toledo-Bend and Sam Rayburn Lakes, hunting, fishing, tall timber. Practice consists of general family medicine including major surgery and obstetrics. New doctor would fit in according to his interests and abilities. Salary $2500/month with increases based on earning. Present doctors earning far more. Combination of income and working environment will be difficult to beat for doctor who prefers small town. Contact J. D. Bussey, M.D., 379-8155, 379-8156, Newton, Texas.

ATTENTION: GENERAL PRACTITIONERS-SURGEONS. If you would like the advantages of small city living together with a wide open field for practicing your profession, contact the Board of Directors, Taft Hospital District, 1220 Gregory Street, Taft, Texas 78390. A modern hospital and convalescent home is at your disposal. Added attraction: only 15 minutes by car from the Sparkling City hy the Sea, Corpus Christi, Texas. Ideal climate, plus swimming, fishing, sailing, golfing, hunting, and social activities available. Write us for more details, or better still, come and see for yourself. You will be pleasantly surprised.

TWO FULL TIME PHYSICIANS WANTED FOR STUDENT HEALTH SERVICE. Campus of 14,000 students. Limited call duty, reasonable hours, liberal vacations, no major surgery. Semi-retired acceptable. Participation in retiremnt program, group hospitalization, and other fringe benefits. Salary with merit increases. Texas license and Basic Science Certificate required. Interested physician send complete medical resume of professional qualifications in first letter to: K. L. Nelson, M.D., Student Health Service, Texas A&M University, College Station, Texas 77841. Phone AC 713, 845-1511.

WANTED—GP—ASSOCIATE. Associate with well established GP. Large private and industrial practice. Same location 21 years. Well equipped laboratory, x-ray; clinic next door to fully accredited general hospital. Liberal guarantee. Access large metropolitan area. Excellent schools. Hunting and fishing. Contact Curtis J. Torno, M.D., 1029 East Thomas, Pasadena, Texas 77502 or call AC 713, 473-4457 collect.

EMERGENCY ROOM PHYSICIANS WANTED: Texas Hospital Consultants need emergency room physicians to help cover hospitals in Texas. Work for the patient on a fee-for-service basis. Excellent economic opportunity. Hospital privileges available. Call AC 512 732-3541 collect or write Texas Hospital Consultants, 114 West Glenview, San Antonio, Texas 78228.

INTERNAL MEDICINE AND OPHTHALMOLOGY. A fifteen man multispecialty group in a city of 15,000 needs board eligible or board certified physician in internal medicine and ophthalmology. Eligibility for partnership after two years. Excellent fringe benefits and retirement program. Please reply to Ad-295, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

WANTED: PSYCHIATRIST AND GENERAL PHYSICIANS for 900 bed mental hospital in Big Spring, Texas. JCAH accredited. Excellent psychiatric programs. Salary ranges from $20,000 to $25,500 depending on training and experience. Liberal vacation, holidays and sick leave. Write Preston E. Harrison, M.D., Superintendent, P. O. Box 231, Big Spring, Texas 79720.

CLASSIFIED AD RATES & DATA: Classified Advertising sells for $6.00 per Issue for 50 words or less, payable in advance. Ad numbers can be substituted for formal addresses upon request at no extra cost. Name and address of ad number listings can not be given out unless specific permission to do so has been given. The advertising office will not contact ad number holders except by mail. Copy deadline is the 20th of the month preceding publication. Send copy to Advertising Assistant, TEXAS MEDICINE, 1801 North Lamar Blvd., Austin, Texas 78701.

WANTED YOUNG GENERAL PRACTITIONER to practice in group, reasonable guarantee. Share profits after expenses in proportion to work done by each associate. Location Gulf Coast, Texas. Reply to Ad-297, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

MOST INTERESTING TOWN IN TEXAS needs a general practitioner who is tired of the asphalt jungle. Compensation for services open to negotiation. New modern facility in construction. Contact Roger E. Marks, M.D., AC 817, 897-2215, or write P. O. Box 997, Glen Rose, Texas 76043.

RESIDENCIES—PHYSICAL MEDICINE AND REHABILITATION (Rehabilitation Medicine). Three year university residency program, new hospital with extensive PM&R department. Comprehensive in- and outpatient services. Basic stipend: $8,100-$9,300. Contact Arthur E. Grant, M.D., The University of Texas Medical School at San Antonio, 7703 Floyd Curl Drive, San Antonio, Texas 78229.

WANTED GENERAL SURGEON to join two GPs in small privately owned 29 bed hospital and clinic in Central Texas. Beginning salary $3,000 per month or may be on own. Call or write M. A. Childress, M.D., P. O. Box 289, Goldthwaite, Texas 76844, AC 915, 648-2212.

INTERNIST—Sixth member needed by 13-member multi-specialty group in North Texas university city of over 100,000 population. Board certified or eligible. Fully equipped lab and x-ray. Starting salary $25,000 plus percentage with liberal fringe benefits. Please reply to Ad-273, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

WANTED: PSYCHIATRIST at Kerrville State Hospital. 40 hour work week, sick leave, paid vacation, and holidays. Best climate in Texas. Salary up to $22,500 per year. Contact Luther W. Ross, M.D., Superintendent, Kerrville State Hospital, P.O. Box 1468, Kerrville, Texas 78028.

RADIOLOGIST TO ASSOCIATE with board man in coastal bend South Texas city of 60,000. Practice of 17 year tenure. diagnosis and therapy. Minimum pre-partner starting salary $25,000. Should be board certified or qualified. Prompt increase to full partnership. Annual hospital and office diagnostic visits 16,000, increasing. Write Ad-299, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

GENERAL PRACTITIONER WANTED to join three man clinic with adjoining 44 bed hospital. Salary to start with option for partnership. Centrally located near Dallas, Fort Worth and Waco. Good schools, churches, five miles from Lake Whitney. Contact James G. Barton, M.D., or Morris R. Hill, M.D., Whitney, Texas. Phone AC 817, 694-2222.

WELL ESTABLISHED 32-man multi-specialty group in Dallas, Texas, needs an internist, obstetrician, and otolaryngologist. Early partnership, liberal vacation and meeting time, life insurance, group hospitalization, retirement benefits, teaching opportunities, new facilities, interview and expenses paid. Please reply to Cecil Rosamond, Administrator, The Dallas Medical & Surgical Clinic, 4105 Live Oak, Dallas, Texas 75221.

WANTED: BOARD ELIGIBLE, OB-GYN. below 35, military completed to join another OB-GYN, in 13 man multi-specialty group expanding to 24. Town of 20,000. On I-45. 50 miles from Dallas. Beginning salary, $25,000 guarantee leading to full partnership in two years. Send resume to Ad-300, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

WICHITA FALLS CLINIC-HOSPITAL

GENERAL SURGERY
W. E. Crump, M.D., F.A.C.S.
James T. Lee, M.D.
Charles H. Wilson, M.D., F.A.C.S.

ORTHOPEDIC SURGERY
Jack E. Maxfield, M.D., F.A.C.S.
Clyde W. Parsons, M.D.
David G. Borman, M.D.

ORAL SURGERY
R. A. Mitchell, D.D.S.
Larry J. Cason, D.D.S.

RADIOACTIVE ISOTOPES
Claude D. Wilson, M.D., F.A.C.R.
Joe D. Steed, M.D., D.A.B.R.
Julian H. Acker, M.D.
David D. Salmon, M.D., D.A.B.R.

PEDIATRICS
George W. Slaughter, III, M.D., F.A.A.P.
Joseph Bilder, Jr., M.D.

LABORATORIES
Claude D. Wilson, F.A.C.R., Radiology
Joe D. Steed, M.D., D.A.B.R., Radiology
David D. Salmon, M.D., D.A.B.R., Radiology

MEDICINE
W. B. Whiting, M.D., Cardiology
R. F. Knox, M.D., Endocrinology
P. K. Smith, M.D., F.A.C.P., Diagnosis & Internal Medicine
I. L. Humphrey, Jr., M.D., Diagnosis & Internal Medicine
Julian H. Acker, M.D., Diagnosis & Internal Medicine
Preston McCall, M.D., Diagnosis & Internal Medicine
Julian C. Sleeper, M.D., Cardiology
Eugene Jackson, M.D., Diagnosis & Internal Medicine

GENERAL PRACTICE
J. B. Hathorn, Jr., M.D.
Melvin Horany, M.D.
John E. Worthen, Jr., M.D.

UROLOGY
Owen C. Berg, M.D., F.A.C.S.

OBSTETRICS AND GYNECOLOGY
W. L. Parker, M.D., F.A.C.S.
Warren T. Kable, M.D.
Frank J. Lee, M.D.

ADMINISTRATIVE OFFICER
Bertha McNeill, Administrator
Jesse E. Dobbs, Jr., Asst. Administrator

GENERAL PRACTITIONER to associate with two GP's doing surgery, obstetrics, orthopedics. Salary open with full partnership in one year. No investment needed. Town with 4,000 population. Golf course, lake, hunting and fishing. 21 bed hospital fully staffed, licensed and approved for Medicare. Joins three doctor clinic. On call every third weekend. A. D. Major, M.D., or K. J. Wharram, M.D., Box 239, Nocona, Texas 76255.

Situations Wanted

BOARD CERTIFIED GENERAL SURGEON completing university thoracic and cardiovascular residency July, 1971. Military service completed. Desire association or small group practice with eventual partnership. Please reply to Ad-294, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

GP, TEXAS LICENSE, VERY ACTIVE, seeks association or to buy interest in practice by the Gulf Coast or border. Will also consider other good locations. Please reply giving full details to Ad-296, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

For Sale or For Rent

ESTABLISHED GENERAL PRACTICE in northeast Fort Worth. Excellent location, 3-man clinic (2500 sq. ft.). Will sell or lease either fully furnished and equipped or vacant. Available immediately. Call BU 2-7688, Fort Worth.

Miscellaneous

M.A. PSYCHOLOGIST, eligible Texas certification. Desires association with hospital, clinic, group practice, psychiatrist in metropolitan setting. Eight years experience in diagnostics, group, individual, marital, play, therapies, vocational guidance. One year supervisory experience in forming and directing children's crisis short-term treatment unit. Prefer Central, South Central Texas area. Vita, references available. Please reply to Ad-286, *Texas Medcine*, 1801 North Lamar Blvd., Austin, Texas 78701.

ASSISTANT MEDICAL DIRECTOR

We're looking for a physician under age 35 who will appreciate working in a pleasant environment and one of the best locations in the nation to raise a family. We prefer at least two years of private practice; may be internist, surgeon, or general practitioner. This career position includes good hours and liberal benefit programs. Salary is negotiable. If interested write to our Medical Director.

AMERICAN GENERAL LIFE INSURANCE COMPANY
Lloyd Gregory, M.D.
P.O. Box 1931
Houston, Texas 77001

Seeking an associate or looking for a good practice location?

Contact: Physicians Placement Service
Texas Medical Association
1801 North Lamar Blvd.
Austin, Texas 78701

HOMESTEAD
CHILD PLACEMENT AGENCY
and
HOMESTEAD MATERNITY HOME
1250 W. Rosedale
335-5942 **336-7905**
Fort Worth, Texas

Licensed Adoption Service and Private, Confidential maternity care provided unwed expectant mothers. Obstetrical services by a Diplomate of THE AMERICAN BOARD. Also pediatric care furnished by a licentiate of THE AMERICAN BOARD.

Advertising Directory

American General Life Insurance Company
Assistant Medical Director 142

Arch Laboratories
Dicarbosil 39

Beverly Hills Hospital and Clinic 125

Blue Cross-Blue Shield of Texas 9

The Brown Pharmaceutical Company
Android 36
Cerebro-Nicin 36

The Brown Schools
The San Marcos Campuses 10

Campbell Soup Company 67

Casualty Indemnity Exchange
Malpractice Insurance 37

Dallas Medical & Surgical Clinic and Hospital 2nd Cover

Francis Hospitels Incorporated
Convalescent Care 20

Highland Hospital 144

Homestead Child Placement 142

Humco Laboratory
Vasomist 144

Hynson, Westcott and Dunning, Inc.
Lactinex 129

Ives Laboratories, Inc.
Isordil 38-39

Keisey-Seybold Clinic 122

King's Daughters Clinic Back Cover

Lederle Laboratories
Achrostatin-V 40
Declostatin 115

Eli Lilly and Company
Ilosone 24

The Martin X-Ray and Radium Clinic 118

Medical Arts Clinic, Corsicana 130

The Medical Protective Company
Professional Liability Insurance 118

Medicenter of America
Recuperative Care 3rd Cover

Medicine and Cowboys Sixty Years Ago and Today's Politics
E. O. Nichols, M.D. 30

The New Orleans Graduate Medical Assembly
34th Annual Meeting 30

Oncology—Fort Worth 30

William P. Poythress & Company, Inc.
Antrocol 105
Trocinate 106

T. Rowe Price Growth Stock Fund, Inc. 39

The Prudential Insurance Company of America
TMA Group Insurance Plan 96

Radiology Associates of Fort Worth 130

A. H. Robins Company
Donnagel 21
Robitussin 22-23
Silain-Gel 126-127

Roche Laboratories
Efudex 32-34
Valium 41

Schering Corporation
Garamycin 18-19

Scott and White Clinic Back Cover

G. D. Searle & Company
Lomotil 68-69

Smith Kline & French Laboratories
Dyazide 70

Starlite Village Clinic 130

Surgical Mechanical Research, Inc.
Medical and Dental Equipment 40

Terrell's Laboratories and Medical Group 1

Texas Medical Association
Drug Abuse Program 112
Physicians' and Wives' Art Exhibit 100
Venereal Disease Program 16
Memorial Library 71

Timberlawn Psychiatric Hospital 122

Torbett, Hutchings, Smith Memorial Hospital 2nd Cover

Travis Clinic and Nan Travis Memorial Hospital 130

Turner's Clinical & X-Ray Laboratories 118

Wichita Falls Clinic-Hospital 142

Physicians' Directory 131-140

Classified Advertisements 141-142

ADVERTISING RATES & DATA: Available on request from the Advertising Director, Texas Medicine. Advertising plates should be sent directly to the printer. Space reservations, copy and proofs should be sent to the Advertising Director. Represented nationally by the State Medical Journal Advertising Bureau, Inc., 1010 Lake Street, Oak Park, Ill. 60301.

ADVERTISING & BUSINESS OFFICES: Texas Medical Association, 1801 North Lamar Blvd., Austin 78701; Telephone: 512-477-6704.

PRINTING OFFICES: Texas Medicine, c/o Stafford-Lowdon Company, 1114 West Daggett, Fort Worth 76104.

HIGHLAND HOSPITAL

ASHEVILLE, NORTH CAROLINA

Founded 1904

A DIVISION OF THE DEPARTMENT OF PSYCHIATRY OF DUKE UNIVERSITY

Accredited by the Joint Commission on Accreditation and Certified for Medicare

Complete facilities for evaluation and intensive treatment of psychiatric patients, including individual psychotherapy, group therapy, psychodrama, electro-convulsive therapy, Indoklon convulsive therapy, drugs, social service work with families, family therapy, and an extensive and well organized activities program, including occupational therapy, art therapy, music therapy, athletic activities and games, recreational activities and outings. The treatment program of each patient is carefully supervised in order that the therapeutic needs of each patient may be realized.

High school facilities for a limited number of appropriate patients are now available on grounds. The School Program is fully integrated into the hospital treatment program and is accredited through the Asheville School System.

Complete modern facilities with 85 acres of landscaped and wooded grounds in the City of Asheville.

Brochures and information on financial arrangements available

Contact: (1) Mrs. Elizabeth Harkins, ACSW, Coordinator of Admissions

or

(2) Samuel N. Workman, M.D.
Chief of Clinical Services

(3) Charles W. Neville, Jr., M.D.
Associate Professor of Psychiatry and Medical Director

Area Code 704 - 254-3201

Vasomist

(ANTIHISTAMINIC)

VASOCONSTRICTOR, NASAL DECONGESTANT AND LOCAL ANTIHISTAMINIC

Active Ingredients:
Phenylephrine Hcl 0.25%
Phenylpropanolamine Hcl ...0.50%
Chlorobutanol 0.15%
Tripelennamine Hel 0.50%
In Isotonic Solution

Vasomist

(PLAIN)

VASOCONSTRICTOR AND NASAL DECONGESTANT

Active Ingredients:
Phenylephrine Hcl 0.25%
Phenylpropanolamine Hcl ...0.50%
Chlorobutanol 0.15%
In Isotonic Solution

USE: Temporary relief of nasal congestion due to colds and hay fever.

DIRECTIONS: Adults and Children: Instill two or three drops into each nostril, using no more than needed to provide relief. Repeat every three to four hours as needed but not oftener.

AVAILABILITY

In plastic squeeze bottles containing ¾ fluid oz. and in dropper bottles containing 1 fluid oz.

HUMCO LABORATORY
TEXARKANA, ARK.-TEX.

HUMCO LABORATORY
TEXARKANA, ARK.-TEX.
Our Integrity is Your Guarantee

180403

U. C. SAN FRANCISCO
MEDICAL CENTER LIBRARY
MAR 29 1971

TEXAS MEDICINE

Owned, Published, and Issued Monthly

by

TEXAS MEDICAL ASSOCIATION

Edited for the Association Under the Direction of the Trustees

AUSTIN, TEXAS

Volume 66

January-December, 1970

PRESS OF
STAFFORD-LOWDON COMPANY
FORT WORTH, TEXAS

OFFICERS

OF

TEXAS MEDICAL ASSOCIATION

1969-1970

Dr. Charles Max Cole, Dallas	PRESIDENT
Dr. Walter Walthall, San Antonio	PRESIDENT-ELECT
Dr. George V. Pazdral, Somerville	VICE PRESIDENT
Dr. Byron P. York, Houston	SECRETARY
Mr. C. Lincoln Williston, Austin	EXECUTIVE SECRETARY
Dr. Howard O. Smith, Marlin	TREASURER
Dr. W. H. Hamrick, Houston	SPEAKER OF THE HOUSE OF DELEGATES
Dr. Jack B. Lee, San Antonio	VICE SPEAKER OF THE HOUSE OF DELEGATES

1970-1971

Dr. Walter Walthall, San Antonio	PRESIDENT
Dr. James H. Sammons, Baytown	PRESIDENT-ELECT
Dr. Russell Holt, El Paso	VICE PRESIDENT
Dr. Byron P. York, Houston	SECRETARY
Mr. C. Lincoln Williston, Austin	EXECUTIVE SECRETARY
Dr. Howard O. Smith, Marlin	TREASURER
Dr. W. H. Hamrick, Houston	SPEAKER OF THE HOUSE OF DELEGATES
Dr. Jack B. Lee, San Antonio	VICE SPEAKER OF THE HOUSE OF DELEGATES

BOARD OF TRUSTEES

Dr. C. P. Hardwicke, Austin; Dr. John M. Smith, Jr., San Antonio; Dr. Don G. Harrel, Dallas; Dr. R. Harvey Bell, Palestine; Dr. Charles W. Yates, Rosenberg; Dr. James A. Hallmark, Fort Worth; Dr. N. L. Barker, Paris.

INDEX

Key to Index

Authors are indexed first in a separate list. In the subject index, most items which concern Texas Medical Association are listed under this entry. Deceased physicians are listed alphabetically under "Deaths."

INDEX OF AUTHORS

	Month	Page
A		
Abston, S.		
See: Goldman, A. S.		
Ahern, G. S.	May	3, 72
Allums, J. A.		
See: Wolma, F. J.		
Anderson, M. S.		
See: Obenour, W. H.		
Armstrong, J. R.	June	2, 68
Armstrong, J. T.		
See: Holt, B. B.		
Arras, M. J.		
See: Henry, J. B.		
B		
Bailey, B. J.	July	2, 52
	Oct.	2, 60
Baker, J. C.		
See: Rougraff, M. E.		
Barclay, G. W., Jr.	Aug.	2, 58
Barness, L. A.	Dec.	27
Bayliss, M. W.	Feb.	2, 60
Begley, G. F.	Dec.	25
Bennett, L. W.		
See: Daniel, C. R.		
Blomqvist, C. G.		
See: Jones, E.; Putnam, R. S.		
Blotcky, M. J.	Apr.	2, 64
Bomboy, J. D.		
See: Daniel, C. R.		
Breitner, I. E.	July	3, 72
Bricker, D. L.		
See: Mattox, K. L.		
Brindley, G. V., Jr.	Oct.	29
Brown, W. G.	Mar.	2, 52
Buice, J. W.	May	3, 76
Burdine, J. A., Jr.		
See: Fernbach, D. J.		
Butts, D. R.	Mar.	2, 46
C		
Carson, D. I.	Jan.	2, 50
Carter, N. W.		
See: Fallis, B. D.		
Castrow, F. F., II	Nov.	3, 75
Catanzaro, R. J.	July	2, 60
Correction	Aug.	79
Cedars, N.	Feb.	19
Chapman, J. S.	June	27
Cheek, J. H.	Oct.	44
Cogan, J. E.	Jan.	18
Cohen, L. S.		
See: Fallis, B. D.; Jones, E.; Shropshire, S.		
Cole, C. M.		
(President's Page)	Jan.	21
	Feb.	33
	Mar.	21
	Apr.	33
Combes, B.		
See: Putnam, R. S.		
Copeland, P.	Dec.	3, 92
Crawford, E. S.	Mar.	2, 50
Crout, J. R.		
See: Haley, R.		
Curb, D. L.	Mar.	3, 79
Curry, G. C.		
See: Fallis, B. D.		
Curry, T., III		
See: Jones, E.		
D		
Daniel, C. R.	Feb.	3, 100
Daniels, J. C.		
See: Ritzmann, S. E.		
Davis, H. K.	Apr.	2, 70
Davis, P.		
See: Friedewald, V. E.		
Davis, W. D., Jr.	Dec.	2, 46
DeBord, B. A.	Aug.	2, 68
deGroot, W. J.		
See: Youmans, C. R., Jr.		
Denman, F. R.		
See: Armstrong, J. R.		
Derrick, J. R.		
See: Hanna, E. A.; Youmans, C. R., Jr.		
Dichoso, C. C.	Nov.	3, 86
Dimijian, G. G.	Jan.	2, 42
Dobrkovsky, M.		
See: Goldman, A. S.		
Dodd, G. D.		
See: Hill, C. A.		
Doggett, B. J.	Apr.	2, 56
Downs, J. T., III	Nov.	2, 46
Dudley, H. K., Jr.		
See: Hughes, A. H.		
Duvall, P. E.		
See: Putnam, R. S.		
E		
Eigenbrodt, E. H.		
See: Daniel, C. R.; Fallis, B. D.; Haley, R.; Jones, E.; Putnam, R. S.; Shropshire, S.		
Ellingson, E. A.	Dec.	3, 78
Entzminger, L. B., Jr.		
See: Kosoy, J.		
F		
Fallis, B. D.	Apr.	3, 96
See also: Daniel, C. R.; Jones, E.		
Fechner, R. E.		
See: Friedewald, V. E.		
Fein, B. T.	Oct.	32
Fenner, H. A., Jr.	Feb.	22
Fernbach, D. J.	June	28
Fincher, D. F.		
See: Castrow, F. F., II.		
Fink, F.	Dec.	116
Frank, S.		
See: Fallis, B. D.		
Franklin, R. R.		
See: Gordon, H. L.		
Frederiksen, R.		
See: Putnam, R. S.		
Frenkel, E. P.		
See: Daniel, C. R.; Shropshire, S.		
Friedewald, V. E.	July	3, 78
G		
Gage, T. D.	June	101
Galindo, D. L.		
See: Karbach, H. E., Jr.		
Gallager, H. S.		
See: Sheena, K. S.		
Gammill, R. R.	June	29
Garrett, D.	May	33
Gibbs, C. E.	Apr.	3, 87
	Nov.	46
Gillett, R. B.	June	29
See also: Crawford, E. S.		
Glass, H. G.		
See: Butts, D. R.		
Goldman, A. S.	Nov.	21
Gordon, H. L.	June	2, 48
Graham, C. E.	Sept.	2, 68
Green, S. C.	Nov.	2, 60
Györkey, F.		
See: Dichoso, C. C.; Ruchelman, H.		
H		
Haley, R.	Mar.	3, 82
Hamrick, W. H.	Apr.	21
Hanna, E. A.	Oct.	2, 64
Harrison, A. W.		
See: Hanna, E. A.		
Healy, J. E., Jr.		
See: Sheena, K. S.		
Henry, J. B.	Feb.	2, 66
Hill, C. A.	Nov.	3, 78
Hill, N. O.	Dec.	2, 54
Hinkle, D. C.		
See: Green, S. C.		
Holt, B. B.	Mar.	2, 44
	Nov.	3, 64
Hopkins, J.		
See: Hanna, E. A.		
Horbelt, D. V.	Sept.	3, 76
Hornaday, J. R.	July	88
Hughes, A. H.	Dec.	3, 72
I		
Innes, R. L.		
See: Goldman, A. S.		
J		
Jacobs, W. M.		
See: Radnich, R. H.		
Jamison, J.	Apr.	3, 91
Jasin, H.		
See: Shropshire, S.		
Johnston, D. W.	Dec.	26
Jones, E.	May	3, 87
Jones, F. G.	Jan.	3, 70
Jones, R. W.		
See: Bayliss, M. W.		
Jordan, G. L., Jr.	Aug.	3, 70
K		
Kantor, H. I.		
See: Green, S. C.		
Kaplan, A. L.		
See: McIlhaney, J. S., Jr.		
Kaplan, N. M.		
See: Haley, R.		
Karbach, H. E., Jr.	Mar.	2, 54
Keller, W. K.	Feb.	23
Kiefer, E. D.	Mar.	3, 68
Kimsey, L. R.		
See: Blotcky, M. J.		
King, D. M.	May	2, 66
King, W. B., Jr.	Apr.	3, 82
Kirksey, T.		
See: Hanna, E. A.		
Kit, S.	Sept.	3, 98
Kosinski, A.		
See: Shropshire, S.		
Kosoy, J.	Oct.	2, 56
See also: Bailey, B. J.		
Kowalewski, E. J.	June	3, 92
L		
Lamm, H.	July	32
Lane, M.		
See: Dichoso, C. C.; Friedewald, V. E.; Obenour, W. H.		
Larson, D. L.		
See: Goldman, A. S.		

	Month	Page
Lee, E. S. See: Schneider, D. J.		
Lee, J. B.	Nov.	23
Lerro, S. J.	Sept.	2, 44
Correction	Nov.	97
Lewis, J. M. See: Carson, D. I.		
Lewis, W. H.	Dec.	2, 58
Lindberg, R.	Aug.	2, 54
Linhart, J. W.	Jan.	3, 76
Lockhart, W. E.	June	2, 42
	Nov.	24
Lorimer, W. S., Jr.	Mar.	18
Luby, J. P. See: Putnam, R. S.		

M

McBride, C. M. See: Sheena, K. S.		
McBride, J. O.	July	31
McElmurry, A. L.	Aug.	32
McIlhaney, J. S., Jr.	Apr.	3, 84
McIntosh, H. D. See: Obenour, W. H.		
McKemie, J.	Feb.	116
MacIntyre, R. S. See: Obenour, W. H.		
Malinak, L. R. See: Gordon, H. L.		
Markand, O. N. See: Haley, R.		
Marshall, R. See: Youmans, C. R., Jr.		
Mattox, K. L.	Aug.	3, 74
Meek, T. D.	July	2, 58
Mills, G. C. See: Castrow, F. F., II		
Montandon, C. See: Nichols, B. L.		
Morettin, L. B. See: Youmans, C. R., Jr.		
Morgen, R. O. See: Dichoso, C. C.		
Mullins, J. F. See: Castrow, F. F., II		

N

Naifeh, G.	Feb.	2, 77
Natelson, E. A. See: Friedewald, V. E.		
Nelson, J. T.	Jan.	17
	Oct.	31
Newirth, F. J. See: Rougraff, M. E.		
Nichols, B. L., Jr.	Apr.	2, 74
Nixon, J. W.	Mar.	3, 72
Nixon, S. A.	Apr.	29

O

Obenour, W. H.	Sept.	3, 86
Older, J. J.	Dec.	2, 42
Oliver, J. S. See: Hughes, A. H.		

P

Palmer, R. L.	Sept.	32
Palasota, P. (Mrs.)	Apr.	124
Peterson, P. Q.	Feb.	2, 79
Pettigrew, D.	July	33
Potts, E. See: Nichols, B. L.		
Powell, G. M.	July	2, 46
Powers, A. G.	June	2, 56
Primer, B. M.	May	34
Prystowsky, H.	Nov.	2, 58
Putnam, R. S.	June	3, 80

Q

Queen, C. R.	Sept.	111

R

Radnich, R. H.	May	2, 58
Read, R. E.	Apr.	22
Rector, F., Jr. See: Jones, E.		
Rees, R. B.	Feb.	3, 92, 94
Reese, W. G.	Sept.	2, 56
Reeve, J. D.	Mar.	2, 49
Reifel, D. C.	Nov.	103
Ridgway, H. J. See: Hill, N. O.		
Ritzmann, S. E.	May	2, 48
Roberts, R. E. See: Schneider, D. J.		
Roehm, J., Jr. See: Dichoso, C. C.; Friedewald, V. E.		
Rogers, L. F.	June	3, 72
Rosenstock, H. A.	June	2, 44
Ross, M. L.	Mar.	17
Rougraff, M. E.	May	2, 54
	July	34
	Oct.	33
	Nov.	27
Ruchelman, H.	July	3, 68
Runge, T. M.	Jan.	2, 61
Ruppersberg, A., Jr.	Nov.	2, 50, 54
Rynearson, R. R.	Jan.	2, 58

S

Sanctuary, G.	Apr.	17
Sanford, J. P. See: Daniel, C. R.		
Schaefer, K. F. See: Rougraff, M. E.		
Schmitt, R. C. See: Goldman, A. S.		
Schneider, D. J.	Aug.	2, 44
Schreiber, G.	May	31
Schreiber, M. H. See: Copeland, P.; Jamison, J.; King, D. M.; Naifeh, G.; Williams, T. N.		
Schulze, V. E.	June	30
Seldin, D. W. See: Fallis, B. D.; Putnam, R. S.		
Sewell, R. L.	May	2, 64
Shaffer, C. F.	Jan.	20
Shannon, I. L.	Aug.	2, 48
Shapiro, W. See: Barclay, G. W.		
Sheena, K. S.	June	2, 62
Shelmire, D. S.	Feb.	3, 88
Shropshire, S.	Jan.	3, 82
See also: Haley, R.		
Simons, B. E. See: Jordan, G. L., Jr.		
Siperstein, M. D. See: Fallis, B. D.		
Smith, J. W.	Sept.	2, 52
Soboloff, H. R.	Dec.	3, 82
Sowell, R. F., Jr.	Nov.	26
Speer, R. J. See: Hill, N. O.		
Spiut, H. J. See: Dichoso, C. C.; Friedewald, V. E.; Obenour, W. H.		
Stevenson, R. A., Jr.	Sept.	29
Suki, W. N. See: Dichoso, C. C.		
Sullivan, M. P. See: Sutow, W. W.		
Suris, O. R. See: Lewis, W. H.		
Sutow, W. W.	Apr.	2, 78

T

Tauber, S. D. See: Jones, E.		
Toledo, T. M. See: Powell, G. M.		

V

Van Santen, E. See: Brown, W. G.		

W

Walthall, W.	Aug.	29
(President's Page)	May	39
	June	31
	July	39
	Aug.	39
	Sept.	39
	Oct.	39
	Nov.	29
	Dec.	35
Whelan, G. See: Putnam, R. S.; Shropshire, S.		
Whitfield, D. W.	Sept.	30
Williams, R. See: Putnam, R. S.		
Williams, T. N.	July	2, 56
Willimack, D.	Aug.	81
Williston, C. L.	Sept.	4
Wolma, F. J.	Mar.	3, 64
Wyrick, W. J., Jr.	Oct.	3, 82

Y

Young, G. G. See: Rougraff, M. E.		
Youmans, C. R., Jr.	Oct.	3, 70
See also: Hanna, E. A.		

Z

Zedler, E. Y.	Apr.	2, 60
Zinn, M. B.	Dec.	3, 64

INDEX OF SUBJECTS

	Month	Page
Abortion	Oct.	4
Accidents, Automobile	June	92
Accreditation Institute	Feb.	43
Adenocarcinoma (CPC)	Sept.	86
Adenomatosis	Mar.	54
Agranulocytosis (CPC)	Feb.	100
Air Embolism	Aug.	74
Alcoholic Myopathy (CPC)	Nov.	86
Alcoholism	July	60
Correction	Aug.	79
Alkaluria	Dec.	64
Alveolar Disease	July	56
American Academy for Cerebral Palsy	Nov.	13
American Academy of Physical Medicine and Rehabilitation	July	13
American Academy of Family Physicians	Nov.	99
American Academy of General Practice	Aug.	6
	Nov.	99
American Association for Accreditation of Laboratory Animal Care	May	99
American Board of Family Practice	July	99
	Aug.	79
American College of Obstetricians and Gynecologists	Aug.	81
American College of Physicians and Texas Society of Internal Medicine	Nov.	13
American College of Radiology	Oct.	96
American College of Surgeons	Nov.	104
American Congress of Rehabilitation Medicine	July	14
American Heart Association, Texas Affiliate, Inc.	Aug.	13
American Medical Association	June	11, 104
Actions (President's Page)	Aug.	39
Board of Trustees	July	5
Committee on Long-Range Planning	Nov.	29
Committee on Planning and Development	Jan.	4, 21
	Feb.	4
	Apr.	5
	June	4
	July	4
(President's Page)	Nov.	29
Convention, Annual	May	13
	July	4
	Dec.	5
Clinical	Jan.	4
	Oct.	14
	Nov.	14
Texas Resolutions	Jan.	4
	July	4, 5, 6

	Month	Page
Council on Environmental and Public Health	June	27
Distinguished Service Award	Dec.	4
Dues (President's Page)	Sept.	39
Education and Research Foundation	May	99
Himler Report		
See: AMA Committee on Planning and Development		
Woman's Auxiliary, President	July	6
American Physical Therapy Association, Inc., Texas Chapter, Coastal Bend District	Mar.	27
	Apr.	39
American Public Health Association	Oct.	13
Ambulance Service	Feb.	19
Amphotericin	July	46
Ampulla of Vater	Aug.	70
Anemia	Sept.	32
Anesthesia	Nov.	46
Obstetric	Nov.	58
Anger	Sept.	56
Angina, Abdominal	Mar.	64
Angioma, Intraluminal Venous	May	64
Anomaly	Dec.	78
Antacids	Dec.	64
Appendix	Mar.	52
Appropriations, State	Mar.	4
Arteriography	Aug.	58
Coronary	Jan.	76
Arteriovenous Fistulas	May	66
Artery, Mesenteric Occlusion	Mar.	64
Renal (CPC)	Mar.	82
Aspirin	June	30
Asplenia	June	28
Auditory Canal, Tumors	Oct.	56
Automated Equipment	Feb.	60
Automobile Accidents	Feb.	22, 23
Causes	Feb.	23
Crash Data	Feb.	22
Awards		
Anson Jones	Feb.	112
	Nov.	108
Distinguished Service	Dec.	4
Science Fair	July	93
Texas Medicine	July	93
	Sept.	76
	Oct.	96

B

Baylor College of Medicine	Aug.	79, 87
	Dec.	99, 111
Bebb, E. C.	Mar.	102
Berg, O. C.	June	112
Bexar County Medical Society	May	97
	Nov.	23
	Dec.	101, 102
Pharmaceutical Association	May	97
Psychological Association	May	97
Teaching Hopital, Pediatric Intensive Care Unit	July	95
Biomedical Research	Sept.	98
Biopsy	Dec.	46
Blackford Memorial Lectures	Oct.	13
Blood	Dec.	54
Blue Cross-Blue Shield of Texas	Jan.	6
	Feb.	113
Blunt Trauma	Mar.	72
Board of Nurse Examiners	July	89
Bone Disease	June	44
Books	Jan.	105
	Feb.	123
	Mar.	101
	Apr.	123
	May	115
	June	119
	July	104
	Aug.	89
	Sept.	121
	Oct.	109
	Nov.	113
	Dec.	119
Breast Cancer	Jan.	96
	Oct.	44
Bronchogenic Carcinoma (CPC)	May	87
Burn Injuries	Nov.	21

C

Cancer	Aug.	70
Breast	Jan.	96
	Oct.	44
Cervical	Nov.	64
Information Service	Aug.	44
Resistance	June	44
Carcinoma, Ampulla of Vater	Aug.	70
Bronchogenic	May	87
In Situ	Mar.	52
Cardiac Function	Jan.	70
Catheter Trays, Recalled	Jan.	95
Catheterization	Aug.	74
Cavernous Transformation (CPC)	July	78
CBS "Health in America" Series	May	6
Central Venous Pressure	Aug.	74
Cerebral Palsy, Treatment	Dec.	82
Cervical Cancer	Nov.	64
Trachea	July	52
Chemical Analyses	Feb.	60
Chemotherapy	Apr.	78
Child Development	Apr.	60
Childhood Depression	Apr.	64
Disease	Apr.	74, 78, 82
Children, Emotionally Disturbed	Dec.	72
Children's Hospital Education and Research Foundation, Inc.	Mar.	28
Cholelithiasis (CPC)	June	80
Cholera Toxin	Nov.	100
Cinefluorography	May	76
Cineradiography	May	76
Cirrhosis	Feb.	88
	Dec.	46
Pigmentary (CPC)	Jan.	82
Coagulation	Dec.	54
Cole, C. M.	Mar.	96
	May	6
Colitis	Dec.	92
Communicable Diseases, Report	Dec.	98
Reporting	June	109
Conference on Medical Practice (Medical Students Day)	July	88
Consultative Review	Aug.	5
Consumption Coagulopathy (CPC)	July	78
Continuing Education Courses	Jan.	33
	Feb.	49
	Mar.	33
	Apr.	45
	May	19
	June	17
	July	19
	Aug.	19
	Sept.	19
	Oct.	19
	Nov.	19
	Dec.	17
Directory	Dec.	101
Survey	Sept.	114
Contraceptive Complications, IUD	Nov.	60
Pills	Nov.	23
Coronary Arteries	Jan.	76
Arteriography	Jan.	76
Atherosclerosis	Jan.	20
Cinearteriography	Aug.	58
Crohn's Disease	Mar.	68

D

Dallas	Apr.	112
Dallas County Medical Society	Apr.	111
	May	6
Millard J. Heath Scholarship Trust Fund	Nov.	98
Dallas Southern Clinical Society	Feb.	43
Dental Caries	Aug.	48
Department of Public Safety	Nov.	97
Dermatoses	Feb.	94
Diabetes Mellitus (CPC)	Apr.	96
Diagnosis, Automated Chemical Analyses	Feb.	60
Diagnostic Procedure	Mar.	44
"Dial Access" System	Mar.	6
Diphtheria	Oct.	6
Direct Relief Foundation	July	95
	Oct.	94
Disaster Medical Care, Celia	Sept.	111
Lubbock	June	101
Double Master ECG Test	May	54
Draft Call	Jan.	6
	May	107
	July	103
"Drive Friendly" Campaign	Apr.	111
Driver Licensing	May	99
	Nov.	97
Driving Safety	June	92
	Oct.	32
Drug Abuse	Jan.	42, 50
	Nov.	99
Intoxication and Treatment	Jan.	96
Laredo Program	Apr.	111
Problem Center, San Antonio	May	97
Reactions	Feb.	92
Resource Committee	May	107
Use and Abuse, Publication	Apr.	116
Duodenum	Mar.	72
Dysplasia, Fibromuscular (CPC)	Mar.	82
Dysphagia	June	72

E

Electrocardiography	Jan.	70
	May	31, 54
Emergency Services	Feb.	19
Emotional Education	Apr.	70
Illness	July	72
Endocarditis (CPC)	Sept.	86
Enteritis	Mar.	68
Environmental Quality (President's Page)	Mar.	21
Esophageal, Ring	June	72
Substitute	Oct.	64
Ewing, M. M.	June	112
Eye Damage	Dec.	98
Injuries	Mar.	50
	June	29

F

Fallopian Tube Epithelium	Sept.	76
Family Medicine	Mar.	17
Planning	Aug.	81
Fertility	June	48
Fifth District Medical Society	Jan.	27
Fink, F.	Dec.	116
Fistulas, Arteriovenous	May	66
Fluoride	Aug.	48
Food and Drug Administration	Jan.	95
	July	89
Football Injuries	July	58
Fort Worth Clinical Symposium	Mar.	27
Fractures	Sept.	68
Franklin County (Ohio) Maternal Mortality Study	Nov.	50
Funds, Federal and State	Mar.	4

G

Galveston County, Accidental Poisonings	July	99
Gastrectomy	Mar.	79
Governor's Committee on Aging, Citizen's Advisory Council	Nov.	100
Gram-Negative Sepsis (CPC)	June	80
Grass Roots Policy	Nov.	23
Group Therapy	July	60
Correction	Aug.	79
Gynecology, Pediatric	Apr.	84

H

Handicapped Retardates	Apr.	56
Hand Injuries	May	72
Health Assistants Program, Laredo	Apr.	6
	Nov.	98
Health Care	Feb.	79
(President's Page)	July	39
	Sept.	98
	Oct.	29
	July	33
Costs	Dec.	99
Delivery	Feb.	66
(President's Page)	July	39
Team (President's Page)	Oct.	39

	Month	Page
"Health in America" Series	May	6
Health Manpower	Dec.	111
Health Planning	Feb.	79
Heart		
Disease, Ischemic	Jan.	61
Screening	Jan.	70
Valves	May	58
Hematoma, Subdural	July	58
Hemochromatosis (CPC)	Jan.	82
Hemorrhage, Intracerebral		
(CPC)	Mar.	82
Obstetric	Nov.	50
Hepatitis, Chronic	Dec.	46
Herrmann, G. R.	Dec.	4
Highway Safety	Oct.	32
	Nov.	97
Himler Report		
See: AMA Committee on Planning and Development		
Histiocytic Medullary Reticulosis (CPC)	Feb.	100
Histoplasmosis	July	46
Hobbies	Jan.	98
	Feb.	116
	Mar.	102
	Apr.	124
	June	112
	Nov.	103
	Dec.	116
Hospital		
Accreditation	Aug.	29, 32
Administrators (President's Page)	Dec.	35
Patients	July	32
Houston Academy of Medicine	Feb.	113
Library	Mar.	96
	May	101
Houston Group Psychotherapy Society	Feb.	43
	Mar.	27
Houston Society of Clinical Pathologists	Feb.	43
	Mar.	28
H.R. 17550 (Social Security Amendments, 1970)	Sept.	6
	Dec.	5
Hurricane Celia	Sept.	111, 113
Hypercalcemia (CPC)	May	87
Hyperosmolar Alimentation	Oct.	82
Hyperplasia, Thymic	Nov.	78
Hypertension (CPC)	Mar.	82
Hysterosalpingography	Mar.	44

I

Ileitis	Mar.	68
Ileum, Tumors	June	68
Ulcer	Apr.	82
Immunology, Transplantation	May	48
Indigent Children, Rickets	Apr.	74
Infant Death	Apr.	87
Infant Feeding	Dec.	27
Infertility, Male	June	48
Institutional Program	Dec.	72
Insurance Forms	July	34
Insurance Questions	Oct.	32
	Nov.	27
International Cancer Congress	Apr.	39
	May	13
International Congress on Diseases of the Chest	July	14
International Medical Assembly of Southwest Texas	Jan.	27
	Dec.	11
International Science Fair	July	93
Intestinal Ischemia	Mar.	64
Intraluminal Venous Angioma	May	64
Intravenous Alimentation	Oct.	82
Investigation	Dec.	58
Iron Overload Disorders (CPC)	Jan.	82
Ischemic Heart Disease	Jan.	61
IUD Complications	Nov.	60

J

Jasper-Newton County Medical Society, Scholarship	July	103
Jaundice	Aug.	70
Obstructive (CPC)	June	80
Jejunum, Tumors	June	68
Jogging	Sept.	68
Joint Commission on Accreditation of Hospitals	Aug.	29
Joint Commission on Mental Health of Children, Inc.	Dec.	72

K

Kendall, J. A.	Apr.	111
Keogh	Jan.	5
	Feb.	5
	Mar.	5
	Apr.	5
	May	5
	July	87
	Sept.	6
	Nov.	5
	Dec.	6
Keratoconjunctivitis Sicca	July	68
Kimmelstiel-Wilson's Disease (CPC)	Apr.	96

L

Laboratory Data	Feb.	66
Tests	Nov.	75
Laredo Drug Program	Apr.	111
Laredo Independent School District	Apr.	111
Learning Disabilities in Children	Apr.	60
Lee, J. B.	Dec.	102
Left Ventricle	Jan.	76
Legislation	Jan.	17
Libraries, Medical	June	109
Licensing, Driver	May	99
	Nov.	97
Lithium	Dec.	58
Lubbock Tornado	June	101
Lung Biopsy	Oct.	70
Lymphadenopathy (CPC)	Feb.	100
Lymphocytes	May	48

M

McGovern, J. P.	May	101
McKemie, J.	Feb.	116
Malignancies	June	68
Maternal Deaths	Nov.	46
Measles, Cases in U.S. and Texas, 1963-1969	July	93
Mediastinal Mass	Nov.	78
Medicaid	Feb.	5
	Mar.	4
	Apr.	5, 6
(President's Page)	Apr.	33
	Aug.	6
	Nov.	5
	Dec.	6
Cutback in Reimbursals	Mar.	4
Medical Advisory Board for Driver Licensing	May	99
Medical Curricula	Aug.	79
Medical Education, Expansion	May	108
Community Orientation (MECO)	Nov.	4
Medical Information Service	Mar.	6
Medical Legislation (President's Page)	Feb.	33
Medical Profession (President's Page)	May	39
Medical School, Enrollment	Oct.	29
	Dec.	99
Medical Services	Feb.	19, 33, 109
	Mar.	18
Medicare	Jan.	6
	Mar.	4
	Apr.	5, 6
(President's Page)	Apr.	33
	June	8
	Aug.	6
	Nov.	5, 98, 99
	Dec.	6
Medicine and Religion	Dec.	25
Medicredit	Oct.	4
Meniere's Disease	Aug.	68
Meningococcal Infections	Sept.	44
Correction	Nov.	97
Mental Illness, Prevention	Apr.	70
Retardation	Apr.	56
Methodist Hospital and Lubbock Surgical Society	Aug.	14
	Sept.	13
Methotrexate	Feb.	88
Mickey, R. G.	Nov.	5
Mikulicz's Disease	July	68
Murine Typhus	Dec.	42
Murmurs	Jan.	70
Myocardium	Jan.	70

N

National Health Insurance Proposals	Dec.	6
National Institute of Mental Health	Jan.	96
	Apr.	116
	May	107
Neoplasia, Genetic Protection	June	44
Nephrotic Syndrome (CPC)	Apr.	96
Neurofibroma, Perineal	June	56
Neurosis	July	72
News Media	July	31
Ninth District Medical Society	Feb.	43
Nueces County Medical Society	July	93
Nursing Costs	July	33
Nutritional Rickets	Apr.	74

O

Obstetric, Anesthesia	Nov.	58
Care	Nov.	54
Deaths	Nov.	46
Hemorrhage	Nov.	50
Obstructive Jaundice (CPC)	June	80
Ocular Emergencies	Mar.	50
	June	29
Office Screening, Porphyria	Nov.	75
Ohio Maternal Mortality Study	Nov.	50
Omphalitis (CPC)	July	78
Organized Medicine, Essayists	Nov.	104
Unification	Dec.	26
Osler Symposium, SAMA Meeting	Mar.	27
Osteogenesis Imperfecta	June	44
Osteoporosis	Aug.	48
Oxygen, Hyperbaric	Aug.	54

P

Palasota, P.	Apr.	124
Pamphlets	Jan.	108
	Feb.	115
	Mar.	104
	Apr.	126
	May	117
	June	117
	July	103
	Aug.	87
	Sept.	119
	Oct.	101
	Nov.	109
	Dec.	113
Panhandle District Medical Society	Sept.	13
Paperwork, Resolution	Apr.	29
Pathology, Laboratory Data	Feb.	66
Pediatric, Gynecology	Apr.	84
Vein Catheterization	Mar.	46
Peer Review	Aug.	5
Pelvic Fistulae, Repair	June	62
Peptic Ulcer	Mar.	79
Perinatal Death	Apr.	87
Perineal Neurofibroma	June	56
Physician and Hospital Administrator	May	33
(President's Page)	Dec.	35
Physician Population	Dec.	97
Physician's Assistant	Dec.	98
Physicians Licensed	Aug.	87
Pigmentary Cirrhosis (CPC)	Jan.	82
Plimpton-Gellhorn Syndrome (CPC)	May	87
Poisoning, Accidental	July	93, 99
Poliomyelitis	July	87
Pollution (President's Page)	Mar.	21
	June	27
Polyps	Mar.	52
Population Control, Surgical	Nov.	24
Porphyria, Office Screening	Nov.	75
Postgraduate Courses See: Continuing Education Courses		
Postgraduate Medical Assembly of South Texas	June	11
	July	13
Pre-admit Hospital Patients	July	32
Pregnancy, Prosthetic Heart Valves	May	58
Premature Death	Sept.	56
Professional Liability Insurance	Apr.	22
Project HOPE	Feb.	112
	Nov.	98
Prosthetic Heart Valves	May	58
Protein Metabolism	Jan.	20
Protocol	Dec.	58
Prudential Insurance Company of America	Jan.	6
	Feb.	5
	Oct.	5
Pruritus Ani	Jan.	18

	Month	Page
Psoriasis	Feb.	88
Psychoses, Care-Induced	Jan.	58
Public Health Programs, Personnel	May	34

Q

Quinidine	Dec.	64

R

Radiation Therapy	Aug.	54
Radiological Case	Feb.	77
	Mar.	49
	Apr.	91
	Nov.	78
	Dec.	92
Radiological Diagnosis	Mar.	49
Rattlesnake Bite	June	42
Regional Medical Program of Texas	Mar.	5
Relaxacizor	July	89
Religion and Medicine	Dec.	25
Reproduction	June	48
Research	Sept.	98
Resource Committee on Drug Abuse	May	107
Reuter, S. H.	Jan.	98
Rhabdomyosarcoma	Apr.	78
Robertson, Mrs. R. C. L.	May	6
	July	6
Rocky Mountain Cancer Conference	June	111
Rocky Mountain Spotted Fever	Dec.	42
Roentgenographic Diagnosis	Mar.	49
Rural Practitioners, Survey	June	115

S

Safety Program	Apr.	111
Saied, V. C.	Mar.	102
Sammons, J. H.	July	5
San Antonio Drug Problem Center	May	97
Science Fair	July	93
Scott and White Clinic and Memorial Hospital	Jan.	97
Conference in Medicine and Surgery	Jan.	28
	Feb.	43
Pediatrics Postgraduate Conference	Apr.	39
	May	13
Screening	Dec.	54
Tests	Nov.	75
Seminar on Allergy and Immunology	Mar.	27
Sex Education	Apr.	17
Shriners Burns Institute	Nov.	21
Simmons, L. N.	Mar.	102
Sjogren's Syndrome	July	68
Skin, Diseases, Treatment	Feb.	94
Drug Reactions	Feb.	92
Smoking and Health, Education Week	Dec.	98
Social Security Act	Dec.	5, 6
Amendments (1970)	Sept.	6
Southern Medical Association	Jan.	96
	Oct.	13
	Dec.	6
Southern Obstetric and Gynecologic Seminar	July	13
Southwest Allergy Forum	Jan.	27
Southwestern Medical Association	Jan.	28
Spleen	June	28
State Department of Mental Health and Mental Retardation	Oct.	100
Stress Fractures	Sept.	68
Student American Medical Association	Mar.	18
	June	113
	Sept.	30
Osler Symposium	Mar.	27
Subclavian Catheterization	Aug.	74
Subdural Hematoma	July	58
Suicidology, Training Program	May	107

T

Tax Reform Act of 1969	Jan.	17
Telephoned Electrocardiographs	May	31
Tetanus	Sept.	52
Texas Academy of General Practice, Annual Assembly	May	13
Valley Chapter	Mar.	28
Texas Academy of Internal Medicine	Nov.	13
Texas Board of Examiners in the Basic Sciences	Aug.	81
Texas Board of Vocational Nurse Examiners	Jan.	96
	Feb.	112
	Sept.	114
Texas Cancer Information Service	Aug.	44
Texas College of Osteopathic Medicine	Feb.	114
Texas Commission on Alcoholism	May	13
Texas Dental Association	Mar.	28
	Apr.	39
Texas Hospital Association	Apr.	39
Texas Medical Advisory Board for Driver Licensing	Nov.	97
Texas Medical Assistants Association	May	13
Texas Medical Association Annual Session	Jan.	95
	Feb.	6
	Mar.	95
	Apr.	4, 39, 112
	May	4
	June	4, 98
(President's Page)	June	31
	Aug.	81
	Oct.	94
	Dec.	7
Coordination	Aug.	81
Exhibits	Nov.	6
Himler Report See: AMA Committee on Planning and Development		
Lecture Tapes	June	8
Program	Mar.	P-1
Award		
Anson Jones	Feb.	112
	Nov.	108
Texas Medicine	July	93
	Sept.	76
	Oct.	96
Board of Councilors	Dec.	5
Board of Trustees	Mar.	5
Committee on Continuing Education, Survey	Sept.	114
Committee on Disaster Medical Care	Sept.	111
Committee on Government Health Programs	Sept.	6
Committee on Maternal Health	Nov.	46
Conference on Legislation	Nov.	4
	Dec.	4, 11, 103
Conference on Medical Practice	July	87
	Aug.	4, 13, 83
	Oct.	4, 5, 91
Students	July	88
Conference on Medical Service	Feb.	4, 109
	Apr.	116
Continuing Education Directory	Oct.	100
	Dec.	101
Council on Annual Session	Aug.	81
Council on Constitution and By-Laws, Amendment	Jan.	5
Council on Medical Jurisprudence	Dec.	5
Drug Abuse Education	Jan.	5
Dues Increase	Oct.	4
Executive Board	Feb.	4
	Oct.	4
Grass Roots	Nov.	23
House of Delegates	Apr.	5, 21
	May	4, 5
	June	4
	July	4
Insurance	Jan.	6
	Feb.	5
	Oct.	5
Policy Statements	June	111
Keogh Retirement Program	Oct.	5
	Nov.	4
	Dec.	6
Unit Values	Jan.	5
	Feb.	5
	Mar.	5
	Apr.	5
	May	5
	July	87
	Sept.	6
	Nov.	5
Memorial Library	Mar.	5
	Oct.	104
Members Retirement Plan and Trust (See: TMA, Keogh Retirement Program)		
Office on Medical and Health Manpower	Nov.	5
Public Relations and Advertising Division	Dec.	108
S. E. Thompson Scholarship Fund	July	95
Specialty Societies	Sept.	4
Texas Medicine, 50 Years Ago	Oct.	100
	Nov.	108
	Dec.	107
TEXPAC	Jan.	17
	Sept.	29
	Oct.	31
Venereal Disease Program	Nov.	6
Woman's Auxiliary	May	6
	Oct.	6
Texas Medical Education Expansion	May	108
Texas Medical Students	Sept.	30
Texas Nurses Association	Nov.	109
Texas Nursing Home Association	Jan.	28
Texas Pediatric Society	Aug.	13
	Sept.	13
Texas Pharmaceutical Association	June	11
	July	13
Texas Professional Association Act	Jan.	17
Texas Public Health Association	Feb.	43
Texas Radiological Society	Jan.	27
	Feb.	77
	Apr.	91
	Nov.	78
	Dec.	11
Texas Society of Internal Medicine	Nov.	13
Texas Society of Pathologists	Dec.	11
Texas Society for the Prevention of Blindness	Mar.	96
Texas State Board of Health	Aug.	81
Texas State Board of Medical Examiners	Feb.	112
	May	14
	Sept.	119
Texas State Department of Health	Apr.	39
	June	103, 109, 115
	July	87
	Sept.	113
	Oct.	6
	Nov.	26, 97, 99
	Dec.	113
Texas Surgical Society	Mar.	18, 27
Texas Urological Society	Jan.	27
	Feb.	44
Thromboemboli (CPC)	Sept.	86
Thymus	Nov.	78
Thyroid	Dec.	78
Trachea, Reconstruction	July	52
Tracheal, Transplantation	Oct.	60
Traffic Safety Program	Apr.	111
Transplantation, Immunology of Tracheal	May	48
	Oct.	60
Transcutaneous Biopsy, Lung	Oct.	70
Tuberculosis	July	46
Tumors, Endocrine	Mar.	54
External Auditory Canal	Oct.	56
Ileum and Jejunum	June	68
Registry	Aug.	44
Therapy	Aug.	54
Typhus, Murine	Dec.	42

U

Ulcer, Ileum	Apr.	82
Peptic	Mar.	79
Ulcerative Colitis	Dec.	92
Unilobular Thyroid	Dec.	78
US Department of HEW Public Health Service	Apr.	6
X-ray Survey	May	101
Regulations	Mar.	4
University of Texas Austin College of Pharmacy	June	104
University of Texas Dental School at San Antonio	Dec.	97

	Month	Page
University of Texas M.D. Anderson Hospital and Tumor Institute	Mar.	6
University of Texas Medical Branch at Galveston	Apr.	40
	June	113
	Aug.	79
University of Texas Medical School at Houston	Feb.	114
	Sept.	113
	Dec.	99
University of Texas Medical School at San Antonio	Jan.	100
	Feb.	113
	July	99
	Sept.	114
	Nov.	99
(President's Page)	Dec.	35
University of Texas Nursing School System	Apr.	40
	June	11
	Feb.	112
	May	14
University of Texas School of Public Health at Houston	June	109
University of Texas Southwestern Medical School at Dallas	Feb.	113, 114
	June	104, 109, 113
Distinguished Teaching Award	July	89
	July	93
	Aug.	6, 79
	Nov.	100, 108
Florence Bioinformation Center	Jan.	95
University of Texas System	Jan.	97
	Feb.	112, 113
	May	107
	July	93
	Aug.	79
	Sept.	113
	Dec.	111
Environmental Science Park	May	99
Urinary Tract Obstruction	June	56

V

Valsalva Maneuver	Jan.	70
Vectorcardiography	Jan.	61
Vein Catheterization	Mar.	46
Venereal Disease	Nov.	6, 26
	Dec.	5
Awareness Month	Sept.	115
Venous Angioma	May	64
Vertigo	Aug.	68
Viet Nam Volunteers	Jan.	6
Visceral Substitute, Esophagus	Oct.	64
Volunteer Physicians for Viet Nam	June	113

W

Wade, D.	Oct.	100
Walthall, W.	May	105
Water, Fluoride Levels	Aug.	48, 81
Wilm's Tumor	Nov.	78
Worthen, J.	Mar.	102

X

X-ray Survey	May	101

DEATHS

	Month	Page
A		
Adams, W. B.	Apr.	130
Alexander, R. B.	Aug.	92
Anderson, J. C.	Nov.	116
B		
Bailey, W. M.	Jan.	108
Ball, W. P.	Jan.	110
Barcus, W. S.	Oct.	112
Birt, J. B.	May	120
Boehler, C. C.	Sept.	123
Brindley, G. V., Sr.	Dec.	123
Burns, H. V.	Oct.	111
C		
Callison, R. L.	June	122
Carter, W.	Sept.	122
Casias, D. T.	Aug.	91
Collier, J. W.	Sept.	122
Connor, M. M.	May	120
Cowart, E. M.	Feb.	128
Cross, T. J.	July	106
Crump, T. E.	Aug.	91
Cull, H. G.	Nov.	115
Cunningham, G. N.	June	121
D		
Daily, R. L.	Aug.	92
Danford, E. A.	Feb.	126
Ditto, H. H.	Dec.	121
Divine, J. B.	Apr.	128
E		
Eberle, H. J.	Feb.	126
Edwards, M. L.	July	105
Ellis, J. R.	Aug.	92
English, R. D.	Nov.	116
Ewing, F. S.	June	120
F		
Farris, R. G.	July	105
Fleming, B. P.	Mar.	106
Flood, W. E.	Sept.	123
Frazier, S. Z.	May	120
Frick, R. T.	May	119
Friedman, C.	May	118
G		
Gaddis, L. R.	Apr.	129
Gaddy, S. J.	May	119
Garcia, G. D.	Feb.	127
Geibel, J. W., Jr.	Feb.	127
Good, L. P.	Sept.	124
Goodrich, W. A.	Apr.	129
Green, J. E.	Sept.	122
Griffin, B. H.	Feb.	125
Grumbles, E. W.	June	122
Guill, R. E.	Oct.	111
H		
Hall, E. P., Jr.	Dec.	120
Harrell, J. D.	Mar.	105
Harris, H. W., Jr.	Dec.	123
Hatfield, H. D.	Sept.	122
Hendry, C. H.	Feb.	127
Hethcock, L. D.	Mar.	106
Horbaly, W. V.	Oct.	112
J		
Jester, A. W.	May	120
Jones, A. C.	Oct.	111
K		
Kellogg, D. S.	Feb.	128
Kennedy, S.	Sept.	124
Klatt, W. W.	Mar.	104
L		
Lattimore, J. E.	Sept.	124
Livingston, E. N.	Dec.	123
Loftis, E. L.	Apr.	127
M		
McClure, W. H.	Sept.	123
McKee, F. A., Jr.	Apr.	126
Mendenhall, E.	Feb.	6
	Apr.	128
Milligan, B., Sr.	Oct.	112
Moody, C. O.	Dec.	124
Murphey, P. C.	Apr.	128
O		
Otto, J. L.	Apr.	129
P		
Park, B. E.	Apr.	127
Parnell, C. J., Jr.	Apr.	129
Payne, R. W.	Apr.	127
Pigford, C. A.	Jan.	108
Poindexter, C. A.	Nov.	115
Potter, C.	May	119
R		
Ramsey, W. V.	May	118
Reed, T. B.	Nov.	115
Reily, W. A.	June	121
Reimers, A. F.	Feb.	125
Robau, M. E.	Jan.	110
Rodarte, R. B.	July	104
Rosser, C.	Jan.	109
S		
Sanders, J. G.	Dec.	120
Schauer, C. W.	Feb.	128
Schlenker, G. M.	July	106
Schulze, V. E.	Aug.	90
Shaffer, C. F.	June	121
Simmons, R. L. S.	Sept.	124
Smith, R. H.	Mar.	105
Spann, R. G.	Mar.	105
Spier, E.	Feb.	126
Sprott, E. D., Jr.	Apr.	126
Stanley, J. S.	Dec.	121
Stephenson, J. H.	May	117
Stockdale, R. E.	June	121
Story, J. R.	Nov.	114
Stubblefield, M. L.	Mar.	105
Subotnik, N.	Mar.	106
Suehs, P. E.	Dec.	123
T		
Tatum, J. E.	Apr.	130
Taylor, W. A.	Mar.	106
Teague, W. H.	Dec.	124
Thode, P. G.	Apr.	130
Turbeville, L. R.	Aug.	91
V		
Vermooten, V.	Feb.	127
von Briesen, D.	Mar.	104
W		
Wallace, E. F.	July	105
Walsworth, F. D.	Jan.	110
Watson, T. D.	July	106
Whitsitt, J. J.	Nov.	116
Williams, C. R.	Jan.	109
Williams, E. T.	May	118
Winn, R. E.	Nov.	115
Y		
Young, J. C.	Nov.	114
Young, J. W., Sr.	Dec.	121
Youngblood, J. W.	Jan.	109

THE LIBRARY
UNIVERSITY OF CALIFORNIA
San Francisco
THIS BOOK IS DUE ON THE LAST DATE STAMPED BELOW

7 DAY LOAN

7 DAY
MAY 10 1971
RETURNED
MAY 13 1971
7 DAY
JUL 23 1971
RETURNED
JUL 16 1971
7 DAY
JAN 19 1972
RETURNED
JAN 21 1972
7 DAY
FEB 7 1972

RETURNED
FEB - 8 1972
7 DAY
MAY 29 1972
RETURNED
JUN 9 1972
7 DAY
APR 23 1974
RETURNED
APR 16 1974

14 DAY
AUG 26 1975
RETURNED
AUG 13 1975
7 DAY
NOV 7 1976
RETURNED
NOV 8 1976

15m-5,'70(N6490s4)4315-A33-9

257731